Prepared for:
National Grid
Brooklyn, NY

Prepared by:
AECOM
Chelmsford, MA
September 2014

Remedial Investigation Report

Former Metropolitan Works MGP Site
124-136 2nd Avenue
Brooklyn, Kings County, New York
NYSDEC Site No. : 224046
Order of Consent Index #: A2-0552-0606

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Prepared By Anna Sullivan

Reviewed By Peter S. Cox, P. G.

Contents

1.0 Introduction 1-1

1.1 Remediation Investigation Objectives 1-2

1.2 Scope of Work 1-2

1.3 Report Organization 1-3

2.0 RI Study Area Description and History 2-1

2.1 Historic MGP Site Description 2-1

2.2 Adjacent/Off-site Properties 2-2

2.3 Current Site Topography and Drainage 2-3

2.4 Regional Geology 2-3

2.5 Pre-MGP History 2-5

2.6 MGP Site History 2-5

2.7 Post-Historic MGP Site History 2-7

2.8 Historic Land Use along the Gowanus Canal 2-8

2.9 Potential Source Areas for MGP-Related Residuals 2-12

2.10 Previous and Concurrent Investigations and Remedial Work 2-13

3.0 Investigation Activities 3-1

3.1 Subsurface Utility Location 3-1

3.2 Surface Soil Sampling 3-1

3.3 Test Pit Excavations 3-2

3.4 Soil Borings and Subsurface Soil Sampling 3-2

3.5 Monitoring Well Installation 3-3

3.6 Well Development 3-4

3.7 Hydraulic Conductivity Testing and Tidal Monitoring 3-4

3.8 Groundwater Monitoring 3-5

3.8.1 Depth-to-Water Measurements 3-5

3.8.2 Groundwater Sampling 3-6

3.9 Community Air Monitoring 3-7

3.10 Vapor Intrusion Evaluation Sampling 3-7

3.11 Analytical Program 3-8

3.11.1 Quality Assurance/Quality Control Analyses 3-8

3.11.2 Data Usability Summary Report 3-8
3.12 RI Study Area Survey 3-8
3.13 Investigation-Derived Waste Management 3-9

4.0 Geology and Hydrogeology 4-1
4.1 RI Study Area Geology 4-1
4.1.1 Fill 4-1
4.1.2 Meadow Mat 4-1
4.1.3 Sand/Silt 4-2
4.1.4 Gardiners Clay 4-2
4.1.5 Jameco Gravel 4-2
4.2 Site Hydrogeology 4-2

5.0 Subsurface Environmental Observations and RI Analytical Results 5-1
5.1 Subsurface Visible Impacts 5-1
5.2 Soil Analytical Results 5-2
5.2.1 Surface Soils 5-3
5.2.2 Subsurface Soils 5-3
5.3 Forensic Analytical Results 5-5
5.4 Groundwater Analytical Results 5-6
5.4.1 Shallow Well Groundwater Samples 5-6
5.4.2 Intermediate Well Groundwater Samples 5-7
5.4.3 Deep Well Groundwater Samples 5-9
5.5 Vapor Intrusion Evaluation Sample Results 5-10
5.5.1 Block 1007, Lot 172 5-11
5.5.2 Block 1025, Lot 26 5-11

6.0 Summary of Nature and Extent 6-1
6.1 Surface Soil 6-1
6.2 Subsurface Soil 6-1
6.3 Groundwater 6-2
6.4 Soil Vapor and Indoor Air 6-3

7.0 Qualitative Human Health Exposure Assessment 7-1
7.1 Current Site Setting 7-1
7.2 Exposure Assessment 7-1
7.2.1 Contamination Sources 7-2

7.2.2 Potential Release Mechanisms 7-5
7.2.3 Potential Human Receptors and Exposure Pathways 7-5
7.2.4 Summary of Receptors and Potentially Complete Exposure Pathways 7-9
7.3 Conclusions 7-9

8.0 Fish and Wildlife Resources Impact Analysis 8-1

9.0 Summary and Conclusions 9-1
9.1 Site Geology 9-1
9.2 Site Hydrogeology 9-1
9.3 Nature and Extent of Constituents of Interest 9-2
9.3.1 Surface Soil 9-2
9.3.2 Subsurface Soil 9-3
9.3.3 Groundwater 9-4
9.3.4 Sub-Slab Vapor/Indoor Air 9-5
9.4 Potential Source Areas 9-6
9.5 Human Health Exposure Assessment 9-6
9.6 Fish and Wildlife Resource Impacts Assessment 9-6
9.7 Conclusions 9-6

10.0 Recommendations 10-1

11.0 References 11-1

List of Appendices

Appendix A Summary of Historical Data

Appendix B Test Pit Excavation Logs

Appendix C Soil Boring Logs and Well Construction Logs (Current and Historical)

Appendix D Well Development Logs

Appendix E Slug Testing Data Analysis

Appendix F Groundwater Collection Records

Appendix G Air Quality Monitoring Records

Appendix H Indoor Air Survey Forms

Appendix I NYSDEC Analytical Services Protocol (ASP) Category B Deliverable Data (CD-ROM)

Appendix J Data Usability Summary Reports (CD-ROM)

List of Tables

Table 2-1 Historical Documents Observations

Table 2-2 Summary of Documents

Table 3-1 Surface Soil, Subsurface Soil, and Groundwater Investigation Sample Summary and Rationale

Table 3-2 Monitoring Well Construction Details and Groundwater Elevation Summary

Table 3-3 Soil Vapor, Indoor Air, and Ambient Air Sample Investigation Summary and Rationale

Table 3-4 Summary of Location Coordinates and Elevations

Table 4-1 Horizontal Hydraulic Gradients at Shallow, Intermediate, and Deep Wells

Table 4-2 Vertical Hydraulic Gradients at Shallow, Intermediate, and Deep Wells

Table 4-3 Hydraulic Conductivities at Shallow, Intermediate, and Deep Wells

Table 5-1 Summary of Remedial Investigation Visible and Olfactory Impacts

Table 5-2 Summary of Previous Investigation Tar Saturation Impacts

Table 5-3 Summary of Surface Soil Analytical Results – September 2010

Table 5-4 Summary of Subsurface Soil Analytical Results

Table 5-5 Summary of Groundwater Analytical Results

Table 5-6 Soil Vapor Intrusion Evaluation Results

List of Figures

Figure 1-1 Location Map

Figure 2-1 Aerial Site Location Map

Figure 2-2 Historical and Current Site Features Map

Figure 2-3 Parcel Location Map

Figure 2-4 Historical Gowanus Creek and Marsh Boundary and Current Gowanus Canal Boundary

Figure 2-5 Historic Investigation and Remediation Locations

Figure 3-1 Remedial Investigation Sample Locations

Figure 4-1 Geologic Cross-Section Locations

Figure 4-2 Geologic Cross Section A-A'

Figure 4-3 Geologic Cross Section B-B'

Figure 4-4 Geologic Cross Section C-C'

Figure 4-5 Geologic Cross Section D-D'

Figure 4-6 March 14, 2012 Low Tide Groundwater Contours Shallow Wells

Figure 4-7 March 14, 2012 Low Tide Groundwater Contours Intermediate Wells

Figure 4-8 March 14, 2012 Low Tide Groundwater Contours Deep Wells

Figure 4-9 September 29, 2010 High Tide Groundwater Contours Shallow Wells

Figure 4-10 September 29, 2010 High Tide Groundwater Contours Intermediate Wells

Figure 4-11 September, 29 2010 High Tide Groundwater Contours Deep Wells

Figure 4-12 October 8 and 9, 2010 Groundwater Elevation Tidal Cycle Monitoring Results Shallow Wells

Figure 4-13 October 8 and 9, 2010 Groundwater Elevation Tidal Cycle Monitoring Results Intermediate Wells

Figure 4-14 October 8 and 9, 2010 Groundwater Elevation Tidal Cycle Monitoring Results Deep Wells

Figure 5-1 Visible Impacts Observed Between Ground Surface and 0 ft NAVD88

Figure 5-2 Visible Impacts Observed Between Elevation 0 and -15 ft NAVD88

Figure 5-3 Visible Impacts Observed Between Elevation -15 and -30 ft NAVD88

Figure 5-4 Visible Impacts Observed Between Elevation -30 and -45 ft NAVD88

Figure 5-5 Visible Impacts Observed Between Elevation -45 ft and -72 ft NAVD88

Figure 5-6 Analytical Detections Summary Subsurface Soil Samples

Figure 5-7 Groundwater Analytical Detections Summary - Shallow Wells

Figure 5-8 Groundwater Analytical Detections Summary - Intermediate Wells

Figure 5-9 Groundwater Analytical Detections Summary - Deep Wells

Figure 5-10 Analytical Detections Summary for Ambient Air, Indoor Air, and Sub Slab Soil Vapor

Figure 7-1 QHEA Conceptual Site Model

List of Acronyms

µg/L	micrograms per liter
ASP	Analytical Services Protocol
AST	Aboveground Storage Tank
ASTM	American Society for Testing Materials
AWQSGVs	Ambient Water Quality Standards and Groundwater Values
BAAC	Brooklyn Alcatraz Asphalt Company
BTEX	benzene, toluene, ethylbenzene, and xylene
BUG	The Brooklyn Union Gas Company
CAMP	Community Air Monitoring Program
COCs	Constituents of Concern
COIs	Constituents of Interest
CRDL	Contract Required Detection Limit
CSM	Conceptual Site Model
CSO	combined sewer outfall
DER	Department of Environmental Remediation
DMU	Detached Mail Unit
DNAPL	Dense Non-Aqueous Phase Liquid
DO	Dissolved Oxygen
DUSR	Data Usability Study Report
EM	Electromagnetic
F & N	Fenley & Nicol Environmental
FS	Feasibility Study
FSAP	Field Sampling and Analytical Plan
ft bgs	feet below ground surface
ft/d	feet per day
ft^3	cubic feet
FWRIA	Fish and Wildlife Resources Impact Analysis
GNL	General Notice Letter
gpm	gallons per minute
GPR	Ground Penetrating Radar
HASP	Health and Safety Plan
IDW	Investigation Derived Waste
IRM	Interim Remedial Measures
LCS	Laboratory Control Standards
MDL	Method Detection Limit
mg/kg	milligram per kilogram
mg/L	milligrams per liter
MGP	Manufactured Gas Plant
ml/min	milliliters per minute
MNA	Monitored Natural Attenuation
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MTBE	methyl tert butyl ether
mV	Millivolts
NAD83	North American Datum of 1983
NAPL	Non-Aqueous Phase Liquid
NAVD88	North American Vertical Datum from 1988

NCP	National Contingency Plan
NFA	No Further Action
NP&V	Nelson, Pope & Voorhis, LLC
NTU	nephelometric turbidity units
NY ELAP	New York Environmental Laboratory Approval Program
NYCDOS	New York City Department of Sanitation
NYCRR	New York Codes Rules and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ORP	Oxidation Reduction Potential
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PCE	Tetrachloroethylene
PID	Photoionization Detector
PPE	Personal Protective Equipment
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QHHEA	Qualitative Human Health Exposure Assessment
RCC	Resource Control Corporation
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RIWP	Remediation Investigation Work Plan
ROD	Record of Decision
RPDs	Relative Percent Differences
SCOs	Soil Cleanup Objectives
SVOCs	Semivolatile Organic Compounds
TAL	Target Analyte List
TCL	Target Compound List
TEA	Terminal Electric Acceptor
TOGS	Technical Operation Guidance Series 1.1.1
USACE	US Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
USGSA	US General Service Administration
USORD	US Government Ordinance Department
USPS	US Postal Service
UST	Underground Storage Tank
VMF	Vehicle Maintenance Facility
VOC	Volatile Organic Compounds

Professional Certification

I, Peter S. Cox, certify that I am currently a Qualified Environmental Professional as defined in 6NYCRR Part 375 and that this Remedial Investigation Report was prepared in accordance with all applicable statues and regulations and in substantial conformance with the Department of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

Signature _____ Date_____9/29/14_____

Executive Summary

This is a Remedial Investigation (RI) report for a portion of the former Metropolitan Works Manufactured Gas Plant (MGP) and the former 12th Street Holder Station, (the "Historic MGP Site"), both of which were located along 12th Street between 2nd Avenue and the Gowanus Canal in Brooklyn, Kings County, New York. The former MGP is comprised of mixed commercial uses and vacant lot parcels. Portions of the Historic MGP Site were previously investigated and remediated by FC Gowanus, LLC (FC Gowanus), and the remediated areas (referred to as "Previously Remediated Area") are not included in the scope of this RI. The portion of the Historic MGP Site evaluated during this RI is defined as the "Current Site." Collectively, the Current Site rights-of-way and other areas investigated as part of the RI are referred to as the "RI Study Area."

The RI was performed in accordance with Order on Consent and Administrative Settlement #A2-0552-0606 between The Brooklyn Union Gas Company (now d/b/a National Grid NY) and the New York State Department of Environmental Conservation (NYSDEC). The Order on Consent was executed in February 2007 in accordance with applicable guidelines of the NYSDEC, the New York State Department of Health (NYSDOH), the United States Environmental Protection Agency (USEPA), and the National Contingency Plan (NCP). The RI was conducted to complete investigation activities at the Current Site to identify sources of MGP-related impacts, delineate the extent of MGP-related impacts, determine the surface and subsurface characteristics of the Current Site and RI Study Area, and evaluate potential migration pathways and human or ecological receptors in the immediate vicinity of the Current Site. Based on the results of the investigation, the information will guide the development of efforts to address MGP-related impacts and protect human health and the environment.

The Current Site is adjacent to the Gowanus Canal. The Gowanus Canal supported the transport of bulk materials such as coal, petroleum, asphalt, and lumber, as well as the rapid growth of industry in Brooklyn and surrounding areas, and the land use adjacent to the Gowanus Canal reflected this industrialization. Many of these businesses used, stored, purchased, and/or transported products containing polycyclic aromatic hydrocarbons (PAHs) similar to those generated at MGP sites, including asphalt plants, coal yards, petroleum use/storage areas, and creosote plants. Section 2.7 of this report provides a detailed summary of former or current business operations in closest proximity to the Historic MGP Site. The Gowanus Canal is being remediated under the USEPA Superfund program, pursuant to its inclusion on the National Priorities List in 2009. National Grid will be part of a PRP Group that is being formed to address canal impacts associated with the former MGP operations, in conjunction with the USEPA's remedy for the Gowanus Canal. A Record of Decision (ROD) has been issued for the Gowanus Canal.

Site History

The Metropolitan Gas and Light Company operated the Historic MGP Site as early as 1872. Historic MGP Site buildings noted on the 1886 Sanborn map include a coal shed, several one-story buildings, and retorts, indicating that the original gas manufacturing process was coal carbonization, though a note on the map states, "Used for Storage Only", indicating that at this time gas was not being produced and the Historic MGP Site may have been used to store gas produced at another MGP. By 1888, the Site activities appear to include gas production, based on the date of construction for Holder No. 2. In 1895, the Metropolitan Works became part of The Brooklyn Union Gas Company (BUG), which was incorporated in that year.

Historical records suggest that the Historic MGP Site operated a coal carbonization process until sometime prior to 1915, by when the plant appears to have been converted to a carbureted water gas process.

Due to shortages in the base products used in the manufacture of explosives during World War I, the US Government identified existing gas works operations as a significant toluol source that was not actively utilized. To better capture these base products (including crude toluol, benzol and naphtha), the US Government initiated a program to install standardized scrubbing units at several existing metro New York area MGP plants including the Metropolitan Works, without disruption to the existing gas manufacturing and distribution systems (McGurty, 1919).

The government owned light oil recovery plant at Metropolitan Works was constructed between December 1917 and August 1918 and BUG operated the facility under contract with the US Government from October 8, 1918 (Porter, 1919) until November 22, 1918. The government owned the facility until May of 1920.

Based on available historical records, the MGP appears to have operated until sometime during the time period of 1928 to 1935 based on information contained in a 1928 Metropolitan Works BUG survey and BUG drawing 1G120 (corrected to 1935).

The eastern portion of the Historic MGP Site (Block 1007, Lots 219 and 220) and two adjacent parcels (Block 1007, Lots 1 and 218) were investigated and portions were remediated by FC Gowanus, LLC through excavation of the former oil tanks and Holders No. 1 through No. 3. In addition, approximately 44 recovery wells were installed to allow recovery of free phase non-aqueous phase liquid (NAPL). This work was completed in 2003 and allowed the eastern portion of the former MGP and the two adjacent parcels to be closed by NYSDEC in September 2003 (NYSDEC, 2003). The Lowes building supply center was constructed after the remediation was completed in this portion of the Historic MGP Site and this area is therefore not included in this RI Report.

Key Findings

The RI was conducted over multiple mobilizations between April 2010 and April 2012. The scope of work included the sampling and analysis of surface and subsurface soil, the installation and sampling of groundwater monitoring wells, collection of sub-slab soil vapor samples in areas associated with potential MGP-related contamination, and the characterization of indoor air quality in occupied structures on the Current Site. A Community Air Monitoring Program (CAMP) was conducted in accordance with regulatory guidance during all invasive activities.

The evaluation of the resulting information provides for the following findings:

- Based on visible impacts and subsurface soil analytical results, MGP-related impacts are evident in subsurface soil in three areas 1) west of the Previously Remediated Area, 2) in the vicinity of the former tar tanks along the Gowanus Canal, and 3) in the northern corner of the Lowes parking lot (Block 1007, Lot 1) adjacent to the Gowanus Canal. The vertical and horizontal extents of the visible impacts have been delineated. The vertical extent of subsurface soil analytical impacts has been delineated. The horizontal extent of subsurface soil analytical impacts has generally been delineated although the distribution, source, and extent of impacts immediately adjacent to the Gowanus Canal and along the southwestern boundary of the Current Site are uncertain. Several sources of potential contamination to the Gowanus Canal have been identified as summarized in Appendix A and include tar and MGP-related impacts. Other potential historic and current sources of impacts to the Gowanus Canal and the flushing and dredging operations within the canal complicate the interpretation of visible and analytical impacts within and adjacent to the canal.
- Groundwater samples collected from beneath the RI Study Area contain MGP-related and non-MGP related compounds at concentrations above the Ambient Water Quality Standards and

Guidance Values (AWQSGVs). The potentially MGP-related compounds that were above AWQSGVs include benzene, ethylbenzene, toluene, and xylenes (BTEX), PAHs, and limited cyanide (two locations in the shallow zone only). Compounds unrelated to MGP operations that were detected in the RI Study Area groundwater, at concentrations above the AWQSGVs, include chlorinated Volatile Organic Compounds (VOCs) and methyl tert-butyl ether (MTBE). Chlorinated VOCs were detected in the shallow, intermediate, and deep groundwater zones and MTBE was detected in the shallow and intermediate groundwater zones sampled during the RI and indicate a source(s) other than the former MGP.

- Shallow zone groundwater sample impacts are present in the vicinity of and downgradient of former MGP structures, along the southwestern property boundary, in the northern corner of Block 1007 Lot 1, and also in upgradient monitoring well MW-1S. Groundwater collected from MW-1S also contained MTBE, a gasoline additive, suggestive of an additional (non-MGP) VOC source in the RI Study Area vicinity. The Department of Sanitation (DOS) Underground Storage Tank (UST) NYSDEC Spill site (spill number 9310764/0007546) known as the "Brooklyn West 06 Site" is located east of 2nd Avenue and is upgradient from the former Historic MGP Site and may contribute to impacts detected in the sample collected from MW-1S.
- In general the greatest groundwater impacts were detected in the intermediate zone, consistent with the most visibly impacted soil horizon.
- Groundwater impacts were not noted in the groundwater collected from the intermediate and deep zones at upgradient locations MW-1I and MW-1D.
- MGP-related impacts in the deep zone groundwater appear to be limited to the area of the former tar tanks adjacent to the Gowanus Canal (MW-9D). Chlorinated VOCs (not MGP-related) appear to be more widespread than non-chlorinated VOCs. Benzene concentrations were detected at levels that marginally above the AWQSGV in the groundwater samples collected from deep wells in the parking lot north of the former MGP areas (Block 1007 Lot 1).
- Groundwater impacts are evident at the southwestern and western edge of the Current Site and along the Gowanus Canal in all of the groundwater zones investigated during the RI. No impacts were noted in either of the two wells screened below 115 feet below ground surface (ft bgs), one immediately above the Gardiners Clay and one in the Jameco Aquifer below the Gardiners Clay.

- Carbon disulfide was the only MGP-related constituent detected in sub-slab vapor above NYSDOH's background indoor air concentration values. However, carbon disulfide was not detected in a paired indoor air sample. In addition, there were detections of various constituents in the ambient air samples consistent with urban background concentrations. Based on the collected data, there were no MGP-related constituents detected in indoor air above background concentrations. However, four non-MGP-related compounds (1,2-dichloropropane, 1,4-dichlorobenzene, chloroform, and trichlorofluoromethane [Freon 11]) were detected in indoor air above background concentrations. In general, the concentrations of VOCs detected in the indoor air are comparable with those detected in the ambient air and concentrations typically found in air of non-residential buildings. The results from indoor air samples at locations within occupied structures support the conclusion that subsurface impacts are not posing a potential risk to Current Site workers.
- A qualitative human health assessment conducted using data from the RI concluded that the principal potential for risk from exposure to MGP residuals is associated with construction workers who may perform excavation work on and off the Current Site. The potential risk can be mitigated through the use of appropriately trained staff and a site-specific health and safety plan and site

management plan. Potential human health risks from the Gowanus Canal are addressed in the USEPA's ROD for the canal, issued in 2013.

With the observations and data presented in this report, an evaluation of conditions at the Current Site has been performed fulfilling the requirements of the RI Work Plan and Addenda. Following approval of this report by the NYSDEC and NYSDOH, a Feasibility Study (FS) evaluation of remedial options will be prepared for portions of the Current Site where No Further Action (NFA) conditions cannot be established.

1.0 Introduction

On behalf of National Grid, AECOM has conducted a Remedial Investigation (RI) of portions of the former Metropolitan Works manufactured gas plant (MGP) site, including the former 12th Street Holder Station (the "Historic MGP Site), and prepared this RI Report to present the results. The Historic MGP Site was located along 12th Street, between 2nd Avenue and the Gowanus Canal in Brooklyn, Kings County, New York (Figure 1-1).

Portions of the Historic MGP Site were previously investigated and remediated by FC Gowanus, LLC (FC Gowanus), and these activities were not included in the RI described herein. The portion of the Historic MGP Site evaluated during this RI is defined as the "Current Site." Collectively, the Current Site, rights-of-way, and other areas investigated as part of the RI are referred to as the "RI Study Area."

The RI was performed in accordance with Order on Consent and Administrative Settlement #A2-0552-0606 between The Brooklyn Union Gas Company (now d/b/a National Grid NY) and the New York State Department of Environmental Conservation (NYSDEC). The field investigation was designed to identify sources of MGP contamination, delineate the associated extent of impacts, determine the surface and subsurface conditions of the Current Site, and evaluate potential migration pathways and human receptors in the immediate vicinity of the Current Site.

The fieldwork for the RI was performed under NYSDEC oversight using procedures described in the NYSDEC-approved *Remedial Investigation Work Plan, Metropolitan Former MGP Site, Brooklyn, New York, NYSDEC Site No.: 224046, Index # A2-0552-0606* (RI Work Plan), dated May 2009 (AECOM, 2009). Four companion documents were prepared to detail additional procedures and protocols for the RI and were included as Appendices C through F to the RI Work Plan. Appendix C, *Field Sampling and Analytical Plan (FSAP)*, specified the field sampling procedures. Appendix D, *Quality Assurance Project Plan (QAPP),* specified the field and laboratory quality assurance/quality control procedures. Appendix E, *Community Air Monitoring Plan (CAMP)*, provided procedures to be used for the monitoring of airborne constituents during the invasive sampling tasks conducted during the investigation. Appendix F, *Site-Specific Health and Safety Plan (HASP)*, was developed to protect AECOM personnel and to make others aware of known or suspected health and safety hazards.

There were four RI Work Plan (RIWP) Addenda (No. 1 through No. 4) that were generated to investigate the subsurface conditions at both Current site and off-Current site locations. These addenda are:

- **RIWP Addendum No. 1** - Offsite at 381/539 Smith Street, Brooklyn, New York dated June 7, 2010 (AECOM, 2010)
- **RIWP Addendum No. 2** - Deep Well Installation at 126-136 2nd Avenue, Brooklyn, New York dated February 2, 2011 (AECOM, 2011a)
- **RIWP Addendum No. 3** - Lowe's Parking Lot at 118 2nd Avenue, Brooklyn, New York dated June 15th, 2011 (AECOM, 2011b)
- **RIWP Addendum No. 4** - Step-out location for 381/539 Smith Street, Brooklyn, New York dated February 9, 2012 (AECOM, 2012)

1.1 Remediation Investigation Objectives

Based on the operation of the Metropolitan Works MGP between approximately 1872 and 1935, the objectives of the RI were to:

- Evaluate the nature and extent of MGP impacts in the RI Study Area in accordance with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation. Specifically, develop the conceptual site model (CSM), delineate the areal and vertical extent of MGP source material in soils and groundwater, determine the surface and subsurface conditions of the Current Site, and identify sources of contamination, migration pathways, and potential human receptors to MGP-related residuals at locations not previously addressed by the FC Gowanus remediation.
- Perform a vapor intrusion study in accordance with New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, 2006).
- Conduct a Qualitative Human Health Exposure Assessment (QHHEA).
- Develop the dataset necessary to allow preparation of a Feasibility Study (FS) to evaluate remedial alternatives that will reduce and/or eliminate routes of exposure and the threat to public health or the environment posed by MGP-related contaminants associated with the Current Site or that have migrated beyond the FC Gowanus remedial area. The Feasibility Study shall be prepared in a manner consistent with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation.

1.2 Scope of Work

The scope of work for the RI and RI Addenda, as defined in the NYSDEC-approved Work Plans and subsequent correspondence, includes:

- Pre-investigation coordination/meetings to facilitate implementation of the RI
- Locating underground utilities in the investigation areas
- Community air monitoring during invasive drilling activities
- Surface soil sampling and analysis
- Advancement of soil borings and collection of subsurface soil samples for analysis
- Monitoring well installation
- Monitoring well development
- Groundwater sampling
- Aquifer slug testing at select well locations
- Groundwater elevation gauging and tidal monitoring during various tidal cycles within the adjacent Gowanus Canal
- Performance of a vapor intrusion study at two buildings located within the Current Site
- Surveying of all new sampling points, wells, and borings
- Investigation residuals management

The data presented in this RI Report were collected over four site mobilizations performed during:

- April through October 2010 – Completed initial RI scope of work
- April 2011 – Completed RI Addendum No. 2 scope of work
- September through October of 2011 – Completed RI Addendum No. 1 and No. 3 scopes of work
- March through April of 2012 – Completed RI Addendum No. 4 scope of work

1.3 Report Organization

This RI Report is organized into nine sections following this introduction.

- Section 2 describes the RI Study Area and adjacent areas, and presents historical ownership and operational summary information.
- Section 3 describes the National Grid RI field investigation activities performed in the RI Study Area.
- Section 4 summarizes information regarding the RI Study Area topography, geology, hydrogeology, and the observed extent of MGP-related residuals.
- Section 5 summarizes the results of the laboratory analyses for environmental media sampled during the investigation.
- Section 6 provides a summary of the nature and extent of visible and analytical impacts in the RI Study Area.
- Section 7 presents a qualitative human health exposure assessment for the RI Study Area.
- Section 8 presents the conclusions for the RI.
- Section 9 presents recommendations for additional actions.
- Section 10 provides a list of references cited in this report.

Photographs, tables, and figures are included in sections that immediately follow the report text.

Appendices to this RI Report include the following:

- Appendix A –Includes a summary of documents reviewed (Table A-1), Sanborn maps, previous soil boring and monitoring well logs, historical Brooklyn Union Gas Company (BUG) drawings, historical site photographs, historical newspaper articles, and summaries of historic and/or current businesses using tar and PAHs along the canal (Figure A-1)
- Appendix B – Test Pit Excavation Logs
- Appendix C – Soil Boring Logs and Well Construction Logs (Current and Historical)
- Appendix D – Well Development Logs
- Appendix E – Slug Testing Data Analysis
- Appendix F – Groundwater Collection Records
- Appendix G – Air Quality Monitoring Records
- Appendix H – Indoor Air Survey Forms

- Appendix I – NYSDEC Analytical Services Protocol (ASP) Category B Deliverable Data Packages (CD-ROM disk)
- Appendix J – Data Usability Summary Reports (CD-ROM disk)

2.0 RI Study Area Description and History

This section presents a description of the RI Study Area, information regarding Historic MGP Site ownership and operational history, and the results of previous investigations and remedial work performed. A summarized review of historical photographs, historical topographic maps, historical drawings, Sanborn maps, and aerial photographs for these and other local properties is provided in Table 2-1.

2.1 Historic MGP Site Description

The Metropolitan Works former MGP Site was historically located at 124 – 136 2nd Avenue, Brooklyn, Kings County, New York 11215, east of the Gowanus Canal, between the Gowanus Expressway (Interstate 278) and the New York City Transit Train Bridge and associated subway rail line. Current zoning and land use at the Historic MGP Site is commercial with parking and vacant lots. Current zoning and land use in areas adjacent to the Historic MGP Site include a mixture of commercial, parking, industrial, and transportation/utilities. The Historic MGP Site is bounded by the former 11th Street right of way and the 11th Street basin to the north, 2nd Avenue to the east, 13th Street to the south, and the Gowanus Canal to the west. The location of the Historic MGP Site and the surrounding area is shown on Figure 2-1. The locations of historic and current features are shown on Figure 2-2.

A portion of the Historic MGP Site was the subject of previous remedial/redevelopment activities undertaken by FC Gowanus, an independent third party developer, with NYSDEC oversight. This RI Report details investigation activities for those portions of the Historic MGP Site that were not addressed by the previous remedial/redevelopment activities, i.e., the “Current Site.” The Current Site occupies all or portions of five properties as shown below and summarized on Figure 2-3 and in Section 2. 2.

Block/Lot Number	Owner’s Name and Address	Operator’s Name and Property Address	Current Status
Block 1007 Lot 172	Hamilton Plaza Associates 560 Sylvan Avenue Englewood Cliffs, NJ 07632	Pathmark 1 – 27 12th Street Extension or 2 11th St. Brooklyn, NY 11215	A retail shopping plaza (strip mall) including a large grocery store (Pathmark) and smaller retail shops.
Block 1025 Lot 16	Hamilton Plaza Associates 560 Sylvan Avenue Englewood Cliffs, NJ 07632	Pathmark 22 – 42 12th St. or 21–41 13th St. Brooklyn, NY 11215	A parking lot, part of the retail shopping plaza occupying lot 172.
Block 1025 Lot 20	Hamilton Plaza Associates 560 Sylvan Avenue Englewood Cliffs, NJ 07632	Pathmark Hamilton Place Brooklyn, NY 11215	A parking lot, part of the retail shopping plaza occupying lot 172.
Block 1025 Lot 100	Hamilton Plaza Associates 560 Sylvan Avenue Englewood Cliffs, NJ 07632	Not Available 50 12th Street Brooklyn, NY 11215	Used as a retail parking lot selling used automobiles during the majority of the RI work. Currently a vacant, asphalt-paved lot.
Block 1025 Lot 26	Milea Associates II LLC 12-60 12th Street Brooklyn, NY 11215	Multiple vendors including NY Hardwoods and Lumber Liquidators 60-64 12th Street Brooklyn, NY 11215	Currently a one to two-story garage converted to retail stores.

2.2 Adjacent/Off-site Properties

The Current Site is bounded by the Gowanus Canal, commercial properties, former 11th Street right-of-way, and 13th Street. To the west is the Gowanus Canal, beyond which are transportation/utility use (Block 483, Lot 1) and industrial use (Block 483, Lot 11) properties. To the east are a Lowe's Supply Store (Lowe's) and 2nd Avenue, beyond which are commercial and residential properties. To the south are 13th Street, commercial properties, and the Gowanus Expressway (Interstate 278). To the north is a portion of the Lowe's parking lot, including the former 11th Street right-of-way. The properties occupied by Lowe's (Block 1007, Lots 118 and 220) and associated parking lots (Block 1007, Lots 1 and 219) were the subject of a previous remediation, by FC Gowanus, under NYSDEC prior to their current configuration. To the south and west of the Current Site lie two properties (Block 1025, Lots 1 and 52) that were previously part of the Brooklyn Alcatraz Asphalt Company (BAAC). Across the Gowanus Canal to the west is a property occupied by Greco Brothers Redi Mix Concrete located at 381/539 Smith Street (Block 483, Lot 1). A summary of the adjacent/off-site properties is presented below and provided on Figure 2-3.

Block/Lot Number	Owner's Name and Address	Operator's Name and Property Address	Current Status
Block 1007 Lots 10 and 269	NYC Department of Business Services 110 Williams Street New York, NY 10038	Not Available – Vacant Lot 12th St. Brooklyn, NY 11215	Part of the retail shopping plaza. Parcel contains a permanent sewer easement.
Block 1025 Lot 18	Hamilton Plaza Associates 560 Sylvan Avenue Englewood Cliffs, NJ 07632	Pathmark Hamilton Place Brooklyn, NY 11215	Part of the retail shopping plaza as part of the parking lot. Parcel contains an easement.
Block 1007 Lot 118	RRG Gowanus Canal, Inc. and Forest City Master Associates III, LLC	Lowes 118 2nd Avenue Brooklyn, NY 11215	One-story retail store for Lowe's
Block 1007 Lot 220	RRG Gowanus Canal, Inc. and Forest City Master Associates III, LLC	Lowes 118 2nd Avenue Brooklyn, NY 11215	One-story retail store for Lowe's
Block 1007 Lot 1	RRG Gowanus Canal, Inc. and Forest City Master Associates III, LLC	Lowes 118 2nd Avenue Brooklyn, NY 11215	Vacant lot used for parking
Block 1007 Lot 219	RRG Gowanus Canal, Inc. and Forest City Master Associates III, LLC	Lowes 118 2nd Avenue Brooklyn, NY 11215	Vacant lot used for parking
Block 1025 Lot 1	Hamilton Plaza Associates 560 Sylvan Avenue Englewood Cliffs, NJ 07632	Pathmark Hamilton Place Brooklyn, NY 11215	Part of the retail shopping plaza as part of the parking lot. Parcel contains an easement.
Block 1025 Lot 52	Gloria Farran and Iron Commercial Realty, LLC	Not Available – Vacant Lot 65 13th Street Brooklyn, NY 11215	Vacant lot
Block 480 Lot 1	Smith Street Properties, LLC.	Bayside Fuel Oil Depot 527 Smith Street Brooklyn, NY 11231	Buildings (4) on property, fuel oil terminal
Block 483 Lot 1	381 Hamilton Avenue Corp. 87-13 Rockaway Blvd.	Greco Brothers Redi Mix Concrete 381/539 Hamilton Avenue Brooklyn, NY 11215	Concrete plant
Block 483	539 Smith Street Realty	Greco Brothers Redi Mix	Concrete plant

Block/Lot Number	Owner's Name and Address	Operator's Name and Property Address	Current Status
Lot 11		Concrete 551 Smith Street Brooklyn, NY 11231	
Block 483 Lot 20	539 Smith Street Realty	Benson Scrap Iron and Metal 543 Smith Street Brooklyn, NY 11231	Metal scrap yard
Block 1020 Lot 1	City of New York 127 2nd Avenue Brooklyn, NY 11231	City of New York Department of Sanitation 127 2nd Avenue Brooklyn, NY 11231	New York City Department of Sanitation (NYCDOS)
Block 486 Lot 18	New York City Fire Department	252 Lorraine Street Brooklyn, NY 11231	New York City Fire Department

2.3 Current Site Topography and Drainage

The topography of the Current Site is relatively flat with an elevation of approximately 10 ft North American Vertical Datum 1988 (NAVD88) and gently sloping from east to west, from 2nd Avenue to the Gowanus Canal.

Nearly all the Current Site is covered by buildings or pavement. Therefore, little to no precipitation is captured through infiltration, but instead flows across the Current Site from east to west towards the Gowanus Canal via sheet flow, and is captured by an onsite storm water drainage system. The discharge point for the storm water management system at the Current Site, composed of catch basins connected by buried pipe, is the Gowanus Canal, a NYSDEC Class D (SD) water body (the most degraded saline water body classification; [GEI, 2007]), designated for fishing and fish survival.

The Gowanus Canal is a tidally influenced channel that opens to Gowanus Bay and Upper New York Bay (USEPA, 2012). The canal experiences a semidiurnal tidal cycle with a vertical tidal range from 4. 7 to 5.7 feet (USEPA, 2012). The only fresh surface water inflow to the canal are wet-weather combined sewer outfall (CSO) and stormwater discharges (USEPA, 2012) making up 90% of the freshwater flow. Because of its narrow width, limited freshwater input and enclosed upper end, the canal has low current speeds and limited tidal exchange with Gowanus Bay (USEPA, 2012). Circulation is enhanced by the addition of water from the Flushing Tunnel located at the head of the canal, when it is operating (USEPA, 2012). The estimated annual discharge of CSOs to the Gowanus Canal in 2008 was approximately 122. 6 million gallons annually to the north of the Union Street Bridge (GEI, 2012).

2.4 Regional Geology

According to P. E. Misut and Jack Monti Jr.'s, 1999 article, "Simulation of ground-water flow and pumpage in Kings and Queens Counties, Long Island, New York," in the U. S. Geological Survey Water-Resources Investigations Report 98-4071, the bedrock throughout the region consists of undifferentiated gneiss, schist, and pegmatite. The crystalline bedrock exhibits a soft, clayey, weathered zone up to 100 ft thick. Based on local control points, bedrock at the Current Site is estimated to be at depths greater than 160 feet below ground surface (ft bgs). The bedrock is relatively impermeable, with water transmitted along faults and fractures.

According to Herbert Buxton and Peter K. Shernoff's 1999 article, "Ground-Water Resources of Kings and Queens Counties, Long Island, New York," United States Geological Survey, Water Supply Paper 2498, unconsolidated deposits overlying crystalline bedrock include the Lloyd Sand Member of the Raritan Formation, which acts as an aquifer and consists mainly of deltaic deposits of fine to coarse quartzose sand interbedded with gravel, clay and silt. The unit ranges from 0-300 feet thick and from 90-825 feet below sea level. The Lloyd Sand Member yields up to 2000 gallons per minute (gpm) in some wells. Specific capacities are as high as 44 gpm per foot of drawdown. Water within the aquifer is often under artesian pressure and the horizontal hydraulic conductivity is reported to be in the range of 33-75 feet per day (ft/d) (Misut and Monti, 1999). According to (Misut and Monti, 1999), the Lloyd Sand Member is locally absent in King's County near New York Bay in the area of the Current Site.

The Clay Member of the Raritan Formation, which acts as a confining unit to the underlying Lloyd Sand aquifer, consists of gray, white, red or purple deltaic clay and silty clay and some interbedded layers of sand and gravel. The unit ranges from 0-200 feet thick and from 30-650 feet below sea level (Buxton and Shernoff, 1999). The Clay Member is an impermeable confining unit. Local lenses and layers of sand and gravel with moderate to high permeability are encountered in some areas. The vertical hydraulic conductivity is 0.001 ft/d (Misut and Monti, 1999). According to (Misut and Monti, 1999), the Clay Member of the Raritan Formation is either very thin or locally absent in King's County near New York Bay in the area of the Current Site.

The Jameco Gravel, which acts as an aquifer, overlies the Clay Member of the Raritan Formation and consists of coarse sand and gravel with some cobbles and boulders consisting of dark brown and dark gray igneous, metamorphic, and sedimentary rocks. The unit ranges from 0-200 feet thick and from 90-240 feet below sea level (Buxton and Shernoff, 1999). The Jameco Gravel is highly permeable and may yield as much as 1,500 gpm. Specific capacities are as high as 135 gpm per foot of drawdown. Water is often under artesian pressure and the horizontal hydraulic conductivity is reported to be in the range of 200-300 ft/d (Misut and Monti, 1999). According to (Misut and Monti, 1999), the Jameco Gravel is believed to be present immediately above crystalline bedrock at the Current Site.

The Gardiners Clay, which acts as a confining unit to the underlying Jameco Gravel, is a greenish-gray clay and silt with some interbedded sand and gravel. The unit ranges from 0-150 feet thick and from 40-200 feet below sea level (Buxton and Shernoff, 1999). The Gardiners Clay is the principal confining unit in the region. Locally, the Gardiners Clay may contain moderate to highly permeable sand and gravel lenses. The vertical hydraulic conductivity ranges from 0.001-0.0029 ft/d (Misut and Monti, 1999).

The Upper Pleistocene glacial deposits, which act as an aquifer overlying the Gardiners Clay, include terminal moraine deposits, ground moraine deposits, and glacial outwash deposits consisting of clay, sand, gravel and boulders. The unit ranges from 0-300 feet thick (Buxton and Shernoff, 1999). The hydrogeologic properties of the Upper Pleistocene glacial deposits (upper glacial aquifer) are highly variable. The till has low permeability, the sand and gravel part of the outwash is highly permeable. Yields of individual wells are as much as 1,700 gpm. Specific capacities of wells are as much as 109 gpm per foot of drawdown and the horizontal hydraulic conductivity ranges from 20-80 ft/d in the moraines to 200-300 ft/d in the outwash (Misut and Monti, 1999).

The recent Holocene deposits are grouped with the Upper Pleistocene glacial deposits and consist of tan to white beach sand and gravel, dune sand and gray bay bottom silt and clay deposits. The beach and dune deposits are well stratified and well sorted. The recent deposits also contain fill made up of earth, rocks, concrete fragments, ash, rubbish and hydraulic fill (Misut and Monti, 1999). The sandy beds of the Holocene deposits have moderate to high permeability beneath barrier beaches (Misut and Monti, 1999).

2.5 Pre-MGP History

The following sections summarize the Historic MGP Site history and usage based on a review of Sanborn maps covering the 110 year period of 1886 through 1996, aerial photographs, historical survey maps, historical BUG drawings, and historical photographs, some of which were not available during preparation of the RIWP (AECOM, 2009). A summary of the historical information is provided in Table 2-1 and provided on Figure 2-2.

The 1776 survey of the Gowanus Creek shows that the area surrounding the creek was a tidal marshland that extended to the east of the current location of 2nd Avenue prior to development of the RI Study Area. A figure showing the area of the former MGP prior to development is shown on Figure 2-4. Before the mid-1840s, the creek and its tributaries were dammed and used primarily to power tide mills (USEPA 2012). By the mid-1840s, Brooklyn was rapidly growing and the Gowanus marshes were considered to be a detriment to local development (USEPA 2012). In 1847 and 1848, plans to construct basins along the creek to drain the marshlands for development were drafted. The Gowanus Canal served as an open sewer when it was initially constructed in the late 1860s (USEPA 2012). By the late 1870s, sewers entering the canal carried a combination of household waste, industrial effluent, and stormwater runoff (USEPA 2012). By the 1880s the canal was constructed to its current configuration. In 1911, New York City began operating the Gowanus Canal Flushing Tunnel to address the canal's serious water quality issues (USEPA 2012). The Flushing Tunnel connects the head of the canal with Buttermilk Channel in Upper New York Bay (USEPA 2012). It was designed to improve circulation and flush pollutants from the canal by pumping water in either direction (USEPA 2012). The Flushing Tunnel operated until the mid-1960s, when it fell into disrepair (USEPA 2012). The Flushing Tunnel was rehabilitated and reactivated in 1999 by the New York City Department of Environmental Protection (NYCDEP) but was determined to be inadequate. In July 2010, the Flushing Tunnel was shut down by NYCDEP to perform facility improvements in an effort to improve operation of the Tunnel. The Flushing Tunnel resumed operation in May of 2014.

2.6 MGP Site History

The Historic MGP Site was operated by the Metropolitan Gas and Light Company as early as 1872. Historic MGP Site buildings noted on the 1886 Sanborn map include a coal shed, several one-story buildings, and retorts, indicating that the original gas manufacturing process was coal carbonization, though a note on the map states, "Used for Storage Only", indicating that at this time gas was not being produced and the Historic MGP Site may have been used to store gas produced at another MGP. By 1888, gas production appears to have resumed, based on the date of construction for Holder No. 2. In 1895, the Metropolitan Works became part of The Brooklyn Union Gas Company (BUG), which was incorporated in that year.

Several gas holders were constructed at the Historic MGP Site over its history. Gas holders typically stored gas that was produced at an MGP. In general, there were two classifications of holders: relief holders, where gas was held and cooled prior to purification, and distribution holders, where purified gas was held. Holder No. 1 (320,000 cubic feet (ft^3) capacity, 2-lifts) was constructed with a subsurface brick tank and a concrete foundation in 1872, based on internal BUG documentation (BUG Drawing 1-G-120 and Gas Holder Inventory Sheet dated December 31, 1915). Holder No. 2 (370,000 ft^3 capacity and 2-lifts) was built in 1888 and had a below ground brick tank and a concrete foundation. Holder No. 3 (575,000 ft^3 capacity and 3-lifts) was constructed in 1891 with a concrete foundation and above ground steel tank. In 1903, a 105,000 ft^3, 2-section relief holder (Holder No. 4), with an above ground steel tank and concrete foundation was constructed. Holder No. 5, 5-lifts with 5 million ft^3 capacity, was built in 1904 with an above-ground, steel tank and concrete foundation. Holder No. 5 remained in use after decommissioning of the Metropolitan works MGP and would have held gas produced off-site at another MGP.

Historical records suggest that the Historic MGP Site operated a coal carbonization process until sometime prior to 1915, by when the plant appears to have been converted to a carbureted water gas process, and included oil storage tanks located east of Holder No. 2. A BUG photograph (No. 1285) dated August 17, 1910 (Appendix A) shows the roof removed from the generator house (which was apparently under construction/renovation), suggesting that the conversion of the plant to the water gas process was ongoing in 1910.

Holder No. 4 was used as a relief holder from its construction (1903) until approximately 1915, after which the Sanborn Map labeled it a hydrogen holder. A 1928 survey of the Historic MGP Site indicates that Holder No. 4 was no longer in use by this time, and Holder No. 1 was serving as the relief holder. After demolition of the MGP, Holder No. 4 was used as a coal bunker until approximately 1957, as this was the year the property was sold. The re-use of former Holder No. 4 as a coal bunker suggests that any MGP residuals present in the above-ground Holder No. 4 tank were significantly removed. Based on available historical records, the MGP appears to have operated until sometime during the time period of 1928 to 1935 based on information contained in a 1928 Metropolitan Works BUG survey and BUG drawing 1G120 (corrected to 1935).

Military By-Products Processing Plant

Due to shortages in the base products used in the manufacture of explosives during World War I, the US Government identified existing gas works operations as a significant source of those materials that were not actively utilized. The primary base products produced during distillation of coal and gasification of petroleum distillates used for enriching the gas (water gas) included:

- Light Oil
- Benzol
- Toluol
- Xylol

To better capture these base products (primarily crude toluol), the US Government initiated a by-products recovery program to install standardized scrubbing units at several existing metro New York area MGP works plants including the Metropolitan Works, without disruption to the existing gas manufacture and distribution systems (McGurty, 1919). The construction of the by-products recovery facilities at the existing MGPs, including Metropolitan Works, was completed by contractors working for the US Government and directed by the Ordinance Department (USORD) of the US Government under a unit developed in 1917 known as the “Toluol Unit,” for benefit of the US Government.

The government provided material such as wash oil for use in the plants, paid direct materials and labor costs, as well as overhead and administrative and general expenses associated with the operation of the by-products process plants (USORD, July 2, 1918). The government also made decisions regarding the disposal of wastes, such as crude still residue, and various by-products (USORD, June 5, 1918). The United States provided indemnities to BUG affording “full and complete protection in the carrying out of the terms of this contract and of the directions of the Contracting Officer.” The United States “hereby agrees, for and during the term of this agreement, to indemnify and hold the Contractor harmless from any and all costs, charges and expenses including liability for damages imposed upon the Contractor by the municipal authorities in any permit for or consent to the construction, existence, use, maintenance, operation, or removal of any mains, pipes, conduits, poles, or any other sub or super structures.”

The United States equipped the Metropolitan Works by-products recovery plant with a gas scrubbing system, wash oil stripping system, light oil fractionating equipment, storage facilities, and additional equipment (USORD, January 4, 1918). The Metropolitan Works by-products recovery plant was rated to scrub 12,000 million cubic feet of water gas per day. The estimated annual pure toluol production was 295,000 gallons. Between August and November 1918, the Ordnance Department produced 467,687 gallons of light oil, 137,789 gallons of crude benzol, 119,728 gallons of crude toluol, and 90,295 gallons of solvent naphtha at the Metropolitan Plant (USORD, n. d.).

The government-owned light oil recovery plant at Metropolitan Works was constructed between December 1917 and August 1918 and BUG operated the facility under contract with the US Government from October 8, 1918 (Porter, 1919) to November 22, 1918. The government owned the facility until May of 1920. The by-products recovery facility was primarily located along 2nd Avenue as outlined on Figure 2-2. Based on a 1921 BUG drawing (2-G-126), a still house was present at the intersection of 12th Street and 2nd Avenue, associated storage tanks were noted at the corner of 11th Street and 2nd Avenue, and tower scrubbers (listed as not used) were noted adjacent to and north of the No. 2 Gas Holder (Figure 2-2). One sewer connection at the Metropolitan By-Products Recovery Plant is depicted on Brooklyn sewer maps.

The Ordnance Department decided to attempt to sell the government-owned toluol plants as salvage in or about December 1919. On May 28, 1920, the United States entered into an agreement with McLoughlin for the sale of the government-owned equipment at the Metropolitan Plant.

2.7 Post-Historic MGP Site History

A hand-written note on BUG drawing 1G120, dated 1909 and revised in 1935, states that in 1935, the Metropolitan Works between 12th and 13th Streets was demolished, and some buildings south of 12th Street, including Holder No. 5 continued to operate as “BUG 12th Street Holder Station.” The 12th Street Holder Station is identified on all aerial Historic MGP Site figures. The Holders No. 1, No. 2, No. 3, and No. 4 were purged and disconnected as noted on the BUG drawing #1G120, dated 1909, corrected in 1935. In the 1928 BUG survey of the Metropolitan Works, Holders 2, 3, and 4 are noted “not used” although they are shown as being present. It is unknown whether the Holders No. 1, 2, 3, and 4 were disconnected in or prior to 1935. BUG drawing 1G-120, dated 1937 and corrected to 1956, and a 1938 Sanborn Map confirm the 12th Street Holder Station designation. The 1938 Sanborn Map also labels Holder No. 4 as “to be coal bunker” and shows Holder No. 5 as being present. Holders 1 through 3 are no longer present on the 1938 Sanborn Map indicating that they were likely demolished sometime between 1935 and 1938.

BUG drawing 1G-120 for the 12th Street Holder Station, dated 1937 and corrected to 1956, includes handwritten notes indicating that:

- Block 1007, Lot 172 was sold on August 22, 1957
- Block 1007, Lot 118 was sold on May 18, 1948
- Block 1007, Lot 219 was sold November 15, 1949
- Block 1025 Lot 16 (coal storage, Holder No. 5, 12th Street Holder Station) was sold on January 31, 1958
- The parcel between the 12th Street Holder Station and 2nd Avenue, constituting a portion of current Block 1025, Lot 26, was sold on August 30, 1948 and January 31, 1958

By 1950, the northeastern portion (Block 1007, Lot 118) of the Historic MGP Site was listed as housing the US Post Office Garage and Repair shop, with some former MGP structures (e. g., Holder No. 4 and a boiler

house) located closer to the Gowanus Canal on the western portion of the Historic MGP Site. The southern portion of the Historic MGP Site, also identified as the 12th Street Holder Station, still housed Holder No. 5 and the exhaust house, with the parcel listed as a storage area for old electric cables.

The 1969 Sanborn map indicates BUG as the owner of parcels on Block 1025 (the 12th Street Holder Station), where Holder No. 5 was still shown to be present. All other above ground structures related to the former MGP operations are no longer present. The 1969 Sanborn map also shows a food products warehouse present adjacent to the Gowanus Canal, on current Block 1007, Lot 172. By 1977, the Sanborn map indicated that all structures from the former MGP had been removed from the surface of the Historic MGP Site. Sanborn maps from 1982 through 1996 show no major changes in the Historic MGP Site usage, with the US Postal Service (now demolished) and formerly present in the current Lowes property (Block 1007, Lots 1, 118, 219, and 220), the food products warehouse (currently a Pathmark Supermarket), and parking covering the footprint of the former MGP on Block 1007, Lots 16, 18, 172, and 269. The portion of the MGP south of 12th Street, also identified as the 12th Street Holder Station, on Block 1025, Lot 26 was developed into a two story building which remains present. The building housed a former maintenance garage and is currently used for mixed retail and office space.

2.8 Historic Land Use along the Gowanus Canal

The Gowanus Canal supported the transport of bulk materials such as coal, petroleum, asphalt, and lumber, as well as the rapid growth of industry in Brooklyn and surrounding areas, and the land use adjacent to Gowanus Canal reflected this industrialization. Figure A-1 in Appendix A under the subsection “Third Party Sites with Historical Usage of PAHs and Tar” provides a summary of historic and/or current businesses using tar and PAHs along the Gowanus Canal in proximity to the Metropolitan former MGP. Operations identified as potential sources of PAHs and tar in the Historic MGP Site area can be divided into the following general categories:

- Asphalt plants
- Petroleum use/storage
- Coal yards
- Creosote plant

The closest former or current business operations to the Metropolitan Historic MGP Site outlined on Figure A-1 include:

- The BAAC bordering the Historic MGP Site to the west and east
- The Cranford Asphalt Company bordering the Historic MGP Site to the northeast
- The New York City Transit Authority property to the west and across the canal from the Historic MGP Site
- The US Postal Service (USPS) and US General Service Administration (USGSA) to the east of the Historic MGP Site
- Cibro Petroleum Products and Bayside Coal and Fuel Oil Company (Bayside) to the northwest and across the canal from the Historic MGP Site

A summary of key properties in proximity to the Historic MGP Site is provided in the following paragraphs.

Brooklyn Alcatraz Asphalt Company: The BAAC property began operations on the Gowanus Canal in or around 1903 on Block 1025, Lot 1 (Figure 2-3). A fire occurred at Brooklyn Alcatraz's facility in 1911, when hot asphalt streamed out of a supply trough and set fire to a three-story building at the site. In 1913, the company had a substantial contract with New York City (NYC) for street paving. The earliest map of the facility located is a 1915 Sanborn map (Appendix A), which depicts a structure for storage, a garage, a blacksmith and repair shop on the northerly side of the property. The main processing building was located on the southerly portion of the site, and contained asphalt tanks (located over boilers), dryers, and an engine room. The process area had an earth floor. A large iron tar tank was located near Gowanus Canal at the northeasterly side of the process building. A coal bin was located adjacent to the process building on the northwesterly side, and a 20,000 gallon asphalt tank a located on the southerly side of the process building. Brooklyn Alcatraz also had some office space across 13th Street and an additional area located further inland which contained additional garage space, cooperage area, and a feed store room.

In 1926 the US Army Corps of Engineers (USACE) reported that Brooklyn Alcatraz used the wharf for receiving cement, asphalt, sand, and broken stone. The site reportedly had a timber bulkhead with earth fill, and the company had a derrick with a 55-foot boom and a 1-ton bucket.

The 1938 Sanborn map indicates that Brooklyn Alcatraz's facility was not in operation at the time the insurance inspector visited the site. However, BAAC reportedly was caught up in a City paving fraud in 1940, so it appears operations may have continued past 1938; however, in the 1942 survey the USACE indicated that the asphalt plant structures had been removed during the construction of the Hamilton Avenue Bridge. Brooklyn Alcatraz's property was sold by court order in 1944.

Cranford Asphalt Company: Cranford Company began acquiring property on Gowanus Canal in 1903 and built a small asphalt plant in 1904 (Appendix A, 1904 Sanborn, expanded view north subsection) on Block 1007, Lot 1 (Figure 2-3). Historical records indicate the plant faced Ninth Street and extended along the east side of the Gowanus Canal to Tenth Street. A New York Times article reporting on a fire at the Cranford plant in May 1910 indicated that there was formerly a two-story wood framed plant building on the north side of the property containing gasoline and petroleum powered generators. Behind this building there was a three-story building used as a mill. Adjacent to the mill was a swinging crane reported to be approximately 100 feet tall. In the eastern portion of the property it was reported that the site contained approximately 500 barrels of crude oil and tar and adjacent to this area were three tanks, two 1,000 gallon capacity crude oil tanks and one 500 gallon gasoline tank. This area was reportedly saved from catching fire during the May 1910 fire that significantly damaged the plant. The company continued to acquire small pieces of property through 1911 and rebuilt their plant following the fire (Appendix A, 1915 Sanborn, expanded view north subsection). A Sanborn map from 1915 show the plant used the 11th Street basin area to off-load sand through a conveyor system. Subsequent Sanborn maps from 1922, 1928, 1938, and 1950 (Appendix A, expanded view north subsection) document the plant layout and modifications over time. Records indicate the business continued to operate through 1950. Operations ceased around 1953. The company continued to exist and leased the property to the USPS through at least 1965. Ultimately the company sold the site in 1973.

USPS and USGSA Properties: The USPS property is located at 124 and 136-138 Second Avenue and included a Vehicle Maintenance Facility (VMF), a Detached Mail Unit (DMU) facility, and support facilities. USEPA issued the General Services Administration (GSA), the agency responsible for federally owned property, a general notice letter (GNL) for the Gowanus Canal site. The initial leases for the DMU and VMF were with the United States of America. In addition, Motorola Holdings Company assigned its rights to the property to the Reconstruction Finance Corporation. GSA is the successor to the Reconstruction Finance

Corporation. However, when the government acquired title to the property between 1980 and 1983, title was placed in the USPS.

The USPS operated the DMU from 1952 to 1998. The DMU was a two-story concrete block structure, with a footprint of approximately 50,000 square feet, built on a concrete slab foundation. The slab foundation was elevated such that the first floor was raised to provide loading dock areas on the north and south sides of the building. Both floors of the building were comprised of large open areas for mail handling and distribution. A utility area was constructed on the north central side of the building. Four 10,000-gallon heating oil underground storage tanks (USTs) were located beneath the loading platform near the utility area. Additional structures on the DMU site included a two-story brick building with overhead garage doors that provided access for vehicles. A covered storage area without sides projected from the north wall of the building. Another structure on-site was a warehouse building located adjacent to the Gowanus Canal. Sanborn maps (Appendix A) indicate that historically this warehouse was used for used machinery and chemical storage. A loading dock in the building opened onto the canal. Catch basins were located in the partially paved parking area between the buildings. Consultants working for the USPS indicated that the catch basins drained into the Gowanus Canal.

The USPS operated at the VMF from 1950 to June 1992 and sold the property in 2002. The VMF was a one-story building of about 85,000 square feet, which contained the vehicle service facilities for the USPS in the area. The building was a large open drive-through structure that included service bays for vehicle maintenance. It was a concrete block structure, built on a concrete slab foundation, and had a partial basement. The building included a vehicle wash apparatus, spray painting booth, USTs, aboveground storage tanks, and vehicle fuel pumps and storage tanks. A boiler room was located on the south side of the building, which had a floor drain for boiler blow-down. The facility contained numerous floor drains in the vehicle service area and a sub-grade vault, containing an oil-water separator, which consultants working for the USPS believed were connected to the city's combined sewer system. In the spring of 1990, USPS personnel discovered a blockage in the sewer lines on site. The drain lines were "snaked out" and a "stoppage" discovered which "indicated the likelihood of a break in the line somewhere under the building." Moreover, when City personnel were cleaning out the street sewer lines in October 1990, oil was found flowing into the City's sewers from the VMF sewer connection. USPS personnel informed USPS' consultant (Rizzo) that the drain lines were snaked and the oil/water separator was cleaned on December 1, 1990.

Bayside Coal and Fuel Oil Company: Bayside operates at two sites on the Gowanus Canal: the Bond Street Terminal and the Smith Street Terminal. The Smith Street Terminal is located on the easterly side of the Gowanus Canal north of Hamilton Avenue and closest to the former MGP. The address is 503-527 Smith Street (Block 480, Lots 1 and 8). Bayside operates a bulk petroleum storage and distribution facility at this site. Bayside's operations at this site began in 1994 and continue to the present.

Bayside receives petroleum products at the Smith Street Terminal by barge via two 8-inch and four 6-inch pipelines that extended from the wharf to three steel storage tanks with a total capacity of 48,400 barrels. An aboveground diesel tank was installed in 2001. The storage tanks identified at the site are:

- Tank 001, 500,000 gallons, underground, #6 fuel oil, installed in 1946
- Tank 002, 390,012 gallons, underground, #6 fuel oil, installed in 1946
- Tank 003, 200,004 gallons, underground, #4 fuel oil, installed in 1946
- Tank 004, 448,182 gallons, aboveground, #2 fuel oil, installed in 1972
- Tank 005, 448,182 gallons, aboveground, #2 fuel oil, installed in 1972

- Tank OBF1, 3,000 gallons, aboveground, #2 fuel oil, installed in 1992
- Tank GDF1, 275 gallons, aboveground, diesel, installed in 2001
- The treatment system at the site consists of an oil/water separator with a 6,000-gallon UST pre-separator holding tank and 5,000-gallon UST spill containment tank

Since operations at the Smith Street Terminal began, Bayside Depot has moved approximately 30 to 40 million gallons of petroleum products per year.

In September of 1994, Bayside Depot entered into an agreement to operate the terminal while 527 Smith Street, Inc. retained ownership of the terminal and continued the remediation (see following sentences). In July 1996, Bayside Depot acquired the terminal and entered into a Consent Order with NYSDEC to continue the remediation work. At the time Bayside Depot entered into the Consent Order, ongoing remediation efforts at this time included pumping floating product from 10 monitoring wells.

In December 1996, Bayside's consultant, Resource Control Corporation (RCC), submitted a Remedial Action Plan to the NYSDEC for construction and installation of a product recovery system at the terminal. RCC identified a hydrocarbon plume that covered the central, northwestern, and southeastern portions of the property. The consultant estimated that there was 10,200 gallons of liquid phase petroleum (i.e., "product") in the plume. Pumping continued and by July 2003, RCC's review of the product in the monitoring wells indicated the existence of a single isolated plume in the northern portion of the site. The plume's highest product thickness was 0. 95 feet in well GT-07. In October 2003, RCC informed the NYSDEC that the product recovery system had recovered a significant amount of oil from the ground and oil only sporadically appeared in the wells. As a result, RCC operated the recovery system only a few times a week to remove product from the wells.

In September 2004, Bayside's new consultant, Fenley & Nicol Environmental (F & N), examined all existing monitoring wells for the presence of liquid phase hydrocarbons and found two areas of product on the site. Results of later sampling events characterized # 2 fuel oil type hydrocarbons in the plume in the easterly area of the site, near the Gowanus Canal. The second area of product was located in the plume on the westerly side of the site, near Smith Street, which contained relatively high viscous # 6 fuel oil type carbons. By December 2004, F & N stated that the overall product thickness beneath the site had begun to decrease.

Remediation activities continued but in May 2009, the NYSDEC noted that the thickness of the product in MW-5 had risen from 0. 2 feet to 6.8 feet in just two months and informed Bayside Depot that this increase may indicate a new discharge. The last quarter of testing in 2009 showed only one well with product and MW-5 with trace levels of floating product. Based on these results, F & N stated that separate phase hydrocarbons beneath the site had been sporadic and did not follow a pattern. The consultants concluded that the tidal action of the Gowanus Canal might be influencing the behavior of the residual product level in the wells.

Operations and Maintenance activities related to the ongoing remedial actions continued at the Bayside property until at least 2010.

Two additional properties in proximity to the Historic MGP Site with known hydrocarbon releases include:

- A NYSDEC spill number (07-00373) was identified for the former maintenance garage (address of 60 12th Street) to address a release from USTs including (1) 3,000 gallon diesel tank and (1) 3,000

gallon gasoline tank. Documented soil and groundwater impacts include volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and MTBE.

- One adjacent property identified during a records search is the NYC Department of Sanitation (DOS) UST NYSDEC Spill site (spill number 9310764/0007546), known as the "Brooklyn West 06 Site", with an address of 127 2nd Avenue. This property is east of 2nd Avenue adjacent to the eastern edge of the Lowes building and is upgradient from the Historic MGP Site. Available data indicates a multi-phase extraction system is operating at the NYCDOS property. The system is recovering VOC impacted groundwater with evidence of free-phase petroleum at a minimum of one well location.

Other properties with known or suspected historical uses of PAHs and/or tar in proximity to the Historic MGP Site include:

- The former Barrett Manufacturing plant at Halleck and Smith Streets southwest and down-canal from the Site, who was a major purchaser, storer, processor, manufacturer, and shipper of coal tar products.
- The former Warren Chemical & Manufacturing Company located south of the Site adjacent to Hamilton Avenue that operated as an asphalt plant and distiller of coal tar used to manufacture tarred felt and asphalt materials.
- The former Coal Tar Product Company located at 2nd and Hamilton Avenue and later at Creamer and Smith Streets that operated as a coal tar roofing manufacturer and were a major purchaser, storer, and user of coal tar products.
- The City of New York's former asphalt plant at the 7th Street basin that used coal tar for its road repair activities.
- The City of New York's former waterfront dump and incinerator property located at the intersection of Hamilton Avenue and the Gowanus Canal.
- The former Ernest Zobel Co. and Ernest Zobel Chemical Corporation at 92-112 9th Street and 521 3rd Avenue that manufactured dyes, printing ink, and paints. Dyes were manufactured almost exclusively from coal tar products.
- The former Iridescent Dyestuff & Color Company at 247-251 Bush Street who manufactured dyestuffs made almost exclusively from coal tar products.
- The former Thompson & Company and Nelsons Brothers coal yard located at 9th and Smith Streets.

A summary of the Gowanus Canal industries with documented PAH and tar sources are provided in Appendix A.

2.9 Potential Source Areas for MGP-Related Residuals

Aside from the non-MGP sources identified in the previous section, historical research identified various former Historic MGP Site features and two adjacent off-site facilities which could have been potential source areas for MGP residuals. These potential source areas are shown on Figure 2-2 and are summarized as follows:

- Areas adjacent to former Gas Holders No. 1, No. 2, and No. 3, which were previously investigated and remediated.

- Areas adjacent to and surrounding former Gas Holders No. 4 and No. 5.
- The Former Generator House and Tar Tank No. 2 area (along the western edge of the Current Site).
- The former BAAC footprint (adjacent to the southwestern boundary of the Current Site) and the former Cranford Company asphalt manufacturer's footprint (adjacent to the northeastern boundary of the Current Site) as both properties may have received byproducts from the former MGP.

2.10 Previous and Concurrent Investigations and Remedial Work

A review of the historical information available for the Historic MGP Site was performed by Nelson, Pope & Voorhis, LLC (NP&V) with the results summarized in a report entitled "*Phase I Environmental Site Assessment*", dated May 15, 1997 (NP&V, 1997). The report included a review of the historic Sanborn Fire Insurance maps for the Historic MGP Site as well as other available information (including tax records, zoning records, and United States Geologic Society (USGS) Topographic Maps). A copy of the Sanborn maps is included in Appendix A, and a summary of the historical information obtained from these sources is presented in Table 2-1.

Previous investigation and remediation activities have occurred at the Historic MGP Site between 1997 and 2007 prior to development of the property to its current state. A list of previous reports reviewed is summarized on Table 2-2. Copies of previous reports reviewed are provided in Appendix A of the RIWP (AECOM, 2009). Figure 2-5 illustrates the pre-RI sampling and remediation locations, including recovery well locations and a summary of areas previously remediated and closed by NYSDEC.

The majority of these locations are near the southern portion of the main former MGP parcel (Block 1007, Lot 220), where three former gas holders (Holders No. 1, No. 2, and No. 3) and historic above ground oil storage tanks (ASTs) and USTs part of the former US Postal Service building Block 1007, Lot 118, were located. The eastern portion of the Historic MGP Site north of 12th Street, currently occupied by Lowe's (Block 1007, Lots 219 and 220) and two adjacent parcels (Block 1007, Lots 1 and 118), were investigated and remediated through excavation of the former oil tanks and Holders No. 1, No. 2, and No. 3. In addition, approximately 44 recovery wells were installed to allow recovery of free phase non-aqueous phase liquid (NAPL) along the downgradient boundaries of the Previously Remediated Area. This work, completed in 2003 by FC Gowanus, allowed the eastern portion of the former MGP and the two adjacent parcels (Block 1007, Lots 1 and 118) to be closed by NYSDEC in September 2003. This portion of the Historic MGP Site presently houses a Lowes home improvement center and associated parking lot.

Information provided in these previous reports was used to develop the initial scope of work for this RI. Note that prior to initiation of the RI, many of the pre-RI investigation locations, including monitoring wells, were removed due to excavation activities associated with the FC Gowanus work. The only monitoring points present when the RI was initiated included the perimeter recovery wells (RW) RW-1 through RW-44 (located along the western edge (Block 1007, Lot 119) of the Lowe's parcel and three 4-inch monitoring wells (possibly including AMW-1 and AMW-2) located along 2nd Avenue near the intersection with 12th Street.

Information on other environmental reports is limited to a Tank Closure Report and a Phase II Environmental Assessment, both dated 2007, for the maintenance garage facility (Block 1025, Lot 26 [60 12th Street]). A list of available information related to the spill is provided in Appendix A of the RIWP (AECOM, 2009).

3.0 Investigation Activities

This section provides a description of the activities performed during the RI and the methods used for conducting the fieldwork at the RI Study Area. Unless otherwise noted in the following sections, the procedures used were consistent with the methods and procedures described in the NYSDEC-approved RIWP, FSAP, QAPP, HASP, and CAMP. Each field activity performed during the investigation, grouped by field task or environmental media, is described in the following sections. The RI sample locations, and the locations of the samples collected during the previous investigation are shown on Figure 3-1.

3.1 Subsurface Utility Location

Subsurface utilities were located prior to starting the invasive subsurface investigation work. The utility locating was initiated by contacting Dig Safely New York. Each company or municipality that had subsurface utilities present in the investigation area marked out their utility lines prior to the initiation of the subsurface work. Following the utility mark out, each sampling location was then scanned using ground penetrating radar (GPR) and electromagnetic (EM) survey methods by Advanced Geologic Services, Inc. to confirm the location of marked utilities and/or to identify other unmarked utilities. In addition, prior to advancing soil borings, each boring/well was pre-cleared using soft dig techniques (combination of air knife, vacuum extraction, and hand digging) to a depth of 5 feet to verify utilities were not located at deeper investigative depths.

3.2 Surface Soil Sampling

Three surface soil samples were collected along the western limits of the Current Site adjacent to the Gowanus Canal bulkhead to evaluate existing surface soil at the Current Site, as shown on Figure 3-1. The designated sample locations were approved by the NYSDEC prior to collection.

Surface soil samples were collected in September 2010 from 0 to 2-inches bgs using a properly decontaminated stainless steel spoon. The necessary volume for VOC samples was placed directly into sample containers to minimize volatilization. Using a stainless steel trowel, the remaining sample was homogenized and placed into the remaining sample containers.

Two surface soil samples were analyzed for the following standard parameters (USEPA, 1980 – SW846):

- VOCs by USEPA Method 8260B
- SVOCs by USEPA Method 8270C
- Resource Conservation and Recovery Act (RCRA) 8 metals by USEPA Method 6000-7000 Series
- Free cyanide (extraction by USEPA Method 9013A and analysis by Microdiffusion, American Society for Testing Materials (ASTM) International Method D4282-02)

One surface soil sample was analyzed for an expanded list of the following parameters:

- Full Target Compound List (TCL) VOCs by USEPA Method 8260B
- Full TCL SVOCs by USEPA Method 8270C

- Target Analyte List (TAL) Metals by USEPA Method 6000-7000 Series
- TCL Pesticides by USEPA Method 8081A
- TCL Herbicides by USEPA Method 8151A
- Polychlorinated Biphenyls (PCBs) (as Aroclors) by USEPA Method 8082
- Free cyanide (extraction by USEPA method 9013A and analysis by Microdiffusion, ASTM International method D4282-02)

Following sample collection, any remaining soil was used to backfill the sample area. Decontamination of sampling equipment was performed between sample locations in accordance with field procedures in the RI Work Plan. RI Study Area sample locations were surveyed as described in Section 3.12.

Sample details including sample ID, date, associated rationale, and laboratory analysis are summarized on Table 3-1. Analytical results are discussed in Section 5.

3.3 Test Pit Excavations

In June 2010, two test pits (TP-1 and TP-2) were advanced per the RI Work Plan. TP-1 was excavated adjacent to Holder 5 in the parking lot to the west of the 12th Street and Hamilton Place intersection to evaluate the location and contents of former Holder No. 5, the valve house area, and the coal line along 12th Street. TP-2 was excavated adjacent to Holder 5 along the northern boundary of Block 1025, Lot 100 in the former used car parking lot to the east of the 12th Street and Hamilton Place intersection to evaluate the location and contents of former Holder No. 5 and the valve house area adjacent to the current building located at Block 1025, Lot 26. The locations of the test pits are provided on Figure 3-1. Sample details including sample ID, sample date, sample collection method, rationale, and laboratory analysis are summarized on Table 3-1. Test pit logs are included in Appendix B. The results of the observations made and the results of subsurface soil analytical testing performed during the test pit excavations are discussed in Sections 4 and 5, respectively.

3.4 Soil Borings and Subsurface Soil Sampling

As outlined in the RIWP and subsequent Addendum Work Plans, 26 soil borings were advanced by Boart Longyear, Inc. of Northborough, Massachusetts using sonic drilling methods during multiple field mobilizations to complete the scopes of work for the initial RI and RI Addenda between April 2010 and April of 2012 as discussed in the previous section. One soil boring (SB-26) was advanced by Zebra Environmental of Lynbrook, New York using a direct push drilling method in March 2012. Soil borings were conducted during the RI program in five phases:

- April 2010 through June 2010– Commencement of RI work: advancement of 19 soil borings and installation of seventeen monitoring wells.
- September 2010 through October 2010– Completion of initial RI scope of work: advancement of one difficult access soil boring (SB-9) and installation of three monitoring wells (MW-9 S/I/D).
- April 2011 – Completion of RI Addendum No. 1 scope of work: advancement of two soil borings (SB-19 and SB-20) and two monitoring well pairs (MW-19 S/I and MW-20 S/I) at 381/539 Smith Street (bordering the western edge of the Gowanus Canal) within the RI Study Area.
- April 2011 and September through October of 2011 – Completion of RI Addendum No. 2 and No. 3 scopes of work: advancement and installation of the two deep wells, MW-4D1 and MW-4D2 within

the RI Study Area and advancement of five soil borings (SB-21 through SB-25) and installation of six groundwater monitoring wells (MW-21D, MW-22 I/D, MW-23D, and MW-25 S/I) in the Lowes parking lot bordering the eastern side of the Gowanus Canal (within the RI Study Area).

- March through April of 2012 – Completion of RI Addendum No. 4 scope of work: advancement of one soil boring (SB-26) as a step out location to the 381/530 Smith Street property advanced in the right-of-way area along Smith Street southwest of 381/530 Smith Street (within the RI Study Area).

All boring locations were hand cleared to a minimum depth of five feet bgs for utility clearance purposes. Following hand clearing activities to five ft bgs, continuous soil samples were collected using a disposable plastic liner or macro core at five foot intervals. Soil samples were screened using a photoionization detector (PID) and were logged by an on-site geologist. A minimum of three soil samples were collected from each boring location and submitted for laboratory analysis. Sample collection rationale was based on the following:

- A sample was collected at the greatest observed impact, based on olfactory and visual observation and PID readings, between 0 and 5 ft bgs.
- A second sample was collected at the greatest observed impact, based on olfactory and visual observation and PID readings, between 5 feet and the bottom of the borehole.
- A third sample was collected below the deepest impacts or at the base of the boring to provide vertical delineation information.
- If no impacts were observed, the second and third samples, as described above, were not collected, and a sample was collected at the water table instead.
- Additional samples were collected at impacted or non-impacted depths correlated to impacts observed in adjacent borings for horizontal delineation.

Locations of borings are provided on Figure 3-1. The majority of the subsurface soil samples collected from test pits and borings were analyzed for the standard parameters listed above for surface soils. A subset of subsurface soil samples (approximately 20%) were analyzed for the expanded list of parameters detailed above for surface soils. Sample details including sample ID, sample date, sample collection method, rationale, and laboratory analysis are summarized on Table 3-1. Boring logs are provided in Appendix C. The results of observations made during soil boring advancement are discussed in Section 4. Analytical results are discussed in Section 5. Sampling tools were decontaminated between sample intervals and between borehole locations in accordance with field procedures in the RIWP (AECOM, 2009).

The following locations were completed as monitoring wells: SB-1, SB-2, SB-3, SB-4, SB-5, SB-6, SB-7, SB-8, SB-9, SB-19, SB-20, SB-21, SB-22, SB-23, and SB-25. The remaining borings were backfilled with grout, tremied to the surface. Soil cuttings were placed in 55-gallon drums, labeled, and later disposed at an approved off-site facility (see Section 3.13 for Investigation Derived Waste (IDW) details). Following boring activities each location was surveyed as described in Section 3. 12.

3.5 Monitoring Well Installation

A total of 32 monitoring wells were installed during the RI and RI Addendum phases to obtain groundwater data at locations upgradient, crossgradient, and downgradient of various former MGP features. All wells were constructed as two-inch diameter wells using schedule 40 polyvinyl chloride (PVC), 10-slot well screens with 2 feet sump intervals with the exception of the two extra deep (DD-series) wells that did not contain sumps. Monitoring wells were set in three generalized zones within the water-saturated overburden:

shallow(S-series), intermediate (I-series), deep (D-series), and extra deep (DD-series). Collocating/pairing wells into a single borehole was approved by the NYSDEC and is described in the following paragraph.

Locations with monitoring wells screened at deep and intermediate aquifer zones were co-located within one borehole and the shallow well was completed adjacent to the paired location as a single well. For the co-located wells, the deep well was installed first with the bottom of the borehole backfilled with bentonite to within 6-inches of the top of the sump. A 2-foot sump was installed at the bottom, and then a 10 foot screen with a sand pack to just above the lowest screened interval. Before installing the intermediate zone well, bentonite was added (as needed) to the borehole above the deep screened interval to within 6-inches of the bottom of the intermediate screen. A two foot sump was installed, then a 10 foot screen, with a sand pack and a riser to just below grade. Above the intermediate zone sand pack, a 2- foot bentonite seal was placed, followed by tremie grout to just below the ground surface. The paired wells were completed at the surface with one flush-mounted, limited access, road box. The entire construction of the intermediate zone has the riser of the deep zone well adjacent to it. For locations with an additional shallow zone well, a second boring adjacent to the deep and intermediate well cluster was advanced for installation of the shallow zone well. Locations with this nested well construction include SB-1/MW-1S/I/D, SB-5/MW-5S/I/D, and SB-9/MW-9S/I/D. The same construction approach was used for nesting the wells screened in the intermediate and shallow aquifer zones. Locations with this type of well construction include SB-3/MW-3S/I,SB-4/MW-4S/I, SB-6/MW-6S/I,SB-7/MW-7S/I, and SB-8/MW-8S/I. The location of each monitoring well is shown on Figure 3-1.

A summary of monitoring well information, including the well designation, date installed, screened interval, total depth of the boring, and the elevation of the top of each well riser (in feet above NAVD88), is provided in Table 3-2. The construction details for each well are shown on the respective soil boring logs in Appendix C, and on the cross-sectional views discussed in Section 4.

3.6 Well Development

Following a minimum 24-hour wait period after well installation, each of the RI monitoring wells was developed in order to remove fine-grained sediment and fluid residue from the well and the sand pack and to create maximum well efficiency. A surge-and-pump method was used to develop the wells. The surging action was used to actively agitate the water column by forcing water back and forth through the well screen and sand pack. Following surging, the wells were pumped with a submersible pump. Wells were developed until turbidity readings were below 50 nephelometric turbidity units (NTU) or a minimum of ten well volumes was removed. Well development equipment was decontaminated between locations in accordance with field procedures in the RIWP. Well development water was containerized in 55-gallon drums for off-site disposal (see Section 3. 13 for IDW details). A copy of the well development logs is provided in Appendix D.

3.7 Hydraulic Conductivity Testing and Tidal Monitoring

On October 7 and October 15, 2010 hydraulic conductivity testing was performed at nine wells: MW-1S, MW-3S, and MW-5S (shallow water table wells); MW-1I, 3I, and 5I (intermediate water table wells); and MW-1D, 2D, and 5D (deep water table wells). Solid slug test methods were used for the shallow wells which were screened across the water table and pneumatic test methods were used for the intermediate and deep wells screened below the water table. Slug test data was analyzed using AQTESOLV® software produced by HyrdoSOLVE, Inc. Rising head data were matched against the Bouwer-Rice solution (Bouwer and Rice, 1976) for unconfined aquifers using the straight-line fitting method. The AQTESOLV® output files, including graphs of the fitted lines are provided in Appendix E.

Additionally, continuous water level measurements were collected during a 24-hour period to evaluate potential tidal effects on water levels. Measurements were collected between October 7th and October 8th, 2010 at 14 locations: MW-2D, 3S, 3I, 4S, 4I, 5S, 5I, 5D, 6S, 6I, 7S, 8S, 8I, and a designated location at the surface of the Gowanus Canal.

Results of the hydraulic conductivity testing and continuous water level monitoring are discussed in Section 4.

3.8 Groundwater Monitoring

3.8.1 Depth-to-Water Measurements

Groundwater level measurements were collected using an electronic oil/water interface level indicator fitted with a weighted cord, accurate to 0. 01 ft. Depth to water was measured from the surveyed elevation mark on the well riser. The water level indicator was decontaminated between measurement locations in accordance with field procedures in the RIWP. Depth to water measurements and calculated groundwater elevations are provided on Table 3-2. Groundwater contour maps and a discussion of the data are provided in Section 4.

Groundwater monitoring was conducted during the RI program in several phases:

- June 1, 2010 – Static groundwater gauging event completed prior to groundwater well development activities.
- July 26, 2010 – First of five monthly groundwater gauging event corresponding with high tide of the Gowanus Canal. The event was coordinated with gauging events performed by the USEPA during their RI work along the Gowanus Canal and included gauging by National Grid at two nearby former MGP sites: the former Citizens Works MGP site and the former Fulton Municipal Works MGP site.
- August 23, 2010– Second of five monthly groundwater gauging event corresponding with high tide of the Gowanus Canal. The event was coordinated with gauging events performed by the USEPA during their RI work along the Gowanus Canal and included gauging by National Gird at two nearby former MGP sites: the former Citizens Works MGP site and the former Fulton Municipal Works MGP site.
- September 29, 2010 – Third of five monthly groundwater gauging event corresponding with high tide of the Gowanus Canal. The event was coordinated with gauging events performed by the USEPA during their RI work along the Gowanus Canal and included gauging by National Gird at two nearby former MGP sites: the former Citizens Works MGP site and the former Fulton Municipal Works MGP site.
- October 4, 2010 – Static groundwater gauging event prior to a round of groundwater sampling for monitoring wells installed to date.
- October 8, 2010 – Static groundwater gauging event prior to the initial aquifer testing.
- October 22, 2010 - Fourth of five monthly groundwater gauging event corresponding with low tide of the Gowanus Canal. The event was coordinated with gauging events performed by the USEPA during their RI work along the Gowanus Canal and included gauging by National Gird at two nearby former MGP sites: the former Citizens Works MGP site and the former Fulton Municipal Works MGP site.
- November 22, 2010 – Fifth of five monthly groundwater gauging event corresponding with low tide of the Gowanus Canal. The event was coordinated with gauging events performed by the USEPA

during their RI work along the Gowanus Canal and included gauging by National Gird at two nearby former MGP sites: the former Citizens Works MGP site and the former Fulton Municipal Works MGP site.

- April 29, 2011 – Static groundwater gauging of MW-4D1 and MW-4D2, only, prior to well development of these wells.
- March 14, 2012 – Static groundwater gauging event prior to a round of groundwater sampling for wells MW-19S/I, MW-20S/I, MW-21D, MW-22I/D, MW-23D, and MW-25S/I.

3.8.2 Groundwater Sampling

Wells were developed (as described in Section 3. 6 above) and allowed to stabilize for a minimum of two weeks prior to the low-flow groundwater sampling events. Groundwater sampling was conducted on two occasions (October 4, 2010 and March 14, 2012) during the RI field program, as listed in section 3.8.1 above.

Samples were collected using low-flow purging and sampling techniques. Peristaltic pumps were used for purging and sampling each well. Pump intakes were set at the midpoint of the saturated screened interval. Water levels were monitored during purging using an electronic oil/water interface indicator. Flow rates ranged from 200 to 400 milliliters per minute (ml/min). Groundwater was pumped through a flow-through cell during purging, and pH, specific conductivity, temperature, dissolved oxygen (DO), and oxygen reduction potential (ORP) were measured. Turbidity was measured using a separate meter. Parameter measurements were recorded after the flow-through cell was full and approximately every five minutes thereafter. Purging was complete and sampling began when three consecutive readings were within the stabilization parameters as specified in the RIWP and as indicated on the groundwater sample collection records. Prior to sample collection using a peristaltic pump, the flow-through cell was disconnected.

The majority of the groundwater samples were analyzed for the following parameters:

- VOCs by USEPA Method 8260B
- SVOCs by USEPA Method 8270C
- TAL Metals by USEPA Method 6000-7000 Series
- Total cyanide by USEPA Method 9012

A subset (approximately 20%) of the total number of groundwater samples were analyzed for an expanded list of the following parameters:

- Full TCL VOCs by USEPA Method 8260B
- Full TCL SVOCs by USEPA Method 8270C
- TAL Metals by USEPA Method 6000-7000 Series
- TCL Pesticides by USEPA Method 8081A
- TCL Herbicides by USEPA Method 8151A
- PCBs (as Aroclors) by USEPA Method 8082
- Total cyanide by USEPA Method 9012

Purge water was stored in 55-gallon drums later for off-site transport and disposal (see Section 3.13 for IDW details). Decontamination of equipment was not necessary as disposable materials were used to collect the samples. Sample details including sample date(s), rationale, and laboratory analysis are summarized on Table 3-1. A copy of groundwater collection records are provided in Appendix F. Analytical results are discussed in Section 5.

3.9 Community Air Monitoring

Community air monitoring was performed to provide real-time measurements of total VOCs and particulate (airborne dust) concentrations in air at the downwind perimeter of each designated work area when intrusive investigation activities were in progress at the Current Site. The procedures followed methods described in the CAMP. Additionally, site personnel monitored the perimeter stations to determine if any odors were being produced as a result of the intrusive sampling activities. The monitoring was designed to provide protection for the downwind community, such as those present at the adjacent public areas and commercial properties, from releases of airborne constituents potentially resulting from the investigation activities.

Total VOCs and particulates were monitored with a PID and dust meter, respectively, located upwind and downwind of each work zone. The VOC and particulate levels at each location were recorded on field forms every 15 minutes, and are included in Appendix G. The PIDs and dust meters were also set to log information continuously throughout the work day. This information was downloaded to a laptop computer so that the NYSDEC and NYSDOH could review the information if needed. The specific action levels for VOCs and particulates are provided in the CAMP. Action levels were not reached as a result of the intrusive investigation activities at any time during the RI, so no response actions were necessary.

3.10 Vapor Intrusion Evaluation Sampling

A vapor intrusion survey was conducted during the RI by collecting four sub-slab soil vapor samples from two different building locations along 12th Street as shown on Figure 3-1 during three separate sampling events. Prior to conducting the sampling, utilities were cleared by geophysical methods as described in Section 3. 1 above. In addition, a chemical inventory was conducted within the two building locations, along with completion of the NYSDOH indoor air quality questionnaire and building inventory form (Appendix H). Once utilities were cleared, sub-slab soil vapor samples were collected immediately below the concrete floor slabs of the Hamilton Plaza building located in Block 1007, Lot 172 and the Milea property located in Block 1025, Lot 26. Sampling implants were installed by drilling a 4 –inch diameter hole through the slab and placing Teflon® tubing in the hole. An air-tight seal was created by filling the space between the tubing and the concrete with hydrated bentonite. The tubing used for sampling was attached to a sampling canister with Swagelok™ fittings. A helium-filled “shroud” was placed around the insertion points to confirm the integrity of the seals. One to three volumes of air were then purged from the tubing with a helium meter at a rate less than 0. 2 liters per minute. During sampling activities, no helium was detected indicating that no leaks were found in the seals for each location. Once the seals were checked, the samples were collected in batch certified, 6-liter Summa canisters fitted with eight-hour regulators. Following sample collection, all concrete coring holes were sealed and patched to match the existing grade.

Four indoor air samples were also collected at the same locations as the sub-slab soil vapor samples. Three ambient air samples were collected at locations upwind of the buildings at the time of sampling during the three sampling events. Samples were collected using individually certified, 6-liter Summa canisters fitted with eight-hour regulators.

All samples were shipped via an overnight courier to a NY ELAP-certified laboratory for analysis. Sub slab soil vapor, indoor air, and ambient air samples were analyzed for VOCs (including naphthalene) by USEPA

Compendium Method TO-15. The soil vapor samples were also analyzed for helium using ASTM Method D-1946 Modified and a specific MGP indicator compound list provided by National Grid. Sample details including sample identification, sample date(s), rationale, and laboratory analysis are summarized on Table 3-3. Analytical results are discussed in Section 5. Decontamination of equipment was not necessary as disposable materials were used to collect the samples.

3.11 Analytical Program

The laboratory samples for each media and the chemical analyses performed are summarized in Tables 3-1 and 3-3. Requisite quality assurance/quality control (QA/QC) samples were collected and analyzed in accordance with the QAPP. The majority of the laboratory analysis during the RI was completed by Mitkem Laboratories/Spectrum Analytical, of Warwick, Rhode Island; however, analysis was also performed at Test America of Edison, NJ and H2M Laboratories of Melville, NY.

3.11.1 Quality Assurance/Quality Control Analyses

Field and laboratory quality control samples for the investigation were collected and analyzed to document the accuracy and precision of the sample results. The QA/QC samples included trip blanks, field duplicates and matrix spikes, and matrix spike duplicates. The data quality level for the investigation was Level IV and was consistent with reporting requirements outlined in the NYSDEC ASP June 2000 protocols. A full data package was prepared by the laboratory for all samples collected during the RI and is included in Appendix I.

3.11.2 Data Usability Summary Report

For quality control purposes, comprehensive CLP-equivalent data packages were produced by the various laboratories for the soil, groundwater, soil vapor, and indoor air samples for review by a qualified chemist. A USEPA Region II data usability summary report (DUSR) was prepared by the AECOM Environmental Chemistry Group for each soil and groundwater sampling event. The DUSRs for this project are included in Appendix J.

As part of the data review process, analytical results and data qualifiers were corrected, where necessary, to reflect quality control issues. The Form I Report Sheets in Appendix I and the data summary spreadsheets discussed in this section include the data qualifiers and reflect the findings of the data validation process.

Organic data quality was evaluated by reviewing the following parameters: holding times, GC/MS tuning and performance, internal standards, initial and continuing calibrations, surrogate recoveries, matrix spike/matrix spike duplicate (MS/MSD) samples, MS/MSD relative percent differences (RPDs), laboratory control standards (LCSs), laboratory blanks, laboratory and field duplicates, compound identification, and compound quantitation.

Inorganic data quality was evaluated by reviewing the following parameters: holding times, matrix spikes, initial and continuing calibrations, contract required detection limit (CRDL) standard recoveries, laboratory control samples, ICP interference check sample results, ICP serial dilution results, laboratory and field duplicates, and laboratory blanks, and analyte quantitation.

3.12 RI Study Area Survey

Each investigation location was surveyed by Geod Consultants, Inc. of New Jersey following completion of the RI. The survey included reference points with elevations that were tied to the NAVD88 for vertical

elevations, to the nearest 0.01 foot. These reference points were used to determine the ground surface elevations for each surface soil, test pit, and soil boring location. The ground surface and the top of the PVC inner casing (groundwater elevation reference point) elevations were surveyed for each of the monitoring well locations and the surface water staff gauge along the Gowanus Canal. The datum used for the horizontal measurements obtained during the survey was the North American Datum of 1983 (NAD83), to the nearest 0. 01 feet, and the locations were reported in the New York State (NYS) Long Island Zone coordinates. A summary of coordinates and elevations for the RI locations is provided in Table 3-4.

3.13 Investigation-Derived Waste Management

Four types of IDW were generated during the RI activities including:

- Soil
  - soil from the sampling liners
- Water
  - decontamination wash-water from the down hole drilling tools
  - well development water
  - groundwater sampling purge water
- PPE/poly/rags
  - personal protective equipment (PPE)
  - miscellaneous sampling equipment and plastic sheeting.
- Construction Debris (non-environmental)

All IDW generated was placed in drums and properly labeled. The soil and water were sampled for waste profiling purposes. All IDW was transported off site to a permitted disposal facility for proper disposal.

4.0 Geology and Hydrogeology

The following is a discussion of the RI Study Area topography and drainage, geology, hydrogeology, and distribution of visual observations of anthropogenic impacts.

4.1 RI Study Area Geology

RI Study Area stratigraphy was developed based on observations of soil from the test pits and soil borings completed during the RI, as well as observations from previous investigations at the Historic MGP Site and along the Gowanus Canal (See Section 2. 7). Test pit and soil boring logs are included in Appendices B and C, respectively. Based on the information presented in these logs and previous investigations, four stratigraphic cross-sections were generated. The orientation of the cross-sections, shown on Figure 4-1, were positioned to present representative “slices” of the subsurface within the investigation area on-site, as well as off-site at 381 Hamilton Avenue and 537 Smith Street opposite the Site across the Gowanus Canal. Individual sections are provided on Figure 4-2 (A-A’), Figure 4-3 (B-B’), Figure 4-4 (C-C’), and Figure 4-5 (D-D’).

As shown on the cross sections, site specific observations are consistent with the regional description presented above. The upper 120 feet of the RI Study Area stratigraphy is dominated by three primary units:

1. anthropogenic fill
2. meadow mat
3. glacial outwash deposits consisting of predominately sand/ silt

These units are part of the upper Pleistocene and recent Holocene regional deposits. Within the sand /silt unit are discontinuous lenses of sand and gravel, organic silt, and silt and clay. One soil boring, SB-4D2, was advanced below 120 ft bgs to a final depth of 150 ft bgs, encountering the Gardiners Clay and the underlying Jameco Gravel. The Gardiners Clay was encountered at 121 ft bgs, and the Jameco Gravel was encountered at 135 ft bgs. The Jameco Gravel was the deepest unit encountered during the RI. The primary units encountered are described below in greater detail.

4.1.1 Fill

As shown on the cross-sectional views, fill was observed to be present in all areas of the Current Site in thicknesses typically ranging up to 15 feet, and within the range of the groundwater table (see Section 4. 4 below). The fill is comprised of mostly poorly graded sand, silt, and gravel with varying amounts of anthropogenic material: coal fragments, ash, concrete slabs, wood pieces, wood fragments, brick fragments, glass, and other urban fill debris.

4.1.2 Meadow Mat

The meadow mat consists of varying amounts of a densely compacted decomposed vegetative material (peat), organic clays, marine clays with shell fragments, and silt, and is brown/tan or grey in color with a distinctive organic-like odor. The unit acts to separate the underlying native soils from the overlying fill. The meadow mat likely represents the former ground surface prior to development (filling) in the Current Site area. This layer ranges from five to fifteen feet thick, was encountered 15 feet to 20 feet bgs, and was

observed in all Current Site borings with the exception of SB-5. The distribution of the unit is consistent with the historic marshy environment of this area (see Figure 2-4). As shown on cross-section A-A', the elevation of the bottom of the Gowanus Canal is equal to or lower than the elevation of the bottom of the adjacent meadow mat, which is typically absent beneath the canal (GEI, 2007). The bottom of the canal consists of Holocene aged silty and sandy native sediments that overly Upper Pleistocene aged glacial deposits consisting of a poorly sorted mixture of clay, silt, sand, and gravel mixed with more well sorted glacio-fluvial sands and gravels (GEI, 2007).

4.1.3 Sand/Silt

Between the bottom of the meadow mat and the top of the Gardiners Clay, are units of glacial outwash dominated by sands and silts. The unit varies in composition, occurring as tan and grey interbedded sand and silt beds and as well graded to poorly graded sands and silt zones. These zones vary in depth and distribution across the Current Site, and are not defined by clear boundaries. Therefore, on the cross-sections, they have been grouped into a single unit designated sand/silt.

Within the sand/silt unit are discontinuous lenses of sand and gravel, organic silt, and silty clay. The sand/gravel unit is the most abundant of these, and occurs in lenses from 3 to 25 ft thick, as single lenses or two stacked lenses. However, as shown in cross-section A-A', a relatively extensive deposit is located beneath the central area of the Current Site from roughly 60 to 85 ft bgs. The unit is predominately fine to coarse sand with less than 5 to 30% gravel, and has an appearance similar to the surrounding sand/silt unit.

The organic silt unit was observed at two locations (SB-17 and SB-5), and has a similar appearance to the organic silt in the meadow mat; however, the unit is encountered at greater depth (below 29 ft bgs) than the meadow mat and is not continuous. The silty clay unit consists of clay with interbedded silt and gravel, is brown to reddish brown, and has low plasticity. The unit was encountered from 85 to greater than 90 ft bgs at MW-21D.

4.1.4 Gardiners Clay

Soil boring MW-4D2, located adjacent to boring SB-4, was advanced to 150 ft bgs (Figures 4-1 and 4-2). A high plasticity, stiff, gray clay and silty clay were encountered from 121 to 135 ft bgs. This 14 foot thick unit is interpreted to be the Gardiners Clay, and is consistent in depth and composition as described by Buxton and Shernoff (1999) and Misut and Monti (1999). The unit is expected to be laterally continuous beneath the Current Site, have very low permeability, and represents a confining unit defining the lower extent of the shallow sand/silt aquifer.

4.1.5 Jameco Gravel

Below the Gardiners Clay is a brown, well graded, medium to coarse sand and gravel. This unit is interpreted to be the Jameco Gravel, and is consistent in depth and composition as described by Buxton and Shernoff (1999) and Misut and Monti (1999). The unit is expected to be laterally continuous beneath the Current Site. A silty sand was encountered below the gravel at this boring location, however, this unit does contain approximately 35% gravel, and is interpreted to be part of the Jameco Gravel unit.

4.2 Site Hydrogeology

Monitoring well construction details, groundwater gauging measurements, calculated groundwater elevations, and the Gowanus Canal surface water elevations are summarized on Table 3-2. The wells have been grouped into three general depth intervals:

1. shallow: wells screened across the water table surface in the fill and at depths generally ranging from 3 to 15 ft bgs.
2. intermediate: wells screened directly below the meadow mat and within the sand/silt unit at depths generally ranging from 25 to 50 ft bgs.
3. deep: wells screened within the sand/silt unit at depth from 60 to 70 ft.

One deep well was screened from 115 to 120 ft bgs directly above the Gardiners Clay, and one deep well was screened from 142 to 147 ft bgs, directly below the Gardiners Clay and within the Jameco Gravel. During the RI, groundwater gauging was performed on June 1st, July 26, August 23, September 29, October 4, October 22, November 22, 2010, April 29, 2011, and March 14, 2012. Figures 4-6, 4-7, and 4-8 present contours of groundwater elevations collected during low tide on March 14, 2012 for the shallow, intermediate, and deep intervals, respectively. Figures 4-9, 4-10, and 4-11 present contours of groundwater elevations collected during high tide on September 29, 2010 for the shallow, intermediate, and deep intervals, respectively.

The surface of the groundwater table is encountered between 1.9 (MW-3S) and 10.93 (MW-9S) ft bgs across the Current Site. The Gowanus Canal surface water elevation is roughly between 2 ft and 6 ft lower than the groundwater table elevation at adjacent wells (MW-4S, MW-9S, and MW-19S) depending on the tidal cycle. As shown on Figures 4-6 through 4-11, groundwater flow across the Current Site in the shallow, intermediate, and deep screened zones is from the east to the west, with a slightly more northwest flow direction towards the Gowanus Canal observed at low tide in the shallow zone above the meadow mat. Horizontal gradients calculated based on the groundwater elevation contours are summarized on Table 4-1. Horizontal hydraulic gradients calculated from the measurements collected during high tide (September 29, 2010) and low tide (March 14, 2012) were 5.98×10^{-3} ft/ft and 5.56×10^{-3} ft/ft, respectively, (average 5.77×10^{-3} ft/ft) in shallow zone wells, 2.72×10^{-3} ft/ft and 3.59×10^{-3} ft/ft, respectively, (average 3.16×10^{-3} ft/ft) in intermediate zone wells, and 1.90×10^{-3} ft/ft and 2.14×10^{-3} ft/ft, respectively, (average 2.02×10^{-3} ft/ft) in deep zone wells. Vertical gradients between the shallow zone to intermediate zone, intermediate zone to the deep zone, and shallow zone to the deep zone are summarized on Table 4-2. As would be expected, generally downward vertical hydraulic gradients are present along the central and eastern Current Site boundaries (MW-1, MW-3, MW-6, MW-7, and MW-8), and upward vertical hydraulic gradients are present adjacent to the Gowanus Canal (MW-4, MW-5, and MW-9), a condition that is generally consistent for each of the three screened zones and represents groundwater discharge from the shallow aquifer into the canal.

As summarized on Table 4-3, hydraulic conductivity testing was performed at nine monitoring wells on October 7 and 15, 2010. The AQTESOLVE® output files, including graphs of the fitted lines are provided in Appendix E. Based on the data (rising head tests), the calculated average hydraulic conductivity (K) of the shallow well locations (MW-1S, MW-3S, and MW-5S) ranged from 1.404 to 68.28 ft/day (521.7 ft/day was not considered to be representative), with a geometric mean of 17.9 ft/day. The hydraulic conductivity at well MW-3S (68.28 feet/day) is much higher due to the presence of a coarse sand fraction in the soil formation around this well compared to the silt and sand/silt formations around MW-1S and MW-5S, respectively. The calculated average hydraulic conductivity (K) of the intermediate well locations (MW-1I, MW-3I, and MW-5I) ranged from 1.905 to 74.72 feet/day, with a geometric mean of 10.0 feet/day. The calculated average hydraulic conductivity (K) of the deep well locations (MW-1D, MW-2D, and MW-5D) ranged from (1.041 to 38.04 ft/day), with a mean of 11.9 ft/day.

Using the calculated site hydraulic conductivity values and horizontal site gradients and estimated porosity in each aquifer zone, the groundwater seepage velocity beneath the Current Site was calculated using the following equation:

V=Ki/n, where

V=calculated groundwater seepage velocity
K-calculated hydraulic conductivity (obtained from aquifer slug testing)
i=calculated horizontal gradient (obtained from RI Study Area monitoring wells),
n=soil porosity (assumed to be 0. 3)

Using the geometric mean K estimate of the shallow zone wells of 17.9 feet/day and the average horizontal gradient of 5. 77 x 10^{-3} ft/ft, the estimated shallow groundwater horizontal seepage velocity is 0. 44 ft/day, or 126 ft/year. Using the geometric mean K estimate of the intermediate zone wells of 10.0 feet/day and the average horizontal gradient of 3. 16 x 10^{-3} ft/ft, the estimated intermediate groundwater horizontal seepage velocity is 0.105 ft/day, or 38.4 ft/year. Using the geometric mean K estimate of the deep zone wells of 11.9 feet/day and the average horizontal gradient of 2.02 x 10^{-3} ft/ft, the estimated deep groundwater horizontal seepage velocity is 0.080 ft/day, or 29.2 ft/year.

Continuous water level measurements collected over a 24 hour period on October 8 and 9, 2010 from select shallow, intermediate, and deep zone wells are plotted on Figures 4-12 (shallow zone), Figure 4-13 (intermediate zone), and Figure 4-14 (deep zone), respectively. Superimposed on each plot is the surface water elevation of the Gowanus Canal over the same time period. The distance from the canal is noted next to each well on the plots. Based on the tidal cycle monitoring, the strongest tidal effects are noted in the groundwater levels measured in the intermediate and deep zone wells. Groundwater elevations in the deep zone wells are influenced as far as 725 ft (MW-2D) from the canal, and fluctuate by more than a foot. The water levels in the intermediate zone wells also have fluctuations of about one foot, but the influence appears to dissipate between 410 ft (MW-6I) and 425 ft (MW-3I) from the canal. The tidal influence in the shallow zone, above the meadow mat, is less pronounced, with water level fluctuations of less than a foot and slightly irregular compared to the intermediate and deep zone responses. The tidal influence in the shallow zone dissipates by 200 ft (MW-8S) from the canal. The reduced influence may be the result of a dampening effect of the low permeability meadow mat, and the bulkhead supporting the bank of the canal preventing direct contact between groundwater in the fill and the surface water in the canal. As shown on the groundwater elevation contours and Table 4-1, which summarizes horizontal hydraulic gradients at low and high tide, the tidal influence does not appear to significantly alter groundwater flow direction or gradients, and in turn the seepage velocity, in the shallow, intermediate, and deep zones.

5.0 Subsurface Environmental Observations and RI Analytical Results

This section presents a summary of subsurface field observations and the results of the laboratory analyses performed for the RI samples. A discussion of the results of the analyses, and a comparison to applicable NYSDEC Standards, Criteria and Guidance Values are grouped according to environmental media in the sections following the description of observed subsurface conditions. NYSDEC ASP Category B (NYSDEC, 2001) data packages were prepared by the laboratory for all samples collected during the RI and are included in Appendix I.

5.1 Subsurface Visible Impacts

Visible impacts of residual materials observed in the subsurface are summarized in Tables 5-1 and 5-2, shown on the cross-sections (Figures 4-2 through 4-5), and illustrated in plan-view by elevation intervals on Figures 5-1 through 5-5. Table 5-1 summarizes the visible and olfactory impacts noted during drilling and test pit activities during the RI. Table 5-2 provides a summary of the locations and elevations where tar saturation was noted during previous investigations and remedial efforts performed by F. C. Gowanus on the Lowe's property. Data from these tables were used to generate Figures 5-1 through 5-5 which illustrate the distribution of visible and olfactory impacts noted during the RI and tar impacts noted during previous investigations by elevation ranges between the ground surface (the average ground surface elevation at the Current Site is approximately 10 ft NAVD88) and -72 ft NAVD88. Additionally, visible impacts were grouped into color categories for illustration on the geologic cross sections. The color coded visible impact areas represent where impacts were observed in individual borings at specific depths. Zones of tar saturation represent areas where the entirety of the pore space of the soil matrix appears to be filled with NAPL. In summary, the plan view figures (5-1 through 5-5) and the cross sections (Figures 4-1 through 4-5) provide a generalization of the subsurface visible impacts observed in the RI Study Area.

Visible impacts were observed during the RI in the subsurface to the west of the Previously Remediated Area, as illustrated on cross section A-A' (Figure 4-2) and cross section C-C' (Figure 4-4). The Previously Remediated Area included former MGP Holders No. 1 through 3, former MGP tar tanks/tar pits, and former MGP oil storage tanks and was remediated by excavation and dense non-aqueous phase liquid (DNAPL) removal via recovery wells by F. C. Gowanus. Shallow, visible impacts consisting of sheen, blebs, and slight tar coating were observed between 4 and 15 ft bgs in borings between the Previously Remediated Area and Holder No. 5. Deeper visible impacts including a limited amount of tar saturation and tar saturated lenses were also noted in this area in borings SB-3, SB-13, SB-15, and SB-18 at depths ranging between 20 and 45 ft bgs [approximately -11 to -36 ft NAVD88] as illustrated on Figures 5-2 through 5-4. Odors, staining, sheen, and blebs/coatings were observed within, above, and below the interval containing tar lenses or saturation as illustrated on Figures 5-1 through 5-5. It appears from these figures and Figures 4-2 and 4-4 that the deeper visible impacts near the Previously Remediated Area may extend westward predominantly as lenses of material. It does not appear that these deeper impacts are associated with former Holder No. 5 (Block 1025, Lots 100 and 20) which was a slab on grade holder. These visible impacts diminish with distance and have been delineated to the west by borings SB-6 and SB-11, to the south by boring SB-7 and to the east by SB-14 and SB-2.

As outlined in cross section B-B (Figure 4-3), visible impacts were also noted along the western boundary of the Current Site adjacent to the Gowanus Canal. These impacts extend southwest towards SB-4 (located

on the former BAAC property) and northeast towards MW-6 and PB-5. A limited amount of tar saturation was noted within the southern portion of this area at a depth of 31.5 to 34 ft bgs in the SB-4 vicinity and in the northern portion of this area at depths of 30 to 32 ft bgs in MW-6/DP-12 (Figure 4-5). Impacts noted as petroleum saturation and odors were noted in the 70 to 77 ft bgs interval at geotechnical boring PB-6 and impacts noted as “petroleum in sample” were noted in the 50 to 85 ft bgs interval at geotechnical boring PB-5 (Figure 4-5). It should be noted that these geotechnical borings were sampled at standard 5-foot intervals instead of the continuous sampling conducted in the RI. The visible impacts are evident as tar odors, staining, sheen, and blebs/coatings between 7 and -15 ft NAVD88 and below -30 ft NAVD88 (Figures 5-1, 5-2, 5-4, and 5-5) and include tar saturation in the SB-4 and MW-6/DP-12 vicinities in elevation range -15 to -30 ft NAVD88 (Figure 5-3). It appears that this visibly impacted area is separate from the Previously Remediated Area and is possibly associated with the former tar tanks adjacent to the canal based on the lack of visible impacts in borings situated between these two potential sources as illustrated on sections A-A’ and C-C’ (Figures 4-2 and 4-4). However, it is possible that impacts from the Previously Remediated Area or other former structures beneath the Pathmark building contributed to the visible impacts observed along the western portion of the Current Site and that the data distribution (i.e., lack of data between the two areas) results in the appearance that the areas are separate. Drilling and subsurface investigations could not be performed in this area due to the hours of operation for the Pathmark supermarket and the retail nature of the business.

The visible impacts observed in the SB-9 area (Figures 4-3 and 4-4) are at an elevation slightly above the elevation of the bottom of the canal and were observed to approximately 30 feet below the top of the existing canal bed. Based on these elevations, the SB-9 area impacts could originate from former MGP structures but impacts observed beneath the canal sediment elevation may also originate from canal impacts. The visible impacts north of the SB-9 area at PB-5 are at an elevation below the bottom of the 11th Street Basin and the Gowanus Canal. These impacts do not extend as far northeast as monitoring wells GCMW-44, MW-23D, GCMW-46 or boring PB-3. The visible impacts noted from 70 to 75 ft bgs in geotechnical boring PB-6 to the east of SB-9 appear limited as they were not noted in adjacent boring/well SB-22/MW22.

The visible impacts observed south of SB-9 in SB-4, MW-4D1, and MW-4D2 are also illustrated on cross section A-A’ (Figure 4-2). These impacts may originate from, the former tar tanks near SB-9 and/or other former structures beneath the Pathmark building, the former Brooklyn Alcatraz Asphalt operations, and/or from impacts within the Gowanus Canal. As illustrated on cross section A-A’, visible tar impacts were noted in borings in sediment beneath the canal and northwest of the canal at SB-19 at an elevation consistent with visible impacts noted in SB-4. Visible impacts other than stained soil were not noted in boring SB-20 to the north of SB-19.

A third, seemingly separate area of visible impacts, was also noted beneath the parking lot adjacent to the canal in the northern corner of the RI Study Area in borings PB-1, GCMW-45, and GCMW-47 as illustrated on cross section B-B’ (Figure 4-3) and Figures 5-3 and 5-4. This part of the RI Study Area is adjacent to the former Cranford Asphalt Manufacturing Company site and the Gowanus Canal. Visible impacts in this area of the RI Study Area were noted beneath the meadow mat and do not extend to the south and west in borings PB-3, GCMW-46, SB-23, and SB-25 suggesting that they are possibly separate from impacts noted in the Previously Remediated Area and from impacts adjacent to the Pathmark Building.

5.2 Soil Analytical Results

A list of the surface soil and subsurface soil samples collected, and the analyses performed, is included in Table 3-1. The surface soil results included in Table 5-3 and the subsurface soil results presented in Table 5-4 have been compared to the Unrestricted Use Soil Cleanup Objectives (SCOs) and Restricted

Commercial Use SCOs provided in the document entitled "*NYSDEC Rules and Regulations, 6 NYCRR Subpart 375-6, Remedial Program Soil Cleanup Objectives*", dated December 14, 2006 [NYSDEC, 2006]. These Commercial SCOs were selected for comparison in accordance with NYSDEC Subpart 375-6 and CP-51 Soil Cleanup Guidance (NYSDEC, 2010b) and are consistent with the current and anticipated future Current Site zoning and use. Where a result is greater than the method detection limit (MDL), the result is shown with a bold font. If a result is greater than the respective Unrestricted Use SCO it has been shaded gray and if a result is greater than the respective Commercial Use SCO it has been shaded yellow on Tables 5-3 and 5-4.

5.2.1 Surface Soils

The results of the surface soil samples are summarized in Table 5-3. Per the work plan, three surface soil samples (SS-1, SS-2, and SS-3) were collected along the western boundary of the Current Site (see Figure 3-1) with surface soil sample SS-1 being collected at the SB-9 boring location. Sample analytical results indicate that VOCs, including benzene, ethylbenzene, toluene, and xylenes (BTEX), were not detected in the surface soil samples except for an estimated concentration of 1,1-dichloroethene in SS-2 that was not above the Unrestricted Use or Commercial Use SCOs. Two PAHs (benzo(a)pyrene at 1.1 milligram per kilogram (mg/kg) and indeno(1,2,3-cd)pyrene at 0.52 mg/kg)were detected at concentrations above the Unrestricted Use SCOs in sample SS-02. All other detected PAH concentrations were below Unrestricted Use and Commercial Use SCOs in each surface soil sample. Total PAH concentrations ranged between 4.9 and 8.2 mg/kg in the surface soil samples. A few other SVOCs were detected at concentrations below the Unrestricted Use and Commercial Use SCOs as summarized in Table 5-3. Several metals were detected in each surface soil sample at concentrations above the Unrestricted Use SCOs but below the Commercial Use SCOs. Total cyanide was detected at concentrations below both the Unrestricted Use and Commercial Use SCOs in each surface soil sample. Surface soil sample SS-1 was also analyzed for pesticides, herbicides, and PCBs. One pesticide (4,4-DDT) was detected at an estimated concentration of 0.014 mg/kg which are above the Unrestricted Use SCO of 0.0033 µg/kg. One pesticide and two PCB aroclors were detected in sample SS-1 at concentrations below the Commercial Use SCOs (if listed), however the total estimated PCB concentration (1.13 mg/kg) is above both the Unrestricted Use SCO (0.1 mg/kg) and the Commercial Use SCO (1.0 mg/kg). PCBs and pesticides are not associated with MGPs and are interpreted to be related to the presence of urban fill.

5.2.2 Subsurface Soils

The results of the subsurface soil samples are summarized in Table 5-4. The subsurface soil sample analytical results that are above the Commercial Use SCOs are illustrated on Figure 5-6. A total of 80 subsurface soil samples (77 samples and three duplicate samples) were collected from the borings and test pits advanced as part of the RI. The intervals sampled and visible impacts observed at each RI boring location are shown on the soil boring logs in Appendix C and are summarized in Tables 3-1 and 5-1.

5.2.2.1 Volatile Organic Compounds

BTEX compounds were detected in many of the 80 subsurface soil samples collected during the RI. Individual BTEX compounds were detected at concentrations above the Unrestricted Use SCOs in 29 subsurface soil samples however concentrations of individual BTEX compounds were only detected above the Commercial Use SCOs in four of the 80 subsurface samples collected. As illustrated on Figure 5-6, these four samples were collected from borings SB-13, SB-15, and SB-18 immediately west of former Holders No. 1 through No. 3. The samples that contained concentrations of one or more of the BTEX compounds above the Commercial Use SCOs were collected at depths coincident with tar saturated visible impacts. The vertical extent of the BTEX analytical impacts was delineated by deeper samples at each boring location and the horizontal extent of the BTEX analytical impacts was delineated by borings to the

north (SB-16), west (SB-11, SB-6), south (SB-7) and east (SB-14). Five VOCs, other than BTEX compounds, were detected in four of the subsurface soil samples at concentrations above the Unrestricted Use SCOs. These VOCs include acetone, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-propylbenzene, and 1,2, dichloroethane. None of these other detected VOC concentrations are above the Commercial Use SCOs, as summarized in Table 5-4.

5.2.2.2 Semivolatile Organic Compounds

PAHs were detected in many of the subsurface soil samples collected during the RI. Twenty-two of the 80 samples contained concentrations of one or more PAH that are above the respective Commercial Use SCOs as summarized in Table 5-4 and illustrated on Figure 5-6. Six additional subsurface soil samples collected from five locations contained concentrations of one or more PAHs that are above the respective Unrestricted Use SCOs but are not above the respective Commercial Use SCOs. Thirteen of the 22 samples that contained PAH concentrations above Commercial Use SCOs collected from ten locations, contained total PAH concentrations that are above the NYSDEC CP-51 Soil Cleanup Guidance (NYSDEC, 2010b) total PAH alternative criterion of 500 mg/kg(illustrated with green highlighting on Figure 5-6 and Table 5-4). Total PAH concentrations ranged from not detected to 14,106.2 mg/kg in the 35 to 40 ft bgs sample collected from SB-13 (downgradient of the Previously Remediated Area). All of these thirteen samples, except SB-6(4-5), were collected from soils visibly impacted with tar and/or soils with a strong hydrocarbon or naphthalene-like odor (Table 5-1).

The vertical extent of the PAH concentrations that are above the Unrestricted Use and Commercial Use SCOs and the CP-51 total PAH criterion was delineated at each location. PAHs were not detected in RI subsurface soil samples at concentrations above the Unrestricted Use SCOs, the Commercial Use SCOs, or the NYSDEC CP-51 total PAH alternative criterion of 500 mg/kg to the north of the former MGP in the Lowes parking lot. The horizontal extent of soils containing PAHs at concentrations above Commercial Use SCOs and the CP-51 total PAH alternative criterion was not delineated to the west along the Gowanus Canal at SB-9 or to the west-southwest near 13th Street at SB-6 and SB-7. The ratio of the concentrations of the individual PAHs detected in sample SB-6(4-5 ft bgs), vary from those detected in the deeper samples collected from tar impacted soils closer to former MGP structures. This distribution of PAHs is also similar in sample SB-7(4-5), collected from 4 to 5 ft bgs in SB-7, also along the southwestern Current Site boundary to the east of SB-6. Based on this information, the PAHs detected in the 4 to 5 ft bgs interval at SB-6 and SB-7 may originate from a different non-MGP source located upgradient from the SB-6 and SB-7 area or represent more weathered MGP impacts.

PAH concentrations detected in soil sample SB-19 (37-37.5 ft bgs), on the west side of the Gowanus Canal, are above the Unrestricted Use and Commercial Use SCOs and CP-51 alternate total PAH criterion. This sample was collected from soils described as tar coated and tar saturated. Soil samples were collected from boring SB-20 and SB-26 to the west and southwest of SB-19 from shallower and deeper zones than the impacted interval sampled in SB-19 and did not contain PAHs at concentrations above the Commercial Use SCOs. Black stained soils were observed during drilling at SB-20 and visibly impacted soils were not observed during drilling at SB-26, therefore the general extent of the impacts in SB-19 has been delineated. It should be noted that LNAPL was collected from MW-20S (SB-20) for forensic analysis (see Section 5. 3 below) and is not tar related.

Other SVOCs analyzed in the subsurface soil samples were either not detected or were detected at levels below the Commercial SCOs as summarized in Table 5-4. Dibenzofuran was detected at concentrations above the Unrestricted Use SCO in three subsurface soil samples including SB-3(30-35), SB-13(35-40), and SB-18(28-30); all of these samples also contained total PAH concentrations that are above the CP-51

alternative criterion of 500 mg/kg. No other SVOCs were detected in RI subsurface soil samples at concentrations above the Unrestricted Use SCOs.

5.2.2.3 Metals

Metals were detected in all of the 80 subsurface soil samples collected and analyzed during the RI as summarized in Table 5-4. Arsenic was detected at concentrations above the Commercial Use SCO in three samples, (SB-3(59-60), SB-7(4-5), and SB-8(34-35), as illustrated on Figure 5-6 and Table 5-4. Barium and lead were detected at concentrations above Commercial Use SCOs in one sample, SB-13(4-5). Several samples contained concentrations of lead and mercury at concentrations above the Unrestricted Use SCOs. All of these samples were collected from depths shallower than 13 ft bgs, and the majority was collected from depths shallower than 5 ft bgs. Copper, chromium, selenium and zinc were detected at concentrations above Unrestricted Use SCOs in three or fewer subsurface soil samples. These detections are not considered related to the operation of the former MGP and are more likely related to the presence of urban fill. PCBs

Thirteen of the 80 subsurface soil samples were analyzed for PCBs during the RI. PCBs were not detected above the reporting limit in any of the 13 samples analyzed except for an estimated concentration (0. 022 mg/kg) of Aroclor 1254 in the subsurface soil sample collected from 142 to 144 ft bgs in MW-4D2. No Unrestricted Use or Commercial Use SCOs are listed for individual aroclors; however the total PCB Unrestricted Use SCO is 0.1 mg/kg and the total PCB Commercial Use SCO is 1. 0 mg/kg.

5.2.2.4 Pesticides and Herbicides

Thirteen of the 80 subsurface soil samples were analyzed for pesticides and herbicides during the RI. Pesticides and herbicides were not detected above the reporting limit in any of the 13 samples analyzed.

5.2.2.5 Free Cyanide

Free cyanide was detected in eight of the 80 subsurface soil samples collected during the RI, as summarized in Table 5-4. All but one of the detected concentrations were estimated and ranged between 0. 395 in SB-3(30-35) to 7.36 mg/kg in SB-7(10-12). Part 375-6 does not include SCOs for free cyanide however the detected free cyanide concentrations are below the Unrestricted Use and Commercial Use SCOs for total cyanide which are both 27 mg/kg.

5.3 Forensic Analytical Results

One forensic sample of LNAPL was collected at the water table from well MW-20S at the Greco Brothers property during the RI. Results of the forensic analysis indicate that this sample contained a petrogenic material that had experienced substantial environmentally induced degradation or weathering and contained a complex mixture of blended fuels such as No. 4 or No. 6 fuel oil. The forensic analysis does not indicate that the LNAPL is related to MGP tar. Although the MGP water gas process utilized fuel oils, it is unlikely that the LNAPL collected from MW-20S is associated with former water gas fuel oil feedstock since LNAPL at the water table originating from the Historic MGP Site would likely be blocked by the bulkhead along the canal and/or discharge to the Gowanus Canal rather than migrate beneath it and LNAPL was not encountered in any of the wells on the east side of the canal during the RI. Based on the property and equipment use, these impacts may be related to current site operations (concrete plant and equipment storage/usage) or adjacent operations, including the scrap yard or the Bayside Coal and Fuel Oil Company property which are both north of the Greco Brothers property.

5.4 Groundwater Analytical Results

Thirty-two monitoring wells were installed and sampled during the RI. A total of 36 samples, including four duplicate samples, were collected and analyzed. A list of the groundwater samples collected (not inclusive of duplicate samples), and the analyses performed is included in Table 3-1. The groundwater analytical results are summarized in Table 5-5. The evaluation of the groundwater results in the following sections is based on a comparison to the Ambient Water Quality Standards and Guidance Values (AWQSGVs) provided in the NYSDEC - Division of Water – Technical Operation Guidance Series (TOGS) (1.1.1) [NYSDEC, 1998, with addendums]. In Table 5-5, where a result is greater than the MDL, the result is shown with a bold font. Where a result is greater than the respective AWQSGV, the result is shaded on Table 5-5. A summary of the results of the RI groundwater sampling performed during October 2010 and March 2012 is illustrated by depth on Figures 5-7 (shallow wells), 5-8 (intermediate wells), and 5-9 (deep wells). These figures illustrate results that are above the AWQSGVs.

5.4.1 Shallow Well Groundwater Samples

Eleven shallow monitoring wells were installed during the RI. These wells have 10 foot screened sections between 3 and 22 ft bgs as summarized on Table 3-2. The analyses performed for each well are summarized in Table 3-1. Twelve shallow well groundwater samples (including one duplicate sample) were collected and analyzed. A summary of the analytical results are illustrated on Figure 5-7 and tabulated in Table 5-5.

5.4.1.1 Volatile Organic Compounds

Seven of the twelve shallow well groundwater samples contained one or more of the BTEX compounds at concentrations above the AWQSGVs. Where detected, total BTEX concentrations ranged from 0.11 micrograms per liter (µg/L) (MW-19S) to 9,110 µg/L in MW-3S. As illustrated on Figure 5-7, the greatest BTEX concentrations were detected in the vicinity of the former Holders No. 1 through No. 3 (MW-3S), along the southwestern Current Site boundary (MW-6S), and upgradient of the Current Site at MW-1S. Groundwater collected from MW-1S also contained MTBE, a gasoline additive, demonstrating an additional VOC source in the Current Site vicinity. The NYCDOS UST NYSDEC Spill site located east of 2nd Avenue may contribute to impacts detected in the sample collected from MW-1S. Other VOCs detected at concentrations above the AWQSGVs include 1,4-dichlorobenzene, chlorobenzene, isopropylbenzene, MTBE, and styrene. VOCs were not detected at concentrations above AWQSGVs in groundwater samples collected from shallow RI wells adjacent to the Gowanus Canal (MW-4S, MW-9S, and MW-19S).

5.4.1.2 Semivolatile Organic Compounds

Several PAHs were detected in the shallow groundwater samples, however only three PAHs, acenaphthene, benzo(a)anthracene, and naphthalene were detected at concentrations above AWQSGVs in one or more of the twelve shallow well groundwater samples. Naphthalene was the most frequently detected PAH in shallow groundwater and was detected at the greatest concentration in the sample collected from MW-3S (2,100 µg/L). Naphthalene was detected at concentrations above the AWQSGV in groundwater collected from upgradient shallow monitoring well MW-1S, shallow monitoring well MW-8S situated downgradient of the Previously Remediated Area around Holder No. 1 through 3, and along the southwestern Current Site boundary in shallow monitoring wells MW-6S and MW-7S. Benzo(a)anthracene was only detected in one sample (MW-20S at 0. 53 µg/L)and is above the AWQSGV of 0. 002 µg/L. Acenaphthene was detected at concentrations above the AWQSGV in groundwater samples collected from two wells (MW-3S at 21 µg/L and MW-7S at 26 µg/L). PAHs were not detected at concentrations above the AWQSGVs in groundwater samples collected from shallow wells adjacent to the Gowanus Canal, including

MW-4S, MW-5S, MW-9S, MW-19S, and MW-20S or from MW-25S in the northern corner of the Lowes parking lot.

Phenol was the only other SVOC detected at concentrations above the AWQSGVs in the shallow groundwater samples collected during the RI. The detected phenol concentrations ranged from 2. 4 to 69 µg/L. Phenol was detected in five of the twelve shallow groundwater samples including upgradient well MW-1S, monitoring well MW-3S near the former holders No. 1 through No. 3, MW-6S along the southwestern Current Site boundary, MW-8S downgradient of the MGP remediated area, and in MW-20S on the western side of the Gowanus Canal.

5.4.1.3 Metals

Several metals were detected at concentrations above the AWQSGVs as summarized in Table 5-5 and illustrated on Figure 5-7. The metals detected at concentrations above AWQSGVs most frequently include iron, magnesium, manganese, and sodium and were detected in monitoring wells MW-5S, MW-6S, and MW-8S. These metals are not related to MGP operations. Antimony, arsenic, and barium were each detected at concentrations above AWQSGVs in two shallow groundwater samples. Antimony is above AWQSGVs in the groundwater samples collected from MW-6S and MW-8S. Arsenic was detected at concentrations above AWQSGVs in the groundwater samples collected from MW-1S and MW-25S and barium was detected at concentrations above AWQSGVs in groundwater samples collected from MW-1S and MW-4S.

5.4.1.4 Total Cyanide

Total cyanide was detected in 10 of the 12 shallow groundwater samples and ranged in concentration from 8.7 to 279 µg/L. Total cyanide was detected at concentrations above the AWQSGV of 200 µg/L in two of the 10 samples, those collected from MW-4S and MW-7S.

5.4.1.5 Polychlorinated Biphenyls

Four of the 12 shallow groundwater samples were analyzed for PCBs during the RI. PCBs were not detected above the reporting limit in any of the four samples analyzed.

5.4.1.6 Pesticides and Herbicides

Four of the 12 shallow groundwater samples were analyzed for pesticides and herbicides during the RI. Three pesticides (Beta BHC [0.51 µg/L], Delta BHC [0.078 µg/L], and Gamma-BHC [0.072 µg/L]) were detected above the reporting limit in one (MW-6S) of the four samples analyzed. AWQSGVs are not listed for these compounds.

5.4.1.7 Monitored Natural Attenuation Parameters

Primary field parameters used to document the potential for natural biodegradation of dissolved organic compounds in groundwater under a monitored natural attenuation (MNA) approach include DO and ORP. DO and ORP parameters are included in the groundwater collection records in Appendix F. DO concentrations in shallow wells ranged from 0 milligrams per liter (mg/L) at MW-5S, MW-7S, and MW-8S to 6.23 mg/L at MW-9S. ORP readings ranged from 8 millivolts (mV) at MW-19S to -288 mV at MW-7S.

5.4.2 Intermediate Well Groundwater Samples

Twelve intermediate monitoring wells were installed during the RI. These wells have 10 foot long screens located between 25 and 50 ft bgs, as summarized on Table 3-2. The analyses performed for each well are

summarized in Table 3-1. Thirteen intermediate well groundwater samples (including one duplicate sample) were collected and analyzed. A summary of the analytical results are illustrated on Figure 5-8 and tabulated in Table 5-5.

5.4.2.1 Volatile Organic Compounds

Twelve of the 13 intermediate well groundwater samples contained one or more of the BTEX compounds at concentrations above the AWQSGVs. The detected total BTEX concentrations ranged from 4.0 µg/L (MW-20I) to 15,100 µg/L in MW-3I. As illustrated on Figure 5-8, upgradient well MW-1I was the only intermediate well that did not contain groundwater with concentrations of at least one BTEX compound above the AWQSGVs. BTEX is more prevalent and present at higher concentrations in the intermediate zone groundwater than in the shallow zone groundwater beneath the Current Site, consistent with the observation of visible subsurface impacts and locations where soil detections were above Commercial Use SCOs. Groundwater collected from MW-20I on the west side of the canal also contained MTBE, a gasoline additive, demonstrating an additional non-MGP VOC source. Other VOCs detected at concentrations above the AWQSGVs are summarized in Table 5-8. Isopropylbenzene was detected at concentrations above the AWQSGV in eight of the thirteen intermediate zone groundwater samples. Chlorinated VOCs were detected at concentrations above the AWQSGVs in groundwater samples collected from MW-6I and MW-7I along the southwestern boundary of the Current Site and in groundwater samples collected from wells near the Gowanus Canal including MW-5I, MW-9I, and MW-20I. Chlorinated VOCs are not associated with former MGP operations.

5.4.2.2 Semivolatile Organic Compounds

Several PAHs were detected in nine of the 13 intermediate groundwater samples, however only four PAHs (acenaphthene, fluorene, naphthalene, and phenanthrene) were detected at concentrations above AWQSGVs in one or more of the samples. Naphthalene and acenaphthene were the most frequently detected PAHs in intermediate groundwater and were detected at the greatest concentrations in the sample collected from MW-4I and MW-9I near the Gowanus Canal and in MW-3I near former Holders No. 1 through No. 3. Fluorene and phenanthrene were only detected at concentrations above the AWQSGVs in one groundwater sample collected from MW-9I. PAHs were not detected in groundwater samples collected from upgradient monitoring well MW-1I, monitoring well MW-20I across the Gowanus Canal, or monitoring well MW25I in the northern corner of the parking lot (Block 1007 Lot 1).

Phenol and 1,1 biphenyl were the only other SVOCs detected at concentrations above the AWQSGVs in the intermediate groundwater samples collected during the RI. 1,1-Biphenyl was only detected in the groundwater sample collected from MW-6I. The detected phenol concentrations ranged from 5.7 to 86 µg/L. Phenol was detected in six of the 13 intermediate groundwater samples including the samples collected from monitoring well MW-3I near former holders No. 1 through No. 3, MW-6I along the southwestern Current Site boundary, MW-8I downgradient of the Previously Remediated Area, and MW-4I, MW-5I, and MW-9I near the Gowanus Canal.

5.4.2.3 Metals

Several metals were detected at concentrations above the AWQSGVs as summarized in Table 5-5 and illustrated on Figure 5-8. The metals detected at concentrations exceeding AWQSGVs most frequently include arsenic, iron, magnesium, manganese, and sodium. Antimony was detected in two groundwater samples and barium was detected in one intermediate groundwater sample, at concentrations above the AWQSGVs. Arsenic was detected at concentrations above AWQSGVs in five intermediate groundwater samples and ranged in concentration from 26.7 to 110 µg/L.

5.4.2.4 Total Cyanide

Total cyanide was detected in eight of the 13 intermediate groundwater samples and ranged in concentration from 9.9 to 156 µg/L. None of the intermediate groundwater samples contained concentrations of total cyanide above the AWQSGVs of 200 µg/L.

5.4.2.5 Polychlorinated Biphenyls

PCBs were analyzed in three of the 13 intermediate groundwater samples collected during the RI. PCBs were not detected above the reporting limit in any of the 3 samples analyzed.

5.4.2.6 Pesticides and Herbicides

Pesticides and herbicides were analyzed in three of the 13 intermediate groundwater samples collected during the RI. One pesticide (Beta-BHC, at an estimated concentration of 0.072 µg/L) and one herbicide (2,4-DB, at a concentration of 1.4 µg/l) were detected above the reporting limit in one (MW-5I)of the 3 samples analyzed. AWQSGVs are not listed for these compounds.

5.4.2.7 MNA Parameters

Primary field parameters used to document the potential for natural biodegradation of dissolved organic compounds in groundwater under a MNA approach include DO and ORP. The groundwater collection records in Appendix F include the DO and ORP parameters. DO concentrations in intermediate wells ranged from 0 mg/L at MW-4I and MW-5I to 3. 35 mg/L at MW-1I. ORP readings ranged from 20 mV at MW-1I to -198 mV at MW-4I.

5.4.3 Deep Well Groundwater Samples

Nine deep monitoring wells were installed during the RI. The deep wells have 10 foot screened sections between 50 and 70 ft bgs. Two deeper wells (MW-4D1 and MW-4D2) located adjacent to the Gowanus Canal, have 5 foot screened sections extending from 115 to 120 ft bgs and 142 to 147 ft bgs as summarized on Table 3-2. The analyses performed for each well are summarized in Table 3-1. Eleven deep well groundwater samples (including two duplicate samples) were collected and analyzed. A summary of the analytical results are illustrated on Figure 5-9 and tabulated in Table 5-5.

5.4.3.1 Volatile Organic Compounds

Five of the 11 deep well groundwater samples contained benzene at concentrations above the AWQSGV. Four of these samples did not contain any of the other BTEX compounds and the benzene concentration ranged from 1.3 to 1.9 µg/L. One of the groundwater samples (MW-9D) contained all of the BTEX compounds at concentrations above the AWQSGVs (total BTEX concentration of 1,653 µg/L). As illustrated on Figure 5-9, the sample with the greatest BTEX concentrations was collected from the monitoring well adjacent to the Gowanus Canal and in the vicinity of former tar tanks (MW-9D). Low, yet above AWQSGV, concentrations of benzene were also detected in monitoring wells MW-21D through MW-23D to the north-northeast of the Historic MGP Site in the parking lot in Block 1007 Lot 1). BTEX is less prevalent and generally present at lower concentrations in the deep zone groundwater than in the intermediate zone groundwater beneath the Current Site.

Deep zone groundwater samples also contained chlorinated VOCs at concentrations above AWQSGVs. As illustrated on Figure 5-9 and in Table 5-5, chlorinated VOC concentrations above AWQSGVs were detected in every deep zone well (screened between 50 and 70 ft bgs) except monitoring well MW-21D. Chlorinated compounds are not associated with former MGP operations.

5.4.3.2 Semivolatile Organic Compounds

Only one deep zone groundwater sample contained PAHs at concentrations above AWQSGVs. Acenaphthene and naphthalene were detected at concentrations of 61 and 2,100 µg/L, respectively, in the groundwater sample collected from MW-9D near the former tar tanks adjacent to the Gowanus Canal. Only two other SVOCs (carbazole and dibenzofuran) were detected in one groundwater sample (MW-9D). These SVOCs do not have AWQSGVs.

5.4.3.3 Metals

A few metals were detected in the majority of the deep groundwater samples. Only one deep groundwater sample (MW-5D) contained concentrations of metals above AWQSGVs. These metals include iron, magnesium, manganese, and sodium as summarized in Table 5-5 and illustrated on Figure 5-9. These metals are not typically associated with MGPs.

5.4.3.4 Total Cyanide

Total cyanide was detected in six of the 11 deep groundwater samples and ranged in concentration from 6. 4 to 29 µg/L. None of the deep groundwater samples contained concentrations of total cyanide above the AWQSGVs of 200 µg/L.

5.4.3.5 Polychlorinated Biphenyls

One sample of the 11 deep groundwater samples was analyzed for PCBs during the RI. PCBs were not detected above the reporting limits in the sample analyzed.

5.4.3.6 Pesticides and Herbicides

One of the 11 deep groundwater samples was analyzed for pesticides and herbicides during the RI. Pesticides and herbicides were not detected above the reporting limits in the sample analyzed.

5.4.3.7 MNA Parameters

Primary field parameters used to document the potential for natural biodegradation of dissolved organic compounds in groundwater under a MNA approach include DO and ORP. The groundwater collection records in Appendix F include the DO and ORP parameters. DO concentrations in deep wells ranged from 0. 63 mg/L at MW-21D to 7. 89 mg/L at MW-1D. ORP readings ranged from -81 mV at MW-2D to -178 mV at MW-1D.

5.5 Vapor Intrusion Evaluation Sample Results

Samples of sub-slab vapor were collected from four locations at the Current Site. Two of the samples (SV-1 and SV-2) were collected immediately below the concrete slab of the occupied structure currently used for commercial-retail purposes located at 137 12th Street (Block 1007, Lot 172) in March 2010. The remaining samples (SV-3 through SV-4) were collected immediately below the slab in two separate retail spaces of the occupied structure currently used for commercial purposes at 60 12th Street and 64 12th Street, respectively (Block 1025, Lot 26). Results from three ambient air samples (AMB-1, AMB-2, and AMB-3) collected during the three phases of soil gas sampling are also presented on Table 5-6.

A list of the sub-slab soil vapor, indoor air, and ambient air samples collected, and the analyses performed, is included in Table 3-3. The results of the soil vapor and indoor air evaluation samples collected during the RI are summarized in Table 5-6 and illustrated on Figure 5-10. The compounds are divided into two

categories in the table. The first category includes compounds that could possibly be related to MGP sources, but may also be related to non-MGP sources. The second category includes compounds that are not related to MGP sources, including: ethanol, chlorinated hydrocarbons, and MTBE.

5.5.1 Block 1007, Lot 172

5.5.1.1 Sub-slab Vapor

As indicated on Table 5-6 and illustrated on Figure 5-10, compounds were detected in sub-slab vapor samples SV-1 and SV-2, but only two were above the NYSDOH background indoor air concentration levels for non-residential buildings. Carbon disulfide was the only MGP-related constituent detected in sub-slab vapor (SV-1: 2010 sampling event) above NYSDOH's background indoor air values. However, carbon disulfide was not detected in the paired indoor air sample. Chloroform was detected above the NYSDOH background indoor air concentration levels for non-residential buildings in samples SV-1 and SV-2. Chloroform was detected in the paired indoor air samples as discussed below. Chloroform is a non-MGP-related compound.

5.5.1.2 Ambient Air

There were detections of various constituents in the ambient air samples during the sampling event, consistent with urban background concentrations.

5.5.1.3 Indoor Air

1,4-Dichlorobenzene was detected in indoor air only slightly above the background concentration in sample IA-1. It was not detected in the sub-slab vapor samples. 1,4-Dichlorobenzene is an ingredient in various products including air fresheners, mothballs, and toilet-deodorizer blocks, which may be used/located at the facility.

Chloroform was detected in indoor air only slightly above the background concentration in sample IA-1 of the two sample locations and equal to background at the other (IA-2). Chloroform was also detected in soil vapor concentrations above the NYSDOH background concentration levels for non-residential buildings in samples SV-1 and SV-2. Chloroform is frequently employed as a solvent and is an ingredient in various products including air fresheners, adhesive removers, and glass wipes, all of which are present in the building. Chloroform is not associated with former MGPs.

Freon 11 was detected in indoor air only slightly above the background concentration at one of the two sample locations (IA-2) and below background at the other (IA-1). Freon 11 was also detected in sub-slab vapor at a concentration slightly above the NYSDOH background indoor air concentration levels for non-residential buildings. Freon 11 is a widely used halocarbon aerosol propellant and refrigerant, all of which are likely present at the facility.

5.5.2 Block 1025, Lot 26

5.5.2.1 Sub-slab Vapor

As indicated on Table 5-6 and illustrated on Figure 5-10, compounds were detected in sub-slab vapor samples SV-3 and SV-4, but only chloroform is slightly above the NYSDOH background indoor air concentration levels for non-residential buildings. Chloroform was detected in the paired indoor air samples (IA-3 and IA-4) at concentrations below the background levels.

5.5.2.2 Ambient Air

There were detections of various constituents in the ambient air samples during the sampling event, consistent with urban background concentrations.

5.5.2.3 Indoor Air

1,2-Dichloropropane was detected in indoor air above the background concentration at one sample location (IA-3). It was not detected in sub-slab soil vapor samples. 1,2-Dichloropropane is used in the production of tetrachloroethylene (PCE). In the past it was used as a soil fumigant and an industrial solvent and found in paint strippers, varnish, and furniture finish remover.

6.0 Summary of Nature and Extent

This summary of the nature and extent of impacts combines subsurface visible impact observations from the RI and previous investigations and provides the nature and extent of analytical impacts observed in each media investigated during the RI.

6.1 Surface Soil

The majority of the Current Site is covered with impervious materials (urban fill) and has been redeveloped since the cessation of MGP operations. The surface soil sample results and the presence of non-MGP contaminants like PCBs and pesticides illustrate that the present day Current Site surface soil quality has not been impacted by the former MGP operations.

6.2 Subsurface Soil

Based on the visible impacts and subsurface soil analytical results, subsurface MGP-related impacts are evident in three areas: 1) soil west of the Previously Remediated Area 2) in the vicinity of the former tar tanks along the Gowanus Canal, and 3) in the northern corner of the Lowes parking lot adjacent to the Gowanus Canal. The vertical extent of these impacts has been delineated. The horizontal extent of the visible, MGP-related impacts has been delineated. The horizontal extent of subsurface soil analytical impacts has generally been delineated although the distribution, source, and extent of impacts immediately adjacent to the Gowanus Canal and along the southwestern edge of the Current Site near SB-6 and SB-7 is uncertain. Several sources of potential contamination to the Gowanus Canal have been identified as summarized in Appendix A and include tar and MGP-related impacts. Other potential historic and current sources of impacts to the Gowanus Canal and the flushing and dredging operations within the canal, as presented in Section 2, complicate the interpretation of visible and analytical impacts within and adjacent to the canal.

Visible impacts in the northern corner of the parking lot adjacent to the Gowanus Canal and within the former Cranford Asphalt Manufacturing Company site do not appear to be connected with the visible impacts noted in former MGP areas of the Historic MGP Site based on the distribution of visible impacts illustrated in cross section and by elevation as described in subsection 5.1.

The visible impacts in the SB-9 area adjacent to the canal appear separate from the Previously Remediated Area and may be associated with the former structures beneath the Pathmark building, however drilling and subsurface investigations could not be performed in this area to further evaluate the distribution due to the hours of operation for the Pathmark supermarket and the retail nature of the business. The impacts observed in SB-9 in the vicinity of former tar tanks beneath the Pathmark building along the Gowanus Canal are at an elevation slightly above the elevation of the bottom of the canal and continue to approximately 30 feet below the bottom of the canal. Based on these elevations, the SB-9 area impacts may originate from former MGP structures and/or from the canal. The visible impacts observed in SB-19 on the west side of the canal are within the same elevation as the impacts noted in SB-9. LNAPL collected from MW-20S near SB-19 is not tar-related, based on forensic testing demonstrating that there are other sources of the impacts observed on the western side of the canal.

The visible impacts observed south of SB-9 in SB-4, MW-4D1, and MW-4D2 may originate from the former tar tanks near SB-9 and other former structures beneath the Pathmark building, the former Brooklyn Alcatraz Asphalt operations, the impacts within the Gowanus Canal, and/or the Previously Remediated Area. Visible tar impacts were noted in borings in sediment beneath the canal and northwest of the canal at SB-19 at an elevation consistent with visible impacts noted in SB-4. However, based on the elevation of the observed impacts in and adjacent to both sides of the canal (SB-4/MW-4 on the east side and SB-19 on the west side), the historical and current use of the properties surrounding the Canal, the redistribution of impacted sediments within the Canal due to tidal fluxes, the Flushing Tunnel, and CSOs, the distribution and source of these impacts is uncertain and could also include the canal itself. The current and historic uses of the property and the adjacent properties may also represent sources of impacts on the western side of the canal, as summarized in Appendix A.

Visibly impacted subsurface soils were delineated along the southwestern and northeastern borders of the Current Site. Subsurface soils along the southwestern edge (SB-6 and SB-7) of the Current Site contain concentrations of PAHs above the Commercial Use SCOs although the constituent distribution suggests these impacts may not originate from a MGP source.

6.3 Groundwater

Groundwater samples collected from beneath the RI Study area contain MGP-related and other compounds at concentrations above the AWQSGVs. The possibly MGP-related compounds detected at concentrations that are above AWQSGVs include BTEX, PAHs, and limited occurrences of cyanide (two locations in shallow zone only). Compounds unrelated to MGP operations that were detected in groundwater samples at concentrations above the AWQSGVs include chlorinated VOCs and MTBE. All of these compounds were detected in RI groundwater samples collected from the shallow, intermediate, and deep groundwater zones.

Shallow zone groundwater impacts are present in four areas:

1. the vicinity of and downgradient of former MGP structures
2. along the southwestern property boundary
3. in the northern corner of the Lowes parking lot
4. in upgradient monitoring well MW-1S

Groundwater samples collected from MW-1S also contained MTBE, a gasoline additive suggestive of an additional VOC source in the Current Site vicinity. The NYCDOS UST NYSDEC Spill site may contribute to impacts detected in the sample collected from MW-1S.

In general the greatest impacts were detected in the intermediate zone groundwater samples, consistent with the most visibly impacted soil horizon. Impacts were not detected in the groundwater samples collected from the intermediate and deep zones at upgradient locations MW-1I and 1D.

The deep zone MGP-related groundwater impacts appear to be limited to the area of the former tar tanks adjacent to the Gowanus Canal (MW-9D). Chlorinated VOCs appear to be more widespread than non-chlorinated VOCs, although low benzene concentrations above standards were detected in all of the groundwater samples collected from deep wells in the parking lot north-northeast of the Current Site.

Groundwater impacts are evident at the southwestern and western edge of the Current Site, along the Gowanus Canal, in all three of the groundwater zones investigated during the RI. No impacts were noted in

either of the two deepest wells in the RI Study Area (MW-4D1 and MW-4D2) screened directly above the Gardiners Clay and directly below the Gardiners Clay, in the upper portion of the Jameco Gravel unit, respectively.

Primary field parameters used to document the potential for natural intrinsic biodegradation of dissolved organic compounds in groundwater under a MNA approach include DO and ORP. DO is the preferred terminal electric acceptor (TEA) used by microbes during natural degradation of organic compounds, therefore, reduced DO levels within and near known former source areas indicate that aerobic biodegradation is/has occurred in areas most impacted by the dissolved constituents of interest (COIs). ORP is a measure of the energy yield in the groundwater available to the microbes during the respiration process. Highly positive ORP values indicate areas where reactions are taking place under aerobic conditions (high energy yield to microbes), while lower to negative values indicate areas where anaerobic reactions (lower energy yield to microbes) predominate.

Collection of field readings including DO and ORP are susceptible to field meter calibration and the inherent difficulty in gathering DO results despite the use of sealed flow through cells using low-stress/low purge methods. Despite these difficulties, patterns often develop that, overall, document intrinsic biodegradation of dissolved organic compounds in groundwater is occurring.

Groundwater from the shallow groundwater wells showed generally low DO and negative ORP levels for most wells with the lowest DO concentrations at three wells (MW-5S, MW-7S, and MW-8S) in close proximity and downgradient of the area of highest dissolved COI impacts associated with well MW-3S. The most negative ORP readings were noted in groundwater from MW-7S and MW3S, where the lowest DO concentrations were generally noted. Higher DO and ORP values were noted in wells adjacent to the Gowanus Canal at wells MW-9S and MW-19S, where lower COI concentrations were noted.

For the intermediate zone, DO concentrations were lowest in groundwater purged from wells MW-3I, MW-4I, and MW-5I within or downgradient of the area of highest COI impacts. The most negative ORP readings were noted at MW-3I, MW-4I, MW-5I, and MW-9I, Higher DO and ORP values were noted in groundwater at outlying cross-gradient or upgradient wells for which significantly lower COI concentrations were detected in groundwater samples. The highest DO and most positive ORP values were noted with upgradient well MW-1I, fitting the conceptual summary that intrinsic biodegradation is occurring in the areas most impacted by dissolved COI impacts in groundwater.

For the deep zone, DO concentrations were highest in groundwater purged from upgradient well MW-1D and wells MW-5D and MW-23 where non-detect to low dissolved COIs were detected in groundwater samples and lowest in groundwater from wells MW-9D and MW-21D. ORP values were somewhat inconsistent but indicated near lowest recorded levels in groundwater purged from MW-9D, where the highest dissolved COI concentrations were noted in groundwater samples.

In summary, the patterns of the DO and ORP results combined with groundwater flow directions in each interval support the conceptual model that intrinsic biodegradation of dissolved phase COIs is occurring in shallow, intermediate, and deep groundwater zones beneath the RI Study Area.

6.4 Soil Vapor and Indoor Air

Carbon disulfide was the only MGP-related constituent detected in sub-slab vapor (SV-1: 2010 sampling event) above NYSDOH's background indoor air values. However, carbon disulfide was not detected in the paired indoor air sample. In addition, there were detections of various constituents in the ambient air samples during the sampling event consistent with urban background concentrations. Based on the

collected data, there were no MGP-related constituents detected in indoor air above background concentrations. However, four non-MGP-related compounds (1,2-dichloropropane, 1,4-dichlorobenzene, chloroform, and trichlorofluoromethane [Freon 11]) were detected in indoor air above background concentrations. In general, the concentrations of VOCs detected in the indoor air are comparable with those detected in the ambient air and those typically found in indoor air of non-residential buildings.

7.0 Qualitative Human Health Exposure Assessment

This section of the RI assesses the potential for exposure to constituents present in impacted soils, groundwater, soil vapor, and indoor air. This assessment identifies the potential release and transport mechanisms for the constituents of concern (COCs), point of exposure and exposure routes, and the receptors that could be exposed to COCs originating from the Current Site. It is assumed that direct contact with NAPL will pose an unacceptable risk and will not be evaluated as part of the QHHEA. The evaluation follows guidelines specified in the "NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation" (NYSDEC, 2010a).

7.1 Current Site Setting

The Current Site is owned by individual third parties and used by multiple tenants for commercial uses. The Current Site contains one and two-story buildings and includes a vacant lot (Block 1007, Lot 18 and Block 1025, Lot 100), and a paved parking area. The buildings are serviced by public utilities including electric, water, and sewer.

The Current Site is located in a mixed commercial/industrial area of Brooklyn, NY and is located east of the Gowanus Canal, between the Gowanus Expressway (Highway I-278) and the New York City Transit train bridge and associated subway rail line. The Current Site is bounded by 11th Street and the 11th Street Basin to the north, 2nd Avenue to the east, 13th Street to the south, and the Gowanus Canal to the west.

The Current Site is underlain by approximately 15 feet of sand and silt fill identified by anthropogenic material (brick, glass, asphalt, etc.). A peat and organic silt layer is encountered below the fill followed by a sandy silt unit, a silty sand unit, with discontinuous units of silt with fine sand and fine gravel, sand with gravel and cobbles, to depths of approximately 121 ft bgs. A regional confining clay unit known as the Gardiners Clay was detected at the one deep boring location from 121 to 135 ft bgs and underlain by a brown, well graded medium to coarse sand and gravel known as the Jameco Gravel. Groundwater is encountered beneath the Current Site at minimum depths of approximately 3 to 10 ft bgs, and flows towards the west. The nearest water body in the direction of groundwater flow is the Gowanus Canal located directly adjacent to the west of the Current Site.

7.2 Exposure Assessment

Exposure is the process by which humans come in contact with constituents in their environment. Humans can be exposed to constituents in a variety of environmental media including surface soil, subsurface soil, soil vapor, groundwater and ambient/indoor air. Exposure to these media can occur through several routes including ingestion, dermal contact, and inhalation. The exposure assessment identifies likely pathways by which humans are potentially exposed to COCs.

The assessment includes the following:

- Development of a conceptual site model (CSM)
- Discussion of potential sources
- Evaluation of Current Site and off-Current Site data using health-based screening criteria

- Discussion of potential release mechanisms
- Identification of potential human receptors and receptor-specific exposure pathways

Residential and commercial properties in the vicinity of the Current Site obtain drinking water from municipal sources. Municipal sources in the area obtain water from up-state surface water and not from local groundwater. Therefore, the potential for exposure to Historic MGP Site derived constituents in drinking water has not been considered further in this assessment as it is not considered likely to be a complete exposure pathway.

Figure 6-1 presents the CSM for potential release and transport mechanisms for COCs at the Current Site. Included on the figure is information regarding the known or potential sources of COCs at the Current Site, the identified release mechanisms, and the affected source media. Potential migration pathways, exposure media and the potential exposure routes have also been presented. It should be noted that the exposure routes are considered potential unless there is an ongoing or documented exposure.

7.2.1 Contamination Sources

The sources of environmental impact being evaluated for the Current Site are residual materials associated with former MGP activities. Potential locations of residual contamination within or adjacent to the Current Site include:

- The former MGP structures where Hamilton Plaza (Block 1007, Lot 172) and Lowes (Block 1007, Lots 1, 118,219, and 220) are currently located.
- The former location of Holder 5 with additional gas storage (valve house) facilities (Block 1025, Lots 20 and 100).
- The area along 12th Street between the Gowanus Canal and 2nd Avenue, adjacent to several former MGP structures (Block 1007, Lot 18).
- Upgradient of the Current Site, near the intersection of 12th Street and 2nd Avenue at the former Department of Sanitation Site where BTEX was reported in shallow upgradient well MW-1S.
- Downgradient Current Site boundaries along 13th Street and Gowanus Canal. (Block 1025, Lots 1 and 200).

Surface soil (September 2010), subsurface soil (April, May, and September 2010; April, September through October 2011, and April 2012), groundwater, soil vapor and sub-slab vapor (March 2010; March and April 2011 and March 2012), indoor air and ambient air (March and April 2010) samples have been collected from the Current Site and analyzed for a range of constituents. Available analytical data were compared to New York State recommended standards and guidance values on a sample-by-sample basis. Comparison tables are presented in Section 5 of this report. The results of these comparisons are summarized below.

7.2.1.1 Surface Soil

Analytical data for surface soil (0 to 0.5 feet bgs) indicate that constituent concentrations are below New York State (NYS) Part 375 soil clean-up objectives (NYSDEC, 2006b) for a commercial land use scenario.

7.2.1.2 Subsurface Soil

For the purposes of this QHHEA, subsurface soils have been divided into those soils between 1-15 ft bgs and subsurface soils deeper than 15 ft bgs. This depth division is based on the assumption that intrusive

construction activities undertaken at the Current Site are likely to occur at depths between 0 and 15 feet bgs, therefore construction workers may be directly exposed to chemical constituents reported in soils between 0 – 15 ft bgs.

The following constituents were detected in subsurface soils between 1-15 ft bgs above New York State (NYS) Part 375 soil clean-up objectives (NYSDEC, 2006) for a commercial land use scenario:

- Arsenic (SB07[4-5]) at a concentration of 24.2 mg/kg; barium and lead (SB-13[4-5]) at concentrations of 424 mg/kg and 1230 mg/kg, respectively
- Benzo(a)anthracene (SB06[4-5]); SB07[4-5]; SB-07[10-12]; SB-08[3-4]; SB-11[4-5]; SB-16[10-13]; SB-17[4-5]; SB-18[1-2]) concentrations range from 6.41 mg/kg to 96.7 mg/kg
- Benzo(a)pyrene (SB-05_4-5; SB-06_4-5; SB-07_4-5; SB-07_10-12; SB-08_3-4; SB-09_4.5-5.0; SB-11_4-5; SB-16_4-5; SB-16_10-13; SB-17_4-5; SB-18_1-2) concentrations range from 1.16 mg/kg to 81.2 mg/kg
- Benzo(b)fluoranthene (SB06[4-5]; SB07[4-5]; SB-07[10-12]; SB-08[3-4]; SB-09[4.5-5.0]; SB-18[1-2]) concentrations range from 8 mg/kg to 35.6 mg/kg
- Chrysene (SB-07[10-12]) at a concentration of 96.5 mg/kg
- Dibenz(a,h)anthracene (SB-06[(4-5]; SB-08[3-4]; SB-09[4.5-5.0]; SB-11[4-5]) concentrations range from 0.835 mg/kg to 4.1 mg/kg
- Indeno(1,2,3-c,d)pyrene (SB-06[4-5]; SB-07[4-5]; SB-07[10-12]; SB-08[3-4]; SB-09[4.5-5.0]; SB-18[1-2]) concentrations range from 6.43 mg/kg to 24.1 mg/kg
- Naphthalene (SB-07[10-12]; SB-15[4-5] concentrations were reported at two locations (SB-07[10-12]; SB-15[4-5]) at 949 mg/kg and 525 mg/kg, respectively
- Phenanthrene was detected above soil clean-up objectives at a single location (SB-07[10-12])at 518 mg/kg

The following constituents were detected in subsurface soils deeper than 15 feet bgs, above NYS Part 375 soil clean-up objectives (NYSDEC, 2006) for a commercial land use scenario:

- Arsenic
- Benzene, ethylbenzene and toluene
- Acenaphthene, acenaphthylene, benzo(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; chrysene; dibenz(a,h)anthracene; fluoranthene; fluorene; indeno(1,2,3-c,d)pyrene; naphthalene, phenanthrene and pyrene

7.2.1.3 Groundwater

Constituents detected in shallow groundwater (from wells screened between 3 and 30 feet below ground level), both Current Site and off-Current Site, at concentrations above AWQSGVs provided in the NYSDEC - Division of Water –TOGS 1.1.1 (NYSDEC, 1998, with addendums) include:

- benzene, ethylbenzene, toluene, and xylenes (BTEX)
- 1,4-dichlorobenzene (MW-7S), chlorobenzene (MW-7S), isopropylbenzene, MTBE
- acenaphthene, benzo(a)anthracene (off-Current Site only; MW20S), naphthalene, styrene

- phenol
- antimony, arsenic, barium iron, lead, magnesium, manganese, selenium, sodium, thallium
- cyanide (MW-4S and MW-7S)

Constituents detected in intermediate and/or deep groundwater (from wells screened at greater than 30 feet below ground level) at concentrations above AWQSGVs include:

- BTEX
- cis-1,2-dichloroethene, isopropylbenzene, PCE, trans-1,2-dichloroethene, trichloroethene (TCE), MTBE (off-Current Site only; MW20S), styrene, vinyl chloride
- acenaphthene, fluorene, naphthalene, phenanthrene
- 1,1-biphenyl, phenol
- antimony, arsenic, barium, iron, magnesium, manganese, sodium

7.2.1.4 Sub-Slab Vapor and Indoor/Ambient Air

In March 2010, 2 paired sub-slab vapor and indoor air samples (SV-1/IA-1 and SV-2/IA-2) were collected within the Current Site buildings located at in Block 1007, Lot 172. One outdoor (ambient) air sample was also collected outside Block 1007, Lot 172 during this March 2010 sampling event. In March and April 2011, 2 paired sub-slab vapor and indoor air samples (SV-3/IA-3 and SV-4/IA-4) were collected within two buildings within the Current Site located in Block 1025, Lot 26. Two ambient air samples were also collected during the March and April 2011 sampling events.

Constituent concentrations detected in indoor air were compared to NYSDOH background indoor air values (NYSDOH, 2006), site-specific outdoor air concentrations, and the paired sub-slab vapor concentrations. Constituents detected in indoor air above NYSDOH's indoor air values are discussed below:

- No MGP-related constituents were detected in indoor air during either sampling event above NYSDOH's background indoor air values.
- Carbon disulfide was the only MGP-related constituent detected in sub-slab vapor (2010 sampling event) above NYSDOH's background indoor air values. However, carbon disulfide was not detected in the paired indoor air sample and therefore does not pose a health concern via the vapor intrusion pathway.
- Three non-MGP constituents, 1,4-dichlorobenzene, chloroform, and Freon 11, were detected in at least one of the indoor air samples during the 2010 sampling event above NYSDOH background indoor air values. 1,4-Dichlorobenzene was not detected in any of the sub-slab vapor samples, therefore, 1,4-Dichlorobenzene is not considered to be from a subsurface source that has migrated to indoor air via the vapor intrusion pathway. Freon 11 was detected in the sub-slab vapor samples at concentrations approximately equal to or lower than in indoor air. Therefore, Freon 11 is also not considered to be from a subsurface source that has migrated to indoor air via the vapor intrusion pathway. Chloroform was detected in sub-slab vapor samples at concentrations less than paired indoor air samples. Therefore, chloroform is not considered to be from a subsurface source that has migrated to indoor air via the vapor intrusion pathway.
- One non-MGP constituent, 1,2-dichloropropane, was detected in one of the indoor air samples (IA-3) during the 2011 sampling event above NYSDOH's background indoor air value. However, 1,2-

dichloropropane was not detected in any of the sub-slab vapor samples. Therefore, 1,2-dichloropropane is not considered to be from a subsurface source that has migrated to indoor air via the vapor intrusion pathway.

7.2.2 Potential Release Mechanisms

There are several potential release mechanisms by which the constituents detected in soil, groundwater, and soil vapor may be transported to other media. Each mechanism is considered for identified media and potential receptor group. It is assumed that direct contact with NAPL will pose an unacceptable risk and will not be evaluated as part of the QHHEA. Potential release mechanisms for soil include the following:

- Fugitive dust – Constituents detected in surface and subsurface soil could be a potential source for fugitive dust as a result of physical disturbance.
- Volatilization – Volatile constituents detected in surface and subsurface soil may potentially be transported by volatilizing into soil-pore space and eventually emanate into outdoor or indoor air.
- Leaching – Constituents detected in surface and subsurface soil could potentially leach to groundwater.

Migration of chemical constituents in groundwater can act to transfer Current Site derived constituents off-Current Site. There are three mechanisms by which constituents in groundwater can be transported to other media. These migration pathways include the following:

- Adsorption – Constituents in groundwater may be sorbed onto subsurface soils.
- Volatilization – Volatile constituents in groundwater may potentially desorb into soil vapor and be transported into outdoor or indoor air.
- Extraction – Constituents in groundwater may migrate to other media by extraction and use of impacted groundwater.

There are two mechanisms by which volatile constituents in soil vapor can be transported to other media. These migration pathways include the following:

- Migration – Volatile constituents in soil vapor may migrate to indoor air through building foundations (i.e., vapor intrusion to indoor air).
- Migration – Volatile constituents in soil vapor may migrate to other media through soil to outdoor air.

7.2.3 Potential Human Receptors and Exposure Pathways

The section discusses identified potential human receptors and the potentially complete exposure pathways by which receptors may be exposed to Current Site-derived constituents.

7.2.3.1 Current Site Receptors

An assessment of potential exposure pathways for receptors in the Current Site area is presented in Figure 7-1. The analysis includes an identification of each potential receptor group, a listing of each potential exposure media and potential pathway, and a rationale for inclusion or exclusion of each potential receptor in the consideration of remedial actions for the Current Site where complete or potentially complete pathways exist. Potential receptor groups and potential exposure pathways that may exist for the Current Site are discussed below.

Current Site Indoor Commercial/Maintenance Workers

The Current Site is used for commercial purposes and is zoned for commercial land use. Current land use at the Current Site is expected to continue in the future. Commercial workers occupy the Current Site buildings, including full-time indoor commercial workers and intermittent indoor maintenance workers. These workers may be exposed to volatile constituents present in the subsurface of the footprint of the buildings through the migration of impacted vapors to the indoor air of the building. However, MGP-derived volatile constituents in sub-slab vapor and indoor air within Current Site buildings have not been detected above NYSDOH's background indoor air values. Therefore, inhalation of MGP-derived volatile constituents in indoor air is not considered to be complete for Current Site commercial/maintenance workers.

Exposure to groundwater via drinking water is not a complete exposure pathway because the buildings are supplied by a municipal water source, which is derived from surface water sources up-state. Municipal water in the area is not derived from local groundwater.

Direct contact exposure to constituents in soil and groundwater is not considered complete for Current Site commercial/maintenance workers because there were no constituents detected in surface soils above NYS Part 375 soil clean-up objectives (NYSDEC, 2006) for a commercial land use scenario, and because Current Site commercial/maintenance workers are not considered likely to conduct intrusive works at the Current Site and so are unlikely to directly contact soil and groundwater beneath the Current Site.

Current Site Outdoor Commercial/Maintenance Workers

Outdoor workers may potentially be exposed to constituents in surface soil from direct contact pathways (i.e., incidental ingestion, dermal contact) and inhalation of volatiles and particulates in outdoor air originating from soil while performing light maintenance activities such as lawn care. Since no constituents have been reported in surface soils above NYSDEC Part 375 Commercial use SCO, and the Current Site has limited un-paved areas, direct contact and particulate inhalation pathways are not considered likely to be complete for these receptors.

MGP-related constituents were detected at low concentrations in the ambient air samples collected at the Current Site, and sub-slab vapor concentrations were generally detected below NYSDOH's background indoor air levels, therefore inhalation of MGP-derived volatile constituents in outdoor air is not considered likely to be a complete exposure pathway for these receptors.

Current Site Construction Workers

Constituents have been reported in subsurface soil and groundwater at concentrations in excess of NYSDEC Part 375 Commercial use SCOs and AWQSGVs. Outdoor construction workers may potentially be exposed to constituents in subsurface soils and groundwater through direct contact (dermal contact or incidental ingestion) or inhalation of particulates during intrusive construction activities. Sub-slab vapor concentrations were generally detected below NYSDOH's background indoor air levels, therefore inhalation of MGP-derived volatile constituents in outdoor air is not considered likely to be a complete exposure pathway for these receptors.

Impacted groundwater is present beneath the Current Site at depths from approximately 2 ft to approximately 11 ft bgs, making it potentially available for contact by a construction worker. Only properly trained field personnel should complete the subsurface utility work in this area using methods specified in a site-specific HASP until the area has been cleared of impacted soils and groundwater.

Current Site Visitors and Trespassers

The Current Site is covered almost entirely with impermeable surfaces and large commercial buildings therefore direct contact with the subsurface is unlikely for Current Site visitors and trespassers. The absence of MGP-related constituent detections in surface soils also limits the potential for Current Site visitors and trespassers to contact constituents in soil.

These receptors are unlikely to conduct intrusive work in the area, therefore, direct contact with reported constituents in subsurface soils and groundwater is not considered to be a complete exposure pathway.

Concentrations of MGP constituents detected in indoor and outdoor air are below NYSDOH's background indoor air levels, therefore inhalation exposure to MGP-derived volatile constituents in indoor and outdoor air by these receptors is not considered to be a complete exposure pathway.

7.2.3.2 Off-Current Site Receptors

Potential off-Current Site receptor groups and potential exposure pathways for off-Current Site areas are discussed below. Analysis of each potential receptor group, potential media and pathways, and a rationale for inclusion or exclusion of each potential receptor in the consideration of remedial actions for the off-Current Site area have been included.

Off-Current Site Residential/Commercial Receptors in Upgradient and Cross-Gradient Areas

The flow of groundwater at the Current Site has been observed to be towards Gowanus Canal. Therefore, commercial and residential receptors to the east, southeast, and south are considered to be upgradient or cross gradient of the Current Site. Commercial receptors to the northeast and southwest are considered to be cross-gradient, however subsurface conditions beneath these receptors are considered likely to be similar to those observed beneath upgradient properties. The following exposure pathways have been considered for residential and commercial receptors in upgradient and cross-gradient areas:

Inhalation of volatile constituents in indoor and outdoor air:

Inhalation of MGP-derived constituents in indoor and outdoor air as a result of groundwater impacts are considered unlikely to be complete for these receptors given the expected flow of groundwater. Current Site sub-slab vapor concentrations were generally below NYSDOH's background indoor air values; based on off-Current Site groundwater concentrations, it is not expected that off-Current Site MGP-related soil vapor concentrations would be higher than Current Site concentrations. Detected constituents in groundwater are petroleum hydrocarbon based, and as petroleum hydrocarbons in subsurface vapor are not expected to migrate more than a distance of 30 feet due to their ability to biodegrade (ASTM, 2008; NJDEP, 2005), it is considered unlikely that MGP constituents will be present in off-Current Site subsurface soil vapor.

Direct contact with constituents in groundwater:

Groundwater has been reported at depths between 2.5 and 7 ft bgs off-Current Site to the northeast of the Current Site. Based on the westerly direction of groundwater flow observed in the RI, it is considered unlikely that MGP-related groundwater impacts would be present or migrate to off-Current Site receptors to the northeast and east of the Current Site. Residential and commercial receptors are considered unlikely to conduct intrusive work and therefore direct contact with constituents in groundwater is considered unlikely.

Direct contact with and incidental ingestion of constituents in subsurface soil:

Detected constituent concentrations in subsurface soil are not considered likely to be present in off-Current Site upgradient soils unless off-Current Site filling activities were undertaken during decommissioning of the MGP facility. Therefore, it is considered unlikely that residential or commercial receptors would directly contact MGP-derived constituents in soil.

Off-Current Site Commercial Properties Downgradient of the Current Site

The flow of groundwater at the Current Site has been observed to be towards the Gowanus Canal. Therefore, commercial receptors identified to be present to the north, northwest, and west of the Current Site (on the other side of Gowanus Canal) are considered to be downgradient of the Current Site. The following exposure pathways have been considered for off-Current Site commercial receptors in downgradient areas:

Inhalation of volatile constituents in indoor and outdoor air:

Based on detected concentrations in shallow groundwater wells (MW-19S and MW-20S) it is considered unlikely that MGP-derived volatile constituents would be present in soil vapor beneath the commercial properties downgradient of the Current Site. Volatile constituents have been reported in intermediate depth groundwater (MW-19I and MW-20I), however, these constituents were not reported in shallow groundwater, therefore, they are considered unlikely to contribute to soil vapor concentrations.

Direct contact with constituents in groundwater:

Off-Current Site commercial workers are not considered likely to perform intrusive works on off-Current Site commercial properties; and exposure to groundwater via drinking water is not considered likely to be a complete exposure pathway because the buildings are supplied by a municipal water source (that is not derived from local groundwater). Therefore, direct contact and ingestion pathways for off-Current Site groundwater are not considered complete for these receptors.

Direct contact with and incidental ingestion of constituents in subsurface soil:

Reported constituent concentrations in subsurface soil are present at depths greater than 30 ft bgs at off-Current Site locations. However, given the shallow groundwater table and the depth the impacts were noted, off-Current Site commercial receptors are unlikely to directly contact MGP-derived constituents in soil.

Off-Current Site Construction Workers

MGP-derived constituents have been detected in shallow groundwater in off-Current Site areas surrounding the Current Site. As groundwater has been reported at depths between 2.5 and 11 feet below top of casing in off-Current Site areas, there is potential for direct dermal contact and incidental ingestion of groundwater during intrusive works in off-Current Site areas surrounding the Current Site.

Due to the shallow nature of groundwater in the area, any off-Current Site soil impacts are expected to be a result of the presence of impacted groundwater. However, reported constituent concentrations in soil have not above adopted screening criteria between 0 and 15 ft bgs. Therefore, direct dermal contact and incidental ingestion of constituents in subsurface soils are not considered to be complete exposure pathways for off-Current Site construction workers.

It is recommended that only properly trained field personnel should complete the subsurface utility work in this area using methods specified in a site-specific HASP until the area has been cleared of impacted groundwater or if deep excavation (greater than 15 feet bgs) is planned.

7.2.4 Summary of Receptors and Potentially Complete Exposure Pathways

A summary of the environmental media, potential receptors and potentially complete exposure pathways has been provided in the following table. Potential receptors are based on current site use and adjacent site uses, and the potential for future uses and activities (i.e., construction/utility activities). Potentially complete exposure pathways are identified if a receptor has a current or potential future exposure to impacted media.

Location	Media	Exposure Routes	Indoor Commercial/ Industrial Worker	Outdoor Commercial/ Industrial Worker	Construction/ Utility Worker	Visitor/ Trespasser	Off-Current Site Resident
Current Site	Surface Soil	Inhalation (volatiles and particulates) Direct Contact (incidental ingestion, dermal contact)	×	×	×	×	×
	Subsurface Soil	Inhalation (volatiles and particulates) Direct Contact (incidental ingestion dermal contact)	×	×	✓	×	×
	Groundwater	Ingestion Direct Contact	×	×	✓	×	×
	Soil Vapor	Inhalation	×	×	×	×	×
	Indoor Air	Inhalation	×	×	×	×	×
	Ambient Air	Inhalation	×	×	×	×	×
Off-Current Site	Surface Soil	Inhalation (volatiles and particulates) Direct Contact (incidental ingestion, dermal contact)	×	×	×	×	×
	Subsurface Soil	Inhalation (volatiles and particulates) Direct Contact (incidental ingestion, dermal contact)	×	×	×	×	×
	Groundwater	Ingestion Direct Contact	×	×	✓	×	×
	Soil Vapor	Inhalation	×	×	×	×	×

Note:

× Incomplete Exposure Pathway

✓ Complete Exposure Pathway

7.3 Conclusions

Complete exposure pathways have not been identified for current site and off-Current site commercial industrial workers, visitors and trespassers, and off-current site residential receptors.

Current site and off-Current site construction workers who perform excavation work on or adjacent to the Current Site may potentially be exposed to PAHs, metals, and/or VOCs in subsurface soil and groundwater if subsurface excavation work is needed adjacent to or at the Current Site. Only properly trained field personnel should complete the subsurface utility work in this area using methods specified in a site-specific HASP until the area has been cleared of impacted soils and groundwater.

8.0 Fish and Wildlife Resources Impact Analysis

The purpose of the Fish and Wildlife Resources Impact Analysis (FWRIA) is to identify actual or potential impacts to fish and wildlife resources from Current Site contaminants of ecological concern. There are no ecological resources on the Current Site due to the presence of buildings and pavement that cover the majority of the area. The nearest potential ecological resource to the Current Site is the adjacent Gowanus Canal. Migration of MGP-related groundwater or NAPL impacts to the Gowanus Canal represents a potential ecological exposure pathway for the Current Site. The Gowanus Canal is a NYSDEC Class D (SD) water body (the most degraded saline water body classification) and is also a Superfund Site. The USEPA has recently issued a ROD for the Gowanus Canal. Therefore, a FWRIA of the Current Site is not necessary. Future remedial alternative evaluations for the Current Site will be consistent with the USEPA selected remedy and will address the potential MGP-related NAPL migration to the canal.

9.0 Summary and Conclusions

This section summarizes the Remedial Investigation findings for the Current Site. An overview of the nature and extent of COCs is presented by area of concern and by media, and known and potential source areas are identified.

9.1 Site Geology

- Historic fill material covers the majority of the Current Site in a layer typically ranging from 0 to 15 feet thick.
- The fill is composed of mostly poorly graded sand, silt, and gravel with varying amounts of anthropogenic material: coal fragments, concrete slabs, wood pieces, wood fragments, brick fragments, glass, and other urban fill debris.
- Meadow mat is present beneath the fill. The meadow mat consists of varying amounts of a densely compacted, decomposed vegetative material (peat), organic clays, marine clays with shell fragments, and silt and is brown/tan or grey in color with a distinctive organic-like odor. The unit acts to separate the underlying native soils from the overlying fill. The meadow mat likely represents the former ground surface prior to development (filling) in the Current Site area. This layer ranges from five to fifteen feet thick, was encountered 15 to 20 ft bgs, and was observed in all Current Site borings with the exception of SB-5. The distribution of the unit is consistent with the historic marshy environment of this area.
- Beneath the bottom of the meadow mat are units of glacial outwash dominated by sands and silts. The units vary in composition, occurring as tan and grey interbedded sand and silt and as well-graded to poorly-graded sands and silt zones. These zones vary in depth and distribution across the RI Study Area, and are not defined by clear boundaries.
- A stiff, gray, high plasticity clay and silty clay was encountered from 121 to 135 ft bgs at the RI Study Area. This 14-foot thick unit is interpreted to be the Gardiners Clay. The unit is expected to be laterally continuous beneath the RI Study Area, have very low permeability, and represent a confining unit defining the lower extent of the sand/silt aquifer.
- Below the Gardiners Clay is a brown, well-graded, medium to coarse sand and gravel. This unit is interpreted to be the Jameco Gravel. The unit is expected to be laterally continuous beneath the RI Study Area. A silty sand was encountered within the upper Jameco Gravel.

9.2 Site Hydrogeology

- The Current Site is almost entirely covered by buildings or pavement. Therefore, little to no precipitation is captured through infiltration, but instead flows across the Current Site from east to west towards the Gowanus Canal via sheet flow, and is captured by an on-site storm water drainage system.
- The surface of the groundwater table was encountered between 1.9 and 10.93 ft bgs across the Current Site. The Gowanus Canal surface water elevation was roughly between 2 ft and 6 ft lower than the groundwater table elevation at adjacent wells.

- Three groundwater zones beneath the Current Site were evaluated during the RI using shallow wells screened across the water table surface in the fill, at depths generally ranging from 3 to 15 ft bgs; intermediate wells screened directly below the meadow mat and within the sand/silt unit at depths generally ranging from 25 to 50 ft bgs; and deep wells screened within the sand/silt unit at depth from 60 to 70 ft. Additionally, one deep well screened from 115 to 120 ft bgs, directly above the Gardiners Clay, and one deep well screened from 142 to 147 ft bgs, within the Jameco Gravel directly below the Gardiners Clay, were used to evaluate deeper groundwater quality beneath the Current Site.
- Groundwater flows from the east to the west across the Current Site under all tidal conditions.
- Average horizontal hydraulic gradients calculated from the measurements collected during high tide (September 29, 2010) and low tide (March 14, 2012) were 5.77×10^{-3} ft/ft in shallow zone wells, 3.16×10^{-3} ft/ft in intermediate zone wells, and 2.02×10^{-3} ft/ft in deep zone wells. A generally downward vertical hydraulic gradient is present along the central and eastern Current Site boundaries and an upward vertical hydraulic gradient is present adjacent to the Gowanus Canal and represents groundwater discharge into the canal.
- The geometric means of the calculated hydraulic conductivity of the shallow, intermediate, and deep zones were 17.9 ft/day, 10.0 ft/day, and 11.9 ft/day, respectively.
- Based on tidal cycle monitoring, the strongest tidal effects are noted in the groundwater levels in the intermediate and deep zone wells. Groundwater elevations in the deep zone wells are influenced as far as 725 ft from the canal, and fluctuate by more than a foot. The water levels in the intermediate zone wells also have fluctuations of about one foot, but the influence appears to dissipate between 410 ft and 425 ft from the canal. The tidal influence in the shallow zone, above the meadow mat, is less pronounced, with water level fluctuations of less than a foot and slightly irregular compared to the intermediate and deep zone responses. The tidal influence in the shallow zone dissipates by 200 ft from the canal.

9.3 Nature and Extent of Constituents of Interest

Four media were investigated at the Current Site: surface soil, subsurface soil, groundwater, and sub-slab vapor/air. Conclusions for each media are summarized below.

9.3.1 Surface Soil

- Three surface soil samples were collected and analyzed during the RI.
- Sample analytical results indicate that VOCs, including BTEX, were not detected in the surface soil samples except for an estimated concentration of 1,1-dichloroethene in SS-2 that did not above the Commercial Use SCO. The VOC 1,1-dichloroethene is not MGP related.
- PAHs were detected at concentrations below Commercial Use SCOs in each surface soil sample and ranged in total PAH concentration from 4.9 to 8.2 mg/kg. Few other SVOCs were detected at concentrations below the Commercial Use SCOs.
- Metals and total cyanide were detected in each surface soil sample at concentrations below Commercial Use SCOs.
- One surface soil sample (SS-1) was also analyzed for pesticides, herbicides, and PCBs. One pesticide and two PCB aroclors were detected in sample SS-1 at concentrations below the Commercial Use SCOs (if listed).

- The majority of the Current Site is covered with impervious materials and has been redeveloped since the cessation of MGP operations. The surface soil sample results illustrate that the present day surface soil quality has not been impacted by the former MGP operations.

9.3.2 Subsurface Soil

A total of 80 subsurface soil samples (77 samples and three duplicate samples) were collected from the borings and test pits advanced as part of the RI.

- Concentrations of individual BTEX compounds were only detected above the Commercial Use SCOs in four of the 80 subsurface samples collected. These four samples were collected from borings located immediately west of the Previously Remediated Area. These samples were collected at depths coincident with tar saturated visible impacts and were delineated horizontally and vertically.
- Twenty-two of the 80 samples contained concentrations of one or more PAH compound above the applicable Commercial Use SCOs. Thirteen samples collected from ten locations contained total PAH concentrations that are above the NYSDEC CP-51 total PAH alternative criterion of 500 mg/kg. All of these thirteen samples, except SB-6 (4-5), were collected from soils visibly impacted with tar and/or soils with a strong hydrocarbon or naphthalene-like odor. The vertical extent of the PAH concentrations that are above the Commercial Use SCOs and the CP-51 total PAH criterion was delineated at each location. The horizontal extent of soils containing PAHs at concentrations above Commercial Use SCOs and the CP-51 total PAH alternative criterion has not been delineated to the west-southwest near 13th Street at SB-6 and SB-7 (although these may represent impacts from another source such as weathered heavy fuel oils or lubricating oils or more weathered impacts than other samples that contain total PAH concentrations above 500 mg/kg) or to the west along the Gowanus Canal at SB-9. PAHs were not detected at concentrations above the criteria to the north of the former MGP in the Lowes parking lot (Block 1007, Lot 1)
- PAH concentrations detected in the soil sample collected from 37 to 37.5 ft bgs in boring SB-19 on the west side of the Gowanus Canal are above the Commercial Use SCOs and CP-51 alternate total PAH criterion. This sample was collected from soils described as tar coated and tar saturated. The general extent of the impacts in SB-19 has been delineated.
- Metals were detected in all of the 80 subsurface soil samples collected and analyzed during the RI. Arsenic was detected at concentrations above its Commercial Use SCO in three samples (SB-3(59-60), SB-7(4-5), and SB-8(34-35) and barium and lead were detected at concentrations above their Commercial Use SCOs in one sample, SB-13(4-5). None of the metal detections above the Commercial Use SCOs are considered to be MGP-related.
- Free cyanide was detected in nine of the 80 subsurface soil samples collected during the RI. All but one of the detected concentrations were estimated and ranged from 0.395 to 7.35 mg/kg in SB-7(10-12). Part 375-6 does not include SCOs for free cyanide, however detected free cyanide concentrations are below the Unrestricted and Commercial Use SCOs of 27 mg/kg for total cyanide.
- PCBs, pesticides, and herbicides were not detected above the reporting limit in any of the 13 subsurface soil samples analyzed for these parameters except for an estimated concentration (0.022 mg/kg) of Aroclor 1254 in the subsurface soil sample collected from 142 to 144 ft bgs in MW-4D2. No Unrestricted Use or Commercial Use SCOs are listed for individual aroclors; however the total PCB Unrestricted Use SCO is 0.1 mg/kg and the total PCB Commercial Use SCO is 1.0 mg/kg.

Based on visible impacts and subsurface soil analytical results, MGP-related impacts are visually evident in subsurface soil in three areas:

1. west and south of the Previously Remediated Area
2. in the vicinity of the former tar tanks along the Gowanus Canal
3. in the northern corner of Block 1007, Lot 1, adjacent to the Gowanus Canal

The vertical extent of these impacts has been delineated. The horizontal extent of subsurface soil visible impacts has been delineated. The horizontal extent of subsurface soil analytical impacts has generally been delineated although the distribution, source, and extent of impacts immediately adjacent to the Gowanus Canal and along the southwestern boundary of the Current Site near SB-6 and SB-7 is uncertain. Several sources of potential contamination to the Gowanus Canal have been identified as summarized in Appendix A and include tar and MGP-related impacts. Other potential historic and current sources of impacts to the Gowanus Canal and the flushing and dredging operations within the canal, as presented in Section 2, complicate the interpretation of visible and analytical impacts within and adjacent to the canal.

Visible impacts in the northern corner of the parking lot (Block 1007, Lot 1) adjacent to the Gowanus Canal and within the former Cranston Asphalt Manufacturing Company site do not appear to be connected with the visible impacts noted in Previously Remediated Area or areas investigated during this RI, based on the distribution of visible impacts illustrated in cross section and by elevation as described in subsection 5.1.

Drilling and subsurface investigations could not be performed beneath the Pathmark building to further evaluate the distribution of impacts. The impacts observed adjacent to the canal in the SB-9 area are at an elevation slightly above the elevation of the bottom of the canal and continue to approximately 30 feet below the bottom of the canal. Based on these elevations, the SB-9 area impacts may have migrated from former MGP structures and may have migrated from the canal to the Current Site. Visible impacts observed in SB-19 on the west side of the canal are within the same elevation as the impacts noted in SB-9. LNAPL collected from MW-20S (west of SB-19) is not tar-related, based on forensic testing demonstrating, along with the historic and current use of the property and adjacent properties, that there are other sources of the impacts observed on the western side of the canal. For example, the Bayside Coal and Fuel Company Smith Street Terminal property north of the SB-20 well has a documented remedy (see Section 2.7) to collect floating product (LNAPL) from the water table.

The visible impacts observed south of SB-9 in SB-4, MW-4D1, and MW-4D2 may originate from the former tar tanks near SB-9 and/or other former structures beneath the Pathmark building, the former Brooklyn Alcatraz Asphalt operations, or the impacts within the Gowanus Canal. Tar impacts were noted in borings in sediment beneath the canal and northwest of the canal at SB-19 at an elevation consistent with visible impacts noted in SB-4. Based on the elevation of the observed impacts in and adjacent to both sides of the canal (SB-4/MW-4 on the east side and SB-19 on the west side), the historical and current use of the properties surrounding the Canal, the redistribution of impacted sediments within the canal due to tidal fluxes, the Flushing Tunnel, and CSOs, the distribution and source of these impacts is uncertain and could also include the canal itself. As noted above, LNAPL collected from MW-20S (near SB-19) is not tar-related based on forensic testing suggesting, that there are other sources of the impacts observed on the western side of the canal (see above).

9.3.3 Groundwater

Groundwater samples collected beneath and adjacent to the RI Study Area contain MGP-related and other compounds at concentrations above the AWQSGVs. The compounds that may be MGP related and that are

above AWQSGVs include BTEX, PAHs, and limited occurrences of cyanide (two locations in the shallow zone only). Compounds unrelated to MGP operations that were detected in groundwater samples, at concentrations are above the AWQSGVs, include chlorinated VOCs and MTBE. All of these compounds were detected in the shallow, intermediate, and deep groundwater zones sampled during the RI.

Shallow zone groundwater sample impacts are present in the vicinity of and downgradient of former MGP structures, along the southwestern property boundary, in the northern corner of the Lowes parking lot, and also in upgradient monitoring well MW-1S. Groundwater collected from MW-1S also contained MTBE, a gasoline additive, suggestive of an additional VOC source in the vicinity. The NYCDOS UST NYSDEC Spill site may contribute to impacts detected in the sample collected from MW-1S.

In general the greatest groundwater impacts were detected in the intermediate zone, consistent with the most visibly impacted soil horizon. Groundwater impacts were not noted in the groundwater samples collected from the intermediate and deep zones at upgradient locations MW-1I and MW-1D. MGP-related impacts in the deep zone groundwater samples appear to be limited to the area of the former tar tanks adjacent to the Gowanus Canal (MW-9D), and chlorinated VOCs appear to be more widespread than non-chlorinated VOCs, although low, the benzene concentrations were detected above the AWQSGVS in the groundwater samples collected from deep wells in the parking lot north-northeast of the former MGP areas (Block 1007 Lot 1). Groundwater impacts are evident at the southwestern and western edge of the Current Site along the Gowanus Canal in samples collected from all of the groundwater zones investigated during the RI. No impacts were noted in either of the two wells screened below 115 ft bgs.

Primary field parameters used to document the potential for natural intrinsic biodegradation of dissolved organic compounds in groundwater under a MNA approach include DO and ORP. DO is the preferred TEA used by microbes during natural degradation of organic compounds, therefore, reduced DO levels within and near known former source areas indicate that aerobic biodegradation is occurring/has occurred in areas most impacted by the dissolved COIs. ORP is a measure of the energy yield in the groundwater available to the microbes during the respiration process. Highly positive ORP values indicate areas where reactions are taking place under aerobic conditions (high energy yield to microbes), while lower to negative values indicate areas where anaerobic reactions (lower energy yield to microbes) predominate.

The patterns of the DO and ORP results combined with groundwater flow directions in each aquifer zone support the conceptual model that intrinsic biodegradation of dissolved phase COIs is occurring in shallow, intermediate, and deep groundwater zones beneath the RI Study Area.

9.3.4 Sub-Slab Vapor/Indoor Air

Samples of sub-slab vapor were collected from four locations within the Current Site. The soil vapor samples were collected immediately below the foundation slab of the occupied structures that are currently used for commercial purposes. Compounds were detected, but only one compound, carbon disulfide (SV-1), is above the NYSDOH background indoor air concentration levels for non-residential buildings.

Indoor air samples were collected from within each of the occupied structures in conjunction with the sub-slab soil vapor samples. Based on the collected data, there were no MGP-related constituents detected in indoor air above background concentrations. However, four non-MGP-related compounds (1,4-dichlorobenzene, 1,2-dichloropropane, chloroform, and trichlorofluoromethane [Freon 11]) were detected in indoor air above background concentrations. One or more of these compounds were detected in indoor air samples IA-1, IA-2, and IA-3 collected from the building located at Block 1007, Lot 172 (IA-1 and IA-2) and the western portion of the building located at Block 1025, Lot 26 (IA-3). In general, with the exceptions noted

above, the concentrations of VOCs detected in the indoor air samples are comparable to those detected in the ambient air samples and what is typically found in indoor air of non-residential buildings.

9.4 Potential Source Areas

Based on the visible impacts and the subsurface soil and groundwater analytical results, potential MGP-related source areas include:

- the Previously Remediated Area (adjacent to and in the vicinity of Holders No. 1 through No. 3) on Block 1007, Lots 118, and 219)
- the impacted area on Block 1025, Lots 1, 16, 20, and 100, west of and due to migration of MGP residuals from former Holders No. 1 through No. 3 prior to remediation of these structures
- the former tar tanks along the Gowanus Canal on Block 1007, Lot 172
- the impacted area adjacent to the canal and adjacent to the former BAAC site (on Block 1025, Lot 1)
- the northern corner of the Lowes parking lot adjacent to the Gowanus Canal on Block 1007, Lot 1
- the Gowanus Canal and impacts therein that have originated from multiple sources of NAPL and PAHs

According to the historical figures, former MGP structures were previously located in the area of the Pathmark building on Block 1007 Lot 172. These former MGP structures were not investigated during the RI due to access limitations, the hours of operation and the retail nature of the Pathmark Supermarket. It is not known if these former structures are a potential source of contamination.

9.5 Human Health Exposure Assessment

A qualitative human health exposure assessment was performed for the Current Site Complete exposure pathways have not been identified for Current Site and off-Current Site commercial industrial workers, visitors and trespassers, and off-Current Site residential receptors.

Current Site and off-Current Site construction workers who perform excavation work on or adjacent to the former MGP may potentially be exposed to PAHs, metals, and/or VOCs in subsurface soil and groundwater if subsurface excavation work is needed to repair or replace underground gas lines or other utilities or equipment adjacent to or at the Current Site. Only properly trained field personnel should complete the subsurface utility work in MGP-impacted areas adjacent to or at the Current Site, using methods specified in a site-specific HASP until the area has been cleared of MGP-impacted soils and groundwater. Areas where soil impacts are consistent with the urban setting and are not attributable to the former Metropolitan Works MGP site would not be subject to this restriction.

9.6 Fish and Wildlife Resource Impacts Assessment

A FWRIA is not necessary for this RI since the USEPA is addressing concerns within the Gowanus Canal due to its Superfund Site status.

9.7 Conclusions

The objectives of the RI have been fulfilled and the nature and general extent of MGP-related impacts at the Current Site have been adequately defined.

Conditions that would warrant an IRM were not observed during the RI. Areas containing MGP-related residuals are covered by asphalt or developed property and therefore do not pose an immediate risk to receptors as the residuals are isolated from human contact. Potable water in the Current Site area is provided by the City of New York.

10.0 Recommendations

Following approval of this report by the NYSDEC and NYSDOH, the next step on the process is an FS evaluation of remedial options to evaluate portions of the Current Site where No Further Action (NFA) conditions cannot be established. As part of the FS, National Grid will evaluate the use of a barrier wall along the western border of the Historic MGP site to limit potential future migration of free-phase NAPL between the canal and the Current Site.

Interim Site Management Plan(s) should be developed for various current property owners, as needed in consultation with the NYSDEC and NYSDOH to ensure that potentially complete exposure pathways, e. g., construction worker exposure are properly managed.

11.0 References

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Tables

Table 2-1
Historical Documents Observations
Metropolitan Former MGP Site, Brooklyn, New York

Year and Media	Observations:
1766 Historical map	The historical map shows the geography on the Gowanus Creek in 1766 showing a tidal marshland area that spanned from the canal to the area east of 2nd Avenue.
1847 Historical map	The historical map shows the plan for the drainage of the Gowanus Canal.
1848 Historical map	The historical map shows the different basins and drainage plan for the Gowanus canal in 1848. The southern most basin is located near the present day Metro site. Note that this pan is not believed to have been the approved plan for drainage of the upland area of the Gowanus Creek.
1880 Historical map (2)	The historical map doesn't show any structures present within the Site boundary.
1882 Historical Newspaper Article	
1882 Historical Photograph	
1886 Sanborn map	The sanborn map shows the current Block 1007 as Metropolitan Gas Light Company present to the north of 12th Street. Structures depicted include a Gasometer, an office, a coal shed, retorts, and a half dozen one-story buildings within the footprint of the Site. There is a note that the facility was used for storage only. To the south of 12th Street, the current Block 1025, there are vacant lots, dwellings, lumber yards, a lime shed, and a brick and cement shed. The current configuration of the 11th Street basin is shown to extend north to 10th Street parallel to the canal with a strip of land in between.
1887 Brown's Directory	No listing available.
1890 Brown's Directory	The annual gas production of 165,000,000. Process was the Coal & Tessie du Motay.
1891 Brown's Directory	The annual gas production of 240,000,000. Process was the Coal & Tessie du Motay.
1892 Historical map	The historical map shows the drainage plan for the Gowanus Canal
1892 Brown's Directory	The annual gas production of 240,000,000. Process was the Coal & Tessie du Motay.
1893 Brown's Directory	The annual gas production of 325,000,000. Process was the Wilkinson.
1894 Brown's Directory	The annual gas production of 325,000,000. Process was the Wilkinson.
1899 Brown's Directory	Annual gas production of 4,000,000,000,000 and service area production of 1,198,000 that included the consolidation of: Brooklyn Gas Light Co., Citizens Gas Co., Fulton Municipal Gas Co., Metropolitan Gas Light Co., Nassau Gas Light Co., Peoples Gas Light Co., and Williamsburg Gas Light Co.
1904 Sanborn map	The Sanborn map shows the property to the north of 12th Street as the Metropolitan Works Branch of the Brooklyn Union Gas Company with Gas Holders No. 1, 2, and 3 Identified, along with associated structures relating the operation of the MGP that included retorts, fuel oil tanks, condensers, purifiers, etc. South of 12th Street includes a vacant and dilapidated building and vacant lots.
1906 Historical photograph	The historical photograph shows a view looking northeast from the western edge of the canal of what is believed to be Gas Holder No. 1 in the background behind the coal storage building located along the canal.
December 21, 1914 Historical BUG drawing	The BUG drawing #7-B-19 shows the diagrams of holders showing heights determined by guide framing under requirements of proposed building code. The Holder No. 5 from the Metropolitan Site is depicted as a modified holder from 5 million cubic foot to 2.06 million cubic foot. The holder is shown to be 2 feet and 1 and 1/2 inches below grade surface.
February 15, 1915 Historical BUG drawing	The BUG drawing #7-B-27 shows the diagrams of holders of maximum capacity with tanks located as now in regard to depth below the curb. The Holder No. 5 from the Metropolitan Site is depicted as a modified holder (2.58 million cubic feet-about). The holder is shown to be 2 feet and 1 and 1/2 inches below grade surface.
1915 Sanborn map	The Sanborn map shows similar structures identified in the 1904 Sanborn map including three oil storage tanks located in the northeastern corner of the Site with the addition of development to the south of 12th Street. Structures shown include the Holder No. 5 (5 million cubic foot), coal storage yard, and the Brooklyn Alcatraz Asphalt Company is located between the Holder No. 5 and the Gowanus Canal.
1938 Historical Photograph	The historical photograph shows the Red Hook Playground looking east towards the Gowanus Canal with what is believed to be the Holder No. 5 in the background. The photograph was published in the Brooklyn Eagle.
1938 Sanborn map	The Sanborn map shows all of the MGP operation has ceased. Remaining structures include a coal bunker, boiler house, an unmarked building. The three gas holders are not present. To the south of 12th Street. Structures shown include the Holder No. 5 (5 million cubic foot), coal storage yard, and the Brooklyn Alcatraz Asphalt Company is located between the Holder No. 5 and the Gowanus Canal.
1938 water color painting	The painting shows a view of Holder No. 5 from the western edge of the Gowanus Canal looking easterly towards the Brooklyn Alkatraz Asphalt Company.
1942 Historical Photograph	The historical photograph is looking north up the Gowanus Canal towards the Smith Street bridge. The Citizen's MGP site is observed in the background. The western edge of the former Metropolitan MGP Site is to the right, along the eastern edge of the Gowanus Canal.
1943 Aerial photograph	The aerial photograph shows no MGP site features. The current Block 1007 includes the former USPS facility and a building where the current Pathmark building is located. To the south of 12th Street, the Holder No. 5 is not shown and the Block 1025 appears vacant with some warehouse building to the east.
1950 Sanborn map	The Sanborn map shows the current Block 1007a shows the former USPS facility, parcel owned by the Brooklyn Union Gas Company with a boiler house, a coal bunker, a gas tank, and two small one-story buildings. Block 1025 shows a scrap iron yard, a couple small storage buildings, storage area for old electric cables on wood reels, Holder No. 5 (5 million cubic foot) with two associated valve houses along the nothereastern and northwestern edge of the former holder.
1952 Historical Photograph	The historical photograph shows Citizens Holder in the Background and the front end of Metro and a view of the Gowanus Canal with view to elevated Smith and Ninth Street subway station and Hamilton Avenue bridge. The photograph was published in the Brooklyn Eagle.

Table 2-1 (continued)
Historical Documents Observations
Metropolitan Former MGP Site, Brooklyn, New York

Year and Media	Observations:
1953 Aerial photograph	The aerial photograph and a vacant lot to the west along the Gowanus canal showing the USPS facility to the north of 12th Street. To the south of 12th Street Holder No. 5 is present with what appears to be a vacant lot used for storage.
1950's Historical Photograph	The historical photograph is looking west towards the Gowanus Canal showing the Holder No. 5 in the background near the recently constructed Brooklyn-Queens Expressway overpass
1966 Aerial photograph	The aerial photograph is similar to the 1953 aerial photograph with the exception that the Holder No. 5 is not present.
1969 Sanborn map	The Sanborn map shows the current Block 1007 lot 220 shows the former USPS facility. Block 1007 lot 219 shows a vacant, parking lot. Block 1007 lot 172 shows the current Pathmark building as a bottling facility. Block 1007 lot 269 shows the vacant lawn space. Block 1025 lots 18, 16, and 20 show vacant, trailer parking areas with three small one-story buildings along Hamilton Place with a truck repair shop and parking. Block 1031 lot 100 shows a vacant parcel and lot 26 shows a vacant lot along with the Holder No. 5 (5 million cubic foot) with two associated valve houses along the nothereastern and northwestern edge of the former holder.
1975 Aerial Photograph	The aerial photograph shows no MGP site features. The current Block 1007 lot 220 shows the former USPS facility. Block 1007 lot 219 shows a vacant, parking lot. Block 1007 lot 172 shows the current Pathmark building. Block 1007 lot 269 shows the vacant lawn space. Block 1025 lots 18, 16, and 20 show vacant, parking lots. Block 1031 lot 100 shows a vacant parcel and lot 26 shows a vacant lot.
1977, 1979, 1980, and 1981 Sanborn map	The Sanborn map shows the current Block 1007 lot 220 shows the former USPS facility. Block 1007 lot 219 shows a vacant, parking lot. Block 1007 lot 172 shows the current Pathmark building as a bottling facility. Block 1007 lot 269 shows the vacant lawn space. Block 1025 lots 18, 16, and 20 show vacant, trailer parking areas with three small one-story buildings along Hamilton Place with a truck repair shop and parking. Block 1031 lot 100 shows a vacant parcel and lot 26 shows a vacant lot.
1982 Sanborn map	The Sanborn map shows the current Block 1007 lot 220 shows the former USPS facility. Block 1007 lot 219 shows a vacant, parking lot. Block 1007 lot 172 shows the current Pathmark building as a bottling facility. Block 1007 lot 269 shows the vacant lawn space. Block 1025 lots 18, 16, and 20 show vacant and parking areas. Block 1031 lot 100 shows a vacant parcel and lot 26 shows a vacant lot.
1984 Aerial photograph	The aerial photograph shows no MGP site features. The current Block 1007 lot 220 shows the former USPS facility. Block 1007 lot 219 shows a vacant, parking lot. Block 1007 lot 172 shows the current Pathmark building. Block 1007 lot 269 shows the vacant lawn space. Block 1025 lots 18, 16, and 20 show vacant, parking lots. Block 1031 lot 100 shows a vacant parcel and lot 26 shows a vacant lot.
1986, 1987, and 1988 Sanborn map	The Sanborn map shows the current Block 1007 lot 220 shows the former USPS facility. Block 1007 lot 219 shows a vacant, parking lot. Block 1007 lot 172 shows the current Pathmark building. Block 1007 lot 269 shows the vacant lawn space. Block 1025 lots 18, 16, and 20 show vacant, parking lots. Block 1031 lot 100 shows a vacant parcel and lot 26 shows a vacant lot.
1991 - 1992 Sanborn map	The Sanborn map shows the current Block 1007 lot 220 shows the former USPS facility. Block 1007 lot 219 shows a vacant, parking lot. Block 1007 lot 172 shows the current Pathmark building. Block 1007 lot 269 shows the vacant lawn space. Block 1025 lots 18, 16, and 20 show vacant, parking lots. Block 1031 lot 100 shows a vacant parcel and lot 26 shows a commercial warehouse building.
1993, 1995, and 1996 Sanborn map and 1994 Aerial photograph	The Sanborn map shows the current Block 1007 lot 220 shows the former USPS facility. Block 1007 lot 219 shows a vacant, parking lot. Block 1007 lot 172 shows the current Pathmark building. Block 1007 lot 269 shows the vacant lawn space. Block 1025 lots 18, 16, and 20 show vacant, parking lots. Block 1031 lot 100 shows a vacant parcel and lot 26 shows a NYC PS office of building services.
2006 Aerial Photograph	The aerial photograph indicate that the site is shown as it's current configuration as developed with parking lots and commercial buildings present. Block 1007 lot 220 shows the current Lowe's building. Block 1007 lot 219 shows a vacant, parking lot. Block 1007 lot 172 shows the current Pathmark building. Block 1007 lot 269 shows the vacant lawn space. Block 1025 lots 18, 16, and 20 show vacant, parking lots. Block 1031 lot 100 shows a vacant parcel and lot 26 shows a commercial warehouse facility.

Table 2-2
Summary of Documents
Metropolitan Former MGP, Brooklyn, New York

Report Name	Report Date	Consultant	File Name
NYSDEC Spill Investigation Report 136 2nd Avenue Brooklyn, New York	4/23/1997	Nelson, Pope and Voorhis	NYSDEC Spill Inv Rpt Apr 1997.pdf
Phase I Environmental Site Assessment 124/136 Second Avenue Brooklyn, New York	5/15/1997	Nelson, Pope and Voorhis	124-126SecondAvenue Ph I ESA_May15-1997.pdf
Phase II Environmental Site Assessment (Limited Subsurface Investigation) 124/136 Second Avenue Brooklyn, New York	6/2/1997	Nelson, Pope and Voorhis	Ph II ESA June2-1997.pdf
Remediation Plan for Spill Nos. 9214380 VMF Site, 9704147 DMU Site 124/136 Second Avenue Brooklyn, New York	9/30/1997	Nelson, Pope and Voorhis	124_136 Second Ave Rem Plan 1997.pdf
Closure Report Brooklyn Commons 124/136 2nd Avenue	6/7/1999	Nelson, Pope and Voorhis	Closure Rpt Brooklyn Commons 1999.pdf
Supplemental Phase II Environmental Site Assessment Brooklyn Commons DMU Building Gowanus, New York	7/2/1999	Nelson, Pope and Voorhis	Supplemental Ph II ESA 1999.pdf
Voluntary Cleanup Program Site Assessment Report and Conceptual Remedial Work Plan 124-136 Second Avenue Brooklyn, New York Site #V00405-2	Jan-01	AKRF Engineering	Site Assessment Rpt Concept Work Plan Jan 2001.pdf
Remedial Investigation Results 124-136 Second Avenue Brooklyn, New York Site #V00405-2	7/10/2001	AKRF Engineering	Remedial Inv Rpt July 2001.pdf
Voluntary Cleanup Program Remedial Workplan Supplement Hot Spot Removal 124-136 Second Avenue Brooklyn, New York Site #V00405-2	10/1/2001	AKRF Engineering	Vol Clnup Prgm Hot Spot Oct 2001.pdf
Revised Remedial Work Plan 124-139 Second Avenue Brooklyn, New York Site #V00405-2	12/5/2001	AKRF Engineering	Revised Remedial Work Plan Dec 2001.pdf
Geotechnical Investigation Lowe's Home Center Brooklyn, New York	1/14/2002	Mueser Rutledge Consultin	Geotech Inv Rpt Jan 2002.pdf
Hot Spot Delineation and Gasholder Characterization Results 2nd Avenue Former MGP Site Brooklyn, New York	4/26/2002	Roux Associates	Roux Hot Spot Delin Apr 2002.pdf
Installation of Product Recovery Wells and Completion of Well Monitoring and Product Recovery Activities during May 2002, Site No. V00405-2 124-136 Second Avenue Brooklyn, New York	6/11/2002	Roux Associates	Install of Product Rec Wells June 2002.pdf
Detached Mail Unit (DMU) Subsurface Investigation Results and Recommendations Former Manufactured Gas Plant (MGP) 124-136 Second Avenue, Brooklyn, New York	11/27/2002	Roux Associates	DMU Subsurface Inv November27-2002.pdf
Addendum to Geotechnical Report, Supplemental Borings Lowe's Home Center	12/24/2002	Mueser Rutledge Consulting Engineers	Addendum to Geotech Rpt Dec 2002.pdf
Detached Mail Unit (DMU) Subsurface Remediation Results and Evaluation Former Manufactured Gas Plant (MGP) 124-136 Second Avenue, Brooklyn, New York	2/24/2003	Roux Associates	DMU Subsurface Remediation Results February24-2003.pdf
Final Completion Report 124-136 Second Avenue Brooklyn, New York Site No. V00405-2	5/23/2003	Remedial Engineering and Roux Associates	124-136SecondAvenue Final Completion_May23-2003.pdf
DRAFT Gowanus Canal Investigation Executive Summary Report AOC Index No. A2-0523-0705	Apr-07	GEI Consultants, Inc.	Draft Gowanus Invest Executive Summ Report 4-12-07.pdf
DRAFT Remedial Investigation Technical Report Gowanus Canal Brooklyn, New York AOC Index No. A2-0523-0705	Apr-07	GEI Consultants, Inc.	DraftGowanusCanalInvestigationReport-April2007.pdf
Phase II Environmental Site Investigation Former Department of Education Garage 60 12th Street, Brooklyn, NY 11215	12/7/2007	ATC Associates Inc.	ATC_60-12thStreetPhase_II_July2007.pdf

Table 3-1
Surface Soil, Subsurface Soil, and Groundwater Investigation Sample Summary and Rationale
Metropolitan Former MGP, Brooklyn, New York

Sample ID	Sample Identification	Sample Interval	Date Collected		Sample Rationale	Total Depth	Laboratory Analysis
Site Surface Soil							
SS-1	SS-1 (0-2)	0 to 2	9/14/2010	grab	Evaluate existing surface soil on Site. Located on west side of Pathmark building between building and canal at SB-9/MW-9 location.	2-inches	TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
SS-2	SS-2 (0 - 2)	0 to 2	9/14/2010	grab	Evaluate existing surface soil on Site. Located on west side of Pathmark building between building and canal north of the SB-9/MW-9 location.	2-inches	VOCs, SVOCs, RCRA 8 Metals, Free CN
SS-3	SS-3 (0 - 2)	0 to 2	9/16/2010	grab	Evaluate existing surface soil on Site. Located on west side of Pathmark building between building and canal north of the SB-9/MW-9 location.	2-inches	VOCs, SVOCs, RCRA 8 Metals, Free CN
Subsurface Soil							
SB-1	SB-1 (4-5)	4 to 5	4/5/2010	Grab	East of the site to characterize the background soil quality near eastern edge of former MGP footprint .	72	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-1 (5-7)	5 to 7	4/8/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-1 (40-45)	40 to 45	4/6/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-1 (71-72)	71 to 72	4/6/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-2	SB-2 (1-2)	1 to 2	4/8/2010	Grab	Eastern area of the site to characterize soils adjacent to the former Holder 2 and 3.	72	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-2 (40-45)	40 to 45	4/9/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-2 (71-72)	71 to 72	4/9/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-3	SB-3 (4-5)	4 to 5	4/13/2010	Grab	Central area of the site to characterize soils adjacent to the former Holder 5and downgradient of primary NAPL producing recovery wells RW9 through RW-13 and RW-39 and 40.	60	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-3 (30-35)	30 to 35	4/13/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-3 (59-60)	59 to 60	4/13/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-4	SB-4 (4-5)	4 to 5	4/27/2010	Grab	Western edge of the site to characterize soils adjacent to former generator house and tar tank area. The deeper samples were to characterize the Jameco Gravel and Gardner's clay.	144	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-4 (32-34)	32 to 34	4/27/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-4 (58-60)	58 to 60	4/27/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	MW-4D1 (116-118)	116 to 118	4/27/2011	Grab			VOCs, SVOCS, TAL Metals, PCBs, and Free CN
	MW-4D2 (142-144)	142 to 144	4/27/2011	Grab			VOCs, SVOCS, TAL Metals, PCBs, and Free CN
SB-5	SB-5 (4-5)	4 to 5	4/21/2010	Grab	South of the site to characterize soils downgradient from the former MGP operations.	72	TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
	SB-5 (39-40)	39 to 40	4/21/2010	Grab			TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
	SB-5 (70-72)	70 to 72	4/22/2010	Grab			TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
SB-6	SB-6 (4-5)	4 to 5	4/20/2010	Grab	South of the site to characterize soils cross/down gradient from the former MGP operations.	50	TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
	SB-6 (26-28)	26 to 28	4/20/2010	Grab			TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
	SB-6 (49-50)	49 to 50	4/21/2010	Grab			TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
SB-7	SB-7 (4-5)	4 to 5	4/28/2010	Grab	Southern edge of the site to characterize soils adjacent to the former MGP operations and gas holder No. 5.	50	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-7 (10-12)	10 to 12	4/28/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-7 (37-40)	37 to 40	4/29/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-7 (48-50)	48 to 50	4/29/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN

Table 3-1
Surface Soil, Subsurface Soil, and Groundwater Investigation Sample Summary and Rationale
Metropolitan Former MGP, Brooklyn, New York

Sample ID	Sample Identification	Sample Interval	Date Collected		Sample Rationale	Total Depth	Laboratory Analysis
Subsurface Soil (continued)							
SB-8	SB-8 (3-4)	3 to 4	5/5/2010	Grab	Southern edge of the site to characterize soils adjacent to the former MGP operations /Holder 4 and delineate deep impacts noted at RB-1 to east adjacent to Holder 1.	50	TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
	SB-8 (34-35)	34 to 35	5/5/2010	Grab			TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
	SB-8 (48-50)	48 to 50	5/5/2010	Grab			TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
SB-9	SB-9 (4.5-5.0)	4.5 to 5	9/14/2010	Grab	Western edge of the site to characterize soils adjacent to the former tar tank area and the Gowanus Canal.	80	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-9 (40-45)	40 to 45	9/15/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-9 (55-60)	55 to 60	9/15/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-9 (75-80)	75 to 80	9/16/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-10	SB-10 (4-5)	4 to 5	4/15/2010	Grab	South of the site to characterize a soils to the west-southwest of the former MGP operations.	50	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-10 (35-40)	35 to 40	4/15/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-10 (49-50)	49 to 50	4/15/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-11	SB-11 (4-5)	4 to 5	4/19/2010	Grab	West of the site to characterize soils to the west of former Holders No. 1 and No. 2 and north-northwest of former Holder No. 5.	60	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-11 (30-33)	30 to 33	4/19/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-11 (59-60)	59 to 60	4/19/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-12	SB-12 (2-3.5)	2 to 3.5	4/12/2010	Grab	Southern edge of the site to characterize soils adjacent to the former Holder No. 5 and to delineate impacts observed at LB-5	50	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-12 (30-35)	30 to 35	4/12/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-12 (49-50)	49 to 50	4/12/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-13	SB-13 (4-5)	4 to 5	4/14/2010	Grab	West-southwest area of the site to characterize soils adjacent to former Holders 1 and 2. and deep impacts at RB-1, LB-2, and LB-5.	70	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-13 (35-40)	35 to 40	4/14/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-13 (69-70)	69 to 70	4/15/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-14	SB-14 (4-5)	4 to 5	4/1/2010	Grab	Western area of the site to characterize soils adjacent to Holders 2 and 3 and downgradient of primary NAPL producing recovery wells RW9 through RW-13 and RW-39 and 40.	70	TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
	SB-14 (5-6)	5 to 6	4/1/2010	Grab			TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
	SB-14 (9-10)	9 to 10	4/1/2010	Grab			TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
	SB-14 (69-70)	69 to 70	4/2/2010	Grab			TCL VOCs, TCL SVOCs, TAL Metals, Free CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
SB-15	SB-15 (4-5)	4 to 5	4/14/2010	Grab	Western area of the site to characterize soils at the edge of former Holder 5 foundation, the western area of former Holder 2, and downgradient of primary NAPL producing recovery wells RW9 through RW-13 and RW-39 and 40.	70	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-15 (37-39)	37 to 39	4/14/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-15 (69-70)	69 to 70	4/14/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-16	SB-16 (4-5)	4 to 5	5/5/2010	Grab	Southern area of the site to characterize soils west of former Holder 1 and adjacent to former shaving scrubbers and extent of deep impacts to east at RB-1, LB-2, and LB-5.	70	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-16 (10-13)	10 to 13	5/6/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-16 (68-70)	68 to 70	5/6/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-17	SB-17 (4-5)	4 to 5	5/3/2010	Grab	Southern area of the site to characterize soils adjacent to former tar extractors and condensers along 12th Street.	50	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-17 (30-32)	30 to 32	5/4/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-17 (48-50)	48 to 50	5/4/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN

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Metropolitan Former MGP, Brooklyn, New York

Sample ID	Sample Identification	Sample Interval	Date Collected		Sample Rationale	Total Depth	Laboratory Analysis
Subsurface Soil (continued)							
SB-18	SB-18 (1-2)	1 to 2	4/20/2010	Grab	Southern area of the site to characterize soils downgradient of former tar extractors and condensers along 12th Street.	70	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-18 (28-30)	28 to 30	4/20/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-18 (69-70)	69 to 70	4/20/2010	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-19	SB-19 (37-37.5)	37 to 37.5	10/2/2011	Grab	West/southwest of the site (off-site) to characterize soil to the north of the Gowanus Canal and SB-4.	75	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-19 (72.5-75)	72..5 to 75	10/2/2011	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-20	SB-20 (9-10)	9 to 10	10/16/2011	Grab	West/southwest of the site (off-site) to characterize soil to the north of the Gowanus Canal and SB-4.	85	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-20 (82.5-85)	83 to 85	10/16/2011	Grab			VOCs, SVOCs, RCRA 8 Metals, and Free CN
SB-21	SB-21 (25-27.5)	25 to 27.5	10/18/2011	Grab	Evaluate impacts noted at RW-7 and lack of impacts noted at PB-7. Determine if MGP impacts are present north of former gas holder No. 1.	90	VOCs, SVOCs, RCRA 8 Metals, and Free CN
	SB-21 (87.5-90)	88 to 90	10/18/2011	Grab	Evaluate impacts noted at RW-7 and lack of impacts noted at PB-7. Determine if MGP impacts are present north of former gas holder No. 1.		VOCs, SVOCs, RCRA 8 metals, and free CN
SB-22	SB-22 (30-33)	30 to 33	10/5/2011	Grab	Northeast of the site to characterize soils northeast of former relief holder No. 4 and north of gas holder No. 1. Evaluate petroleum impacts noted in boring PB-6.	90	VOCs, SVOCs, RCRA 8 metals, and free CN
	SB-22 (35-40)	35 to 40	10/6/2011	Grab			VOCs, SVOCs, RCRA 8 metals, and free CN
	SB-22 (87.5-90)	88 to 90	10/6/2011	Grab			VOCs, SVOCs, RCRA 8 metals, and free CN
SB-23	SB-23 (80-82.5)	80 to 82.5	10/4/2011	Grab	Northeast of the site to characterize soil due to the lack of impacts noted in existing borings PB-3 and GCMW-46.	90	VOCs, SVOCs, RCRA 8 metals, and free CN
	SB-23 (87-90)	87 to 90	10/4/2011	Grab			VOCs, SVOCs, RCRA 8 metals, and free CN
SB-24	SB-24 (65-67.5)	65 to 67.5	10/11/2011	Grab	North/northeast of the site to characterize soil due to lack of impacts noted in existing historical borings in the area.	90	VOCs, SVOCs, RCRA 8 metals, and free CN
	SB-24 (87.5-90)	88 to 90	10/12/2011	Grab			VOCs, SVOCs, RCRA 8 metals, and free CN
SB-25	SB-25 (67.5-70)	67 to 70	10/13/2011	Grab	Northwestern portion of the site to the characterize soil quality PB-1, CGMW-47, and CGMW-45 as originating from the Citizens MGP site to the north.	90	VOCs, SVOCs, RCRA 8 metals, and free CN
	SB-25 (87.5-90)	88 to 90	10/13/2011	Grab			VOCs, SVOCs, RCRA 8 metals, and free CN
SB-26	SB-26 (47-49)	47 to 49	3/13/2012	Grab	West/southwest of the site (off-site) to characterize horizontal extent of impacts noted at SB-19.	70	VOCs, SVOCs, RCRA 8 Metals
	SB-26 (69-70)	69 to 70	3/13/2012	Grab			VOCs, SVOCs, RCRA 8 Metals
TP-1	TP-1(1.5)051910	1.5 to 1.5	5/19/2010	Grab	To evaluate the location and contents of former Holder No. 5, the valve house area, and the coal line along 12th Street	3.8	VOCs, SVOCs, RCRA 8 Metals
TP-1	TP-1(3.8)051910	3.8 3.8	5/19/2010	Grab	To evaluate the location and contents of former Holder No. 5, the valve house area, and the coal line along 12th Street	3.8	VOCs, SVOCs, RCRA 8 Metals
TP-2	TP-2(4-4.5)052010	4 to 4.5	5/20/2010	Grab	To evaluate the location and contents of former Holder No. 5 and the valve house area adjacent to the current building..	4.5	VOCs, SVOCs, RCRA 8 Metals
Groundwater Monitoring Wells							
MW-1S	MW-1S (100410)	3 to 13	10/4/2010	Grab	Upgradient/background location. Evaluate background groundwater quality in site area above "meadow mat".	15	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-1I	MW-1I (100410)	30 to 40	10/4/2010	Grab	Upgradient/background location. Evaluate background groundwater quality in upper portion of semi-confined aquifer.	42	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-1D	MW-1D (100410)	60 to 70	10/4/2010	Grab	Upgradient/background location. Evaluate background groundwater quality in deeper zone within lower aquifer.	72	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-2D	MW-2D (100510)	60 to 70	10/5/2010	Grab	Cross-gradient location adjacent to former Holders 2 and 3. Evaluate deeper zone within lower aquifer. Shallow and intermediate groundwater data available from adjacent site RWs.	72	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-3S	MW-3S (100510)	3 to 13	10/5/2010	Grab	Downgradient location of primary NAPL producing recovery wells RW9 through RW-13 and RW-39 and 40. Evaluate possible lateral extent of impacts noted in these RWs. Screened interval set to be consistent with RWs.	15	VOCs, SVOCs, RCRA 8 Metals, and Total CN

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Metropolitan Former MGP, Brooklyn, New York

Sample ID	Sample Identification	Sample Interval	Date Collected		Sample Rationale	Total Depth	Laboratory Analysis
Groundwater Monitoring Wells (continued)							
MW-3I	MW-3I (100510)	25 to 50	10/5/2010	Grab	Downgradient location of primary NAPL producing recovery wells RW9 through RW-13 and RW-39 and 40. Evaluate possible lateral extent of impacts noted in these RWs. Screened interval set to be consistent with RWs.	52	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-4S	MW-4S (100510)	3 to 13	10/5/2010	Grab	Downgradient site boundary location adjacent to Gowanus Canal. Evaluate potential inputs from Brooklyn Alcatraz Asphalt Company. Evaluate groundwater flux/gradients into canal above "meadow mat".	15	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-4I	MW-4I (100510)	25 to 35	10/5/2010	Grab	Downgradient site boundary location adjacent to Gowanus Canal. Evaluate potential inputs from Brooklyn Alcatraz Asphalt Company. Evaluate groundwater flux/gradients into canal in the upper portion of semi-confined aquifer.	37	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-4D1	MW-4DI-031812	115 to 120	3/15/2012	Grab	Downgradient site boundary location adjacent to Gowanus Canal. Evaluate potential inputs from Brooklyn Alcatraz Asphalt Company. Evaluate groundwater above the Gardner's Clay unit.	120	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-4D2	MW-4D2-031812	142 to 147	3/15/2012	Grab	Downgradient site boundary location adjacent to Gowanus Canal. Evaluate potential inputs from Brooklyn Alcatraz Asphalt Company. Evaluate groundwater above below the Gardner's Clay unit in the Jameco Gravel Aquifer.	147	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-5S	MW-5S (100510)	3 to 13	10/6/2010	Grab	Downgradient site boundary location adjacent to Gowanus Canal. Evaluate potential inputs from Brooklyn Alcatraz Asphalt Company. Evaluate groundwater flux/gradients into canal above "meadow mat".	15	TCL VOCs, TCL SVOCs, TAL Metals, Total CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
MW-5I	MW-5I (100510)	38 to 48	10/6/2010	Grab	Downgradient site boundary location adjacent to Gowanus Canal. Evaluate potential inputs from Brooklyn Alcatraz Asphalt Company. Evaluate groundwater flux/gradients into canal in the upper portion of semi-confined aquifer.	50	TCL VOCs, TCL SVOCs, TAL Metals, Total CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
MW-5D	MW-5D (100510)	60 to 70	10/6/2010	Grab	Downgradient site boundary location adjacent to Gowanus Canal. Evaluate potential inputs from Brooklyn Alcatraz Asphalt Company. Evaluate groundwater flux/gradients into canal in deeper zone within lower aquifer.	72	TCL VOCs, TCL SVOCs, TAL Metals, Total CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
MW-6S	MW-6S (100510)	3 to 13	10/5/2010	Grab	Downgradient/cross-gradient site boundary location adjacent to former southern gas holder along southern/western boundary of site.	15	TCL VOCs, TCL SVOCs, TAL Metals, Total CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
MW-6I	MW-6I (100510)	30 to 40	10/5/2010	Grab	Downgradient/cross-gradient site boundary location adjacent to former southern gas holder along southern/western boundary of site.	42	TCL VOCs, TCL SVOCs, TAL Metals, Total CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
MW-7S	MW-7S (100410)	3 to 13	10/5/2010	Grab	Downgradient/cross-gradient site boundary location adjacent to former southern gas holder and operations area along southern/western boundary of site. Evaluate potential inputs from Brooklyn Alcatraz Asphalt Company.	15	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-7I	MW-7I (100410)	30 to 40	10/5/2010	Grab	Downgradient/cross-gradient site boundary location adjacent to former southern gas holder and operations area along southern/western boundary of site. Evaluate potential inputs from Brooklyn Alcatraz Asphalt Company.	42	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-8S	MW-8S (100510)	3 to 13	10/5/2010	Grab	Downgradient location. Evaluate impacts noted near former Holder 1 to the east. Potential centerline plume location adjacent to Pathmark building.	15	TCL VOCs, TCL SVOCs, TAL Metals, Total CN, PCBs (as Aroclors), TCL Pesticides & Herbicides
MW-8I	MW-8I (100510)	30 to 40	10/5/2010	Grab	Downgradient location. Evaluate impacts noted near former Holder 1 to the east. Potential centerline plume location adjacent to Pathmark building.	42	TCL VOCs, TCL SVOCs, TAL Metals, Total CN, PCBs (as Aroclors), TCL Pesticides & Herbicides

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Sample ID	Sample Identification	Sample Interval	Date Collected		Sample Rationale	Total Depth	Laboratory Analysis
Groundwater Monitoring Wells (continued)							
MW-9S	MW-9S (100610)	5 to 15	10/6/2010	Grab	Anticipated downgradient site boundary location adjacent to Gowanus Canal and former tar tanks. Evaluate groundwater flux/gradients into canal at three aquifer depth intervals.	17	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-9I	MW-9I (100610)	35 to 45	10/6/2010	Grab	Anticipated downgradient site boundary location adjacent to Gowanus Canal and former tar tanks. Evaluate groundwater flux/gradients into canal at three aquifer depth intervals.	47	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-9D	MW-9D (100610)	60 to 70	10/6/2010	Grab	Anticipated downgradient site boundary location adjacent to Gowanus Canal and former tar tanks. Evaluate groundwater flux/gradients into canal at three aquifer depth intervals.	72	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-19S	MW-19S-031812	5 to 15	3/18/2012	Grab	Evaluate the presence of dissolved phase MGP residuals in groundwater offsite to the northwest of the site, evaluate the effect of the Canal on groundwater flow direction and gradients	17	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-19I	MW-19I-031812	25 to 35	3/18/2012	Grab	Evaluate the presence of dissolved phase MGP residuals in groundwater offsite to the northwest of the site, evaluate the effect of the Canal on groundwater flow direction and gradients	37	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-20S	MW-20S-031812	5 to 15	3/18/2012	Grab	Evaluate the presence of dissolved phase MGP residuals in groundwater offsite to the northwest of the site, evaluate the effect of the Canal on groundwater flow direction and gradients. The wells are RI addendum locations to MW-19S/I.	17	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-20I	MW-20I-031812	25 to 35	3/18/2012	Grab	Evaluate the presence of dissolved phase MGP residuals in groundwater offsite to the northwest of the site, evaluate the effect of the Canal on groundwater flow direction and gradients. The wells are RI addendum locations to MW-19S/I.	37	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-21D	MW-21D (031512)	60 to 70	3/15/2012	Grab	Evaluate the presence of MGP residuals in groundwater (dissolved and possible free phase) north of former gas holder No. 1. Combine deep aquifer data with shallower data available at existing wells RW-7 and C3S/D.	72	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-22I	MW-22I (031512)	25 to 35	3/15/2012	Grab	Evaluate the presence of MGP residuals in groundwater (dissolved and possible free phase) northeast of former relief holder No. 4 and north of gas holder No. 1. Combine with existing data from SB/MW-8S/I on the opposite side of the Pathmark building.	37	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-22D	MW-22D (031512)	60 to 70	3/15/2012	Grab	Evaluate the presence of MGP residuals in groundwater (dissolved and possible free phase) northeast of former relief holder No. 4 and north of gas holder No. 1. Combine with existing data from SB/MW-8S/I on the opposite side of the Pathmark building.	72	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-23D	MW-23D (031412)	60 to 70	3/14/2012	Grab	Evaluate the presence of MGP residuals in groundwater (dissolved and possible free phase) northeast of former MGP operations area at SB/MW-9. Combine intermediate aquifer data at existing well GCMW-46.	72	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-25S	MW-25S (031412)	18 to 28	3/14/2012	Grab	Evaluate the presence of MGP residuals in groundwater (dissolved and possible free phase northeast of former MGP operations area along the canal.	30	VOCs, SVOCs, RCRA 8 Metals, and Total CN
MW-25I	MW25I (031412)	28 to 38	3/14/2012	Grab	Evaluate the presence of MGP residuals in groundwater (dissolved and possible free phase northeast of former MGP operations area along the canal.	40	VOCs, SVOCs, RCRA 8 Metals, and Total CN

Notes:

in bgs = inches below ground surface

Samples collected using a stainless steel trowel.

Table 3-2
Monitoring Well Construction Details and Groundwater Elevation Summary
Metropolitan Former MGP Site, Brooklyn, New York

Well ID	Date Installed	Coordinates				Ground Surface Elevation (ft)	Top of Casing Elevation (ft)	Well Diameter (inches)	Screened Interval (ft btoc)	Total Depth (ft btoc)	1-Jun-10		26-Jul-10		23-Aug-10		29-Sep-10		4-Oct-10		8-Oct-10		22-Oct-10		22-Nov-10		29-Apr-11		14-Mar-12	
		Northing	Easting	Latitude	Longitude						Depth to Water (ft btoc)	Groundwater Elevation (ft datum)	Depth to Water (ft btoc)	Groundwater Elevation (ft datum)	Depth to Water (ft btoc)	Groundwater Elevation (ft datum)	Depth to Water (ft btoc)	Groundwater Elevation (ft datum)	Depth to Water (ft btoc)	Groundwater Elevation (ft datum)	Depth to Water (ft btoc)	Groundwater Elevation (ft datum)	Depth to Water (ft btoc)	Groundwater Elevation (ft datum)	Depth to Water (ft btoc)	Groundwater Elevation (ft datum)	Depth to Water (ft btoc)	Groundwater Elevation (ft datum)	Depth to Water (ft btoc)	Groundwater Elevation (ft datum)
										Tide Occurrence >	Mid-Tide (Incoming)		High Tide		High Tide		High Tide		Mid-Tide (Outgoing)		Mid-Tide (Incoming)		Low Tide		Low Tide		Mid-Tide (Outgoing)		Low Tide (Incoming)	
										Activity >	Initiitial Groundwater Well Development		Monthly Gowanus Gauging (1st)		Monthly Gowanus Gauging (2nd)		Monthly Gowanus Gauging (3rd)		Initial Groundwater Sampling		Initial Aquifer Testing		Monthly Gowanus Gauging (4th)		Monthly Gowanus Gauging (4th)		Initiitial Groundwater Well Development (MW-4D1 & MW-4D2 only)		Initiitial Groundwater Sampling for new wells (MW-19S/I, MW-20S/I, MW21D, MW-22I/D, MW-23D, MW-25S/I)	
Canal Surface	8/24/2010	184286.64	984929.73	NA	NA	9.11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14.05	-4.94	9.65	-0.54	N/A	N/A	16.3	-7.19	17.05	-7.94	12.04	-2.93	NM	NM	13.75	-4.64
Shallow Wells																														
MW-1S	4/8/2010	183754.21	985753.83	40-40-15.742	73-59-40.484	11.99	11.62	2	3 to 13	15.0	3.45	8.17	4.00	7.62	3.97	7.65	4.14	7.48	3.83	7.79	N/M	N/M	3.96	7.66	4.22	7.40	NM	NM	5.00	6.62
MW-3S	4/13/2010	183865.47	985269.49	40-40-16.842	73-59-46.769	8.61	8.05	2	3 to 13	15.0	2.49	5.56	2.95	5.10	3.01	5.04	2.57	5.48	1.9	6.15	2.16	5.89	2.53	5.52	2.92	5.13	NM	NM	3.11	4.94
MW-4S	4/28/2010	184145.24	984868.25	40-40-19.606	73-59-51.977	6.86	6.45	2	3 to 13	15.0	4.94	1.51	5.00	1.45	4.71	1.74	4.88	1.57	4.26	2.19	4.68	1.77	5.07	1.38	4.78	1.67	NM	NM	5.32	1.13
MW-5S	4/27/2010	183938.46	984811.01	40-40-17.563	73-59-52.719	9.79	9.44	2	3 to 13	15.0	7.43	2.01	7.40	2.04	7.29	2.15	7.30	2.14	6.9	2.54	7.30	2.14	7.5	1.94	7.55	1.89	NM	NM	8.00	1.44
MW-6S	4/21/2010	183755.76	985095.95	40-40-15.758	73-59-49.0216	9.81	9.59	2	3 to 13	15.0	5.62	3.97	5.80	3.79	5.78	3.81	5.79	3.80	5.35	4.24	5.38	4.21	5.59	4.00	5.72	3.87	NM	NM	6.13	3.46
MW-7S	4/29/2010	183682.08	985205.99	40-40-15.030	73-59-47.594	10.36	9.94	2	3 to 13	15.0	5.39	4.55	5.63	4.31	5.52	4.42	5.51	4.43	4.44	5.50	4.69	5.25	4.92	5.02	5.46	4.48	NM	NM	5.95	3.99
MW-8S	5/5/2010	184072.81	985056.75	40-40-18.890	73-59-49.530	7.46	7.23	2	3 to 13	15.0	3.08	4.15	4.65	2.58	4.74	2.49	4.63	2.60	4.51	2.72	4.10	3.13	4.68	2.55	4.53	2.70	NM	NM	5.12	2.11
MW-9S	9/17/2010	184284.23	984942.57	40-40-20.980	73-59-51.012	9.36	8.98	2	5 to 15	17.0	NS	NS	NS	NS	NS	NS	6.62	2.36	8.19	0.79	N/M	NM	10.93	-1.95	8.91	0.07	NM	NM	9.65	-0.67
MW-19S	10/2/2011	184233.97	984729.73	40-40-20.48	73-59-53.77	10.91	10.6	2	4 to 14	16.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11.00	-0.40
MW-20S	10/16/2011	184310.69	984687.19	40-40-21.24	73-59-54.33	11.69	11.36	2	4 to 14	16.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.78	2.58
MW-25S	10/13/2011	184592.24	985262.07	40-40-24.023	73-59-46.865	6.51	6.10	2	18 to 28	30.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.85	2.25
Intermediate Wells																														
MW-1I	4/8/2010	183751.96	985757.21	40-40-15.720	73-59-40.440	12.09	11.58	2	30 to 40	42.0	6.27	5.31	7.30	4.28	7.11	4.47	7.35	4.23	7.10	4.48	N/M	N/M	7.84	3.74	7.21	4.37	NM	NM	7.24	4.34
MW-3I	4/13/2010	183865.47	985269.49	40-40-16.842	73-59-46.769	8.61	8.07	2	25 to 50	52.0	3.99	4.08	4.44	3.63	4.35	3.72	4.39	3.68	4.03	4.04	4.23	3.84	4.44	3.63	4.49	3.58	NM	NM	4.76	3.31
MW-4I	4/28/2010	184145.24	984868.25	40-40-19.606	73-59-51.977	6.86	6.31	2	25 to 35	37.0	3.95	2.36	3.88	2.43	3.91	2.40	4.78	1.53	3.74	2.57	4.55	1.76	4.39	1.92	4.02	2.29	NM	NM	4.85	1.46
MW-5I	4/22/2010	183936.22	984812.02	40-40-17.541	73-59-52.706	9.79	9.5	2	38 to 48	50.0	7.09	2.41	7.05	2.45	7.18	2.32	6.91	2.59	6.68	2.82	7.64	1.86	7.5	2	7.21	2.29	NM	NM	7.77	1.73
MW-6I	4/21/2010	183755.76	985095.95	40-40-15.758	73-59-49.0216	9.81	9.21	2	30 to 40	42.0	6.72	2.49	6.78	2.43	6.77	2.44	6.66	2.55	6.45	2.76	7.32	1.89	7.14	2.07	6.78	2.43	NM	NM	7.33	1.88
MW-7I	4/29/2010	183682.08	985205.99	40-40-15.030	73-59-47.594	10.36	9.81	2	30 to 40	42.0	6.98	2.83	7.20	2.61	7.15	2.66	7.07	2.74	6.78	3.03	7.73	2.08	7.48	2.33	7.13	2.68	NM	NM	7.66	2.15
MW-8I	5/5/2010	184072.81	985056.75	40-40-18.890	73-59-49.530	7.46	7.12	2	30 to 40	42.0	4.51	2.61	4.70	2.42	4.68	2.44	4.52	2.60	4.41	2.71	5.22	1.90	5.04	2.08	4.77	2.35	NM	NM	5.12	2.00
MW-9I	9/17/2010	184280.34	984939.39	40-40-20.941	73-59-51.053	9.29	8.81	2	30 to 45	47.0	NS	NS	NS	NS	NS	NS	7.22	1.59	6.07	2.74	N/M	N/M	6.76	2.05	6.5	2.31	NM	NM	6.90	1.91
MW-19I	10/2/2011	184233.97	984729.73	40-40-20.48	73-59-53.77	10.91	10.54	2	28 to 38	40.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.18	1.36
MW-20I	10/16/2011	184310.69	984687.19	40-40-21.24	73-59-54.33	11.69	11.34	2	28 to 38	40.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10.09	1.25
MW-22I	10/6/2011	184316.19	985224.90	40-40-21.295	73-59-47.348	8.12	7.68	2	25 to 35	37.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.30	2.38
MW-25I	10/13/2011	184592.24	985262.07	40-40-24.023	73-59-46.865	6.51	6.10	2	34 to 44	46.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.86	2.24
Deep Wells																														
MW-1D	4/8/2010	183751.96	985757.21	40-40-15.720	73-59-40.440	12.09	11.46	2	60 to 70	72.0	7.42	4.04	7.83	3.63	7.75	3.71	7.88	3.58	7.69	3.77	N/M	N/M	7.11	4.35	7.77	3.69	NM	NM	7.69	3.77
MW-2D	4/9/2010	183753.85	985474.32	40-40-15.739	73-59-44.111	10.26	9.97	2	60 to 70	72.0	7.17	2.80	7.22	2.75	7.12	2.85	7.15	2.82	6.80	3.17	7.70	2.27	7.45	2.52	7.16	2.81	NM	NM	7.61	2.36
MW-4D1	4/28/2011	184130.65	984874.52	40-40-19.462	73-59-51.895	6.85	6.40	2	115 to 120	120.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.20	3.20	5.49	0.91
MW-4D2	4/27/2011	184145.26	984879.53	40-40-19.606	73-59-51.830	6.80	6.07	2	142 to 147	150.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.20	2.87	2.18	3.89
MW-5D	4/22/2010	183936.22	984812.02	40-40-17.541	73-59-52.706	9.79	9.42	2	60 to 70	72.0	7.01	2.41	6.95	2.47	7.10	2.32	6.79	2.63	6.58	2.84	7.54	1.88	7.41	2.01	7.13	2.29	NM	NM	7.67	1.75
MW-9D	9/17/2010	184280.34	984939.39	40-40-20.941	73-59-51.053	9.29	8.83	2	60 to 70	72.0	NS	NS	NS	NS	NS	NS	6.21	2.62	6.08	2.75	N/M	N/M	6.74	2.09	6.50	2.33	NM	NM	6.89	1.94
MW-21D	10/18/2011	184246.62	985321.01	40-40-20.608	73-59-46.101	10.07	9.73	2	60 to 70	72.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.09	2.64
MW-22D	10/6/2011	184316.19	985224.90	40-40-21.295	73-59-47.348	8.12	7.68	2	60 to 70	72.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.51	2.17
MW-23D	10/4/2011	184572.54	985157.21	40-40-23.83	73-59-48.23	5.22	4.64	2	60 to 70	72.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.54	2.10

Notes:

NA - Not Applicable

NS - Not Sampled due to well not installed.

NM - Not Measured

ft btoc - feet below top of casing

Top of casing elevations in feet above North American Vertical Datum of 1988 (NAVD-88).

Canal surface reference adjacent to MW-9 location.

Table 3-3
Soil Vapor, Indoor Air, and Ambient Air Sample Investigation Summary and Rationale
Metropolitan Former MGP, Brooklyn, New York

Sample ID	Location	Depth Interval (ft bgs)	Date Collected	Sample Rationale	Laboratory Analysis
Soil Vapor Samples					
SV-1	Pathmark (137 12th Avenue)	Sub-slab	3/31/2010	Satisfy requirements of the NYSDOH Soil Vapor Intrusion Guidance. The sample was collected with co-located indoor air sample in Pathmark building.	VOC (TO-15) plus National Grid MGP Indicator Compounds and Helium
SV-2		Sub-slab	3/31/2010	Satisfy requirements of the NYSDOH Soil Vapor Intrusion Guidance. The sample was collected with co-located indoor air sample inside Pathmark building.	VOC (TO-15) plus National Grid MGP Indicator Compounds and Helium
SV-3	New York Hardwood Floors (60 12th Street)	Sub-slab	4/2/2011	Satisfy requirements of the NYSDOH Soil Vapor Intrusion Guidance. The sample was collected with co-located indoor air sample inside building.	VOC (TO-15) plus National Grid MGP Indicator Compounds and Helium
SV-4		Sub-slab	3/19/2011	Satisfy requirements of the NYSDOH Soil Vapor Intrusion Guidance. The sample was collected with co-located indoor air sample inside building.	VOC (TO-15) plus National Grid MGP Indicator Compounds and Helium
Indoor Air Samples					
IA-1	Pathmark (137 12th Avenue)	NA	3/31/2010	Satisfy requirements of the NYSDOH Soil Vapor Intrusion Guidance. The sample was collected with co-located soil vapor sample inside building.	VOC (TO-15), plus National Grid MGP Indicator Compounds
IA-2		NA	3/31/2010	Satisfy requirements of the NYSDOH Soil Vapor Intrusion Guidance. The sample was collected with co-located soil vapor sample inside building.	VOC (TO-15), plus National Grid MGP Indicator Compounds
IA-3	New York Hardwood Floors (60 12th Street)	NA	4/2/2011	Satisfy requirements of the NYSDOH Soil Vapor Intrusion Guidance. The sample was collected with co-located soil vapor sample inside building.	VOC (TO-15), plus National Grid MGP Indicator Compounds
IA-4		NA	3/19/2011	Satisfy requirements of the NYSDOH Soil Vapor Intrusion Guidance. The sample was collected with co-located soil vapor sample inside building.	VOC (TO-15), plus National Grid MGP Indicator Compounds
Ambient Air Samples					
AMB-1	Pathmark (137 12th Avenue)	NA	3/31/2010	Satisfy requirements of the NYSDOH Soil Vapor Intrusion Guidance. The sample was collected in a representative background/ambient location.	VOC (TO-15), plus National Grid MGP Indicator Compounds
AMB-2	New York Hardwood Floors (60 12th Street)	NA	3/19/2011	Satisfy requirements of the NYSDOH Soil Vapor Intrusion Guidance. The sample was collected in a representative background/ambient location.	VOC (TO-15), plus National Grid MGP Indicator Compounds

Notes:

SV - Soil Vapor
IA - Indoor Air
AMB - Ambient

ft bgs = feet below ground surface
NA = not applicable
VOC - Volatile Organic Compounds

Table 3-4
Summary of Location Coordinates and Elevations
Metropolitan Former MGP Site, Brooklyn, New York

Location	Northing[1]	Easting[1]	Ground Surface Elevation (feet)	Top of Casing Elevation (feet)
Monitoring Wells				
MW-1S	183754.21	985753.83	11.99	11.62
MW-1I	183751.96	985757.21	12.09	11.58
MW-1D	183751.96	985757.21	12.09	11.46
MW-2D	183753.85	985474.32	10.26	9.97
MW-3S	183865.47	985269.49	8.61	8.05
MW-3I	183865.47	985269.49	8.61	8.07
MW-4S	184145.24	984868.25	6.86	6.45
MW-4I	184145.24	984868.25	6.86	6.31
MW-4D1	184130.65	984874.52	6.85	6.40
MW-4D2	184145.26	984879.53	6.80	6.07
MW-5S	183938.46	984811.01	9.79	9.44
MW-5I	183936.22	984812.02	9.79	9.5
MW-5D	183936.22	984812.02	9.79	9.42
MW-6S	183755.76	985095.95	9.81	9.59
MW-6I	183755.76	985095.95	9.81	9.21
MW-7S	183682.08	985205.99	10.36	9.94
MW-7I	183682.08	985205.99	10.36	9.81
MW-8S	184072.81	985056.75	7.46	7.23
MW-8I	184072.81	985056.75	7.46	7.12
MW-9S	184284.23	984942.57	9.36	8.98
MW-9I	184280.34	984939.39	9.29	8.81
MW-9D	184280.34	984939.39	9.29	8.83
MW-19S	184233.97	984729.73	10.91	10.60
MW-19I	184233.97	984729.73	10.91	10.54
MW-20S	184310.69	984687.19	11.69	11.36
MW-20I	184310.69	984687.19	11.69	11.34
MW-21D	184246.62	985321.01	10.07	9.73
MW-22I	184316.19	985224.90	8.12	7.68
MW-22D	184316.19	985224.90	8.12	8.11
MW-23D	184572.54	985157.21	5.22	4.72
MW-25S	184592.24	985262.07	6.51	6.10
MW-25I	184592.24	985262.07	6.51	6.50
Canal Surface Water				
Canal Surface	184286.64	984929.73	9.11	N/A
Surface Soil				
SS-1	184280.34	984939.39	9.29	N/A
SS-2	184318.98	984965.19	9.23	N/A
SS3	184355.01	984987.59	9.12	N/A
Soil Borings				
SB-10	184036.07	984854.61	9.27	N/A
SB-11	183894.18	985046.09	9.44	N/A
SB-12	183799.95	985224.56	9.56	N/A
SB-13	183907.34	985201.02	8.42	N/A
SB-14	183823.32	985369.96	9.23	N/A
SB-15	183846.84	985308.07	11.46	N/A
SB-16	184031.03	985121.90	7.58	N/A
SB-17	184108.26	985000.39	7.15	N/A
SB-18	183946.83	985147.27	7.00	N/A
SB-24	184457.01	985320.02	8.16	N/A
SB-26	184167.47	984390.53	12.35	N/A
Test Pits				
TP-01	183906.71	985196.05	8.38	N/A
TP-01	183906.53	985193.11	8.40	N/A
TP-01	183890.52	985193.75	8.85	N/A
TP-01	183890.69	985196.72	8.81	N/A
TP-02	183857.82	985285.54	8.74	N/A
TP-02	183856.13	985286.15	8.70	N/A
TP-02	183856.78	985291.32	8.79	N/A
TP-02	183858.96	985290.11	8.74	N/A
TP-02	183861.43	985292.91	8.53	N/A
TP-02	183852.20	985307.03	8.74	N/A
TP-02	183848.10	985304.96	11.40	N/A

Notes:

1 - Horizontal datum: New York State Plane, NAD 83 Feet. Vertical datum: NAVD 1988.

Table 4-1
Horizontal Hydraulic Gradients at Shallow, Intermediate, and Deep Wells
Metropolitan Former MGP, Brooklyn, New York

Location	Well ID	Distance Between Wells	Groundwater Elevations		Horizontal Gradient	Well ID	Distance Between Wells	Groundwater Elevations		Horizontal Gradient	Average Horizontal Gradient Low and High Tide
			Elevation (ft NAVD88)	Difference (ft)	ft/ft			Elevation (ft NAVD88)	Difference (ft)	ft/ft	
		(ft)	29-Sep-10				(ft)	14-Mar-12			
		High Tide					Low Tide				ft/ft
Shallow Groundwater	MW-1S	498.00	7.48	2.00	5.98E-03	MW-1S	498.00	6.62	1.68	5.56E-03	5.77E-03
	MW-3S		5.48			MW-3S		4.94			
	MW-3S	490.00	5.48	3.91		MW-3S	490.00	4.94	3.81		
	MW-4S		1.57			MW-4S		1.13			
Intermediate Groundwater	MW-1I	502.00	4.23	0.55	2.72E-03	MW-1I	542.00	4.34	1.84	3.59E-03	3.16E-03
	MW-3I		3.68			Con 2.5		2.50			
	MW-3S	490.00	3.68	2.15		Con 2.5	260.00	2.50	1.04		
	MW-4S		1.53			MW-4I		1.46			
Deep Groundwater	MW-1D	496.00	3.58	0.83	1.90E-03	MW-1D	710.00	3.77	1.77	2.14E-03	2.02E-03
	Con 2.75		2.75			Con 2.00		2.00			
	Con 2.75	4.16	2.75	0.12		Con 2.75	234.00	2.00	0.25		
	MW-5D		2.63			MW-5D		1.75			

Notes:
bgs - below ground surface
ft - feet
NAVD88 - North American Vertical Datum of 1988
Con - Contour.
Distance measured at right angle to contours.

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Table 4-2
Vertical Hydraulic Gradients at Shallow, Intermediate, and Deep Wells
Metropolitan Former MGP, Brooklyn, New York

Location	Well ID	Screen Interval (ft bgs)	Average Depth to Water (ft bgs)	Screen Midpoint* (ft bgs)	Distance Between Midpoints (ft)	Groundwater Elevations						Vertical Gradients		
						Elevation (ft NAVD88)	Difference (ft)	Elevation (ft NAVD88)	Difference (ft)	Elevation (ft NAVD88)	Difference (ft)	Per Pair (ft/ft)	Per Pair (ft/ft)	Per Pair (ft/ft)
						29-Sep-10		22-Oct-10		14-Mar-12		29-Sep-10	22-Oct-10	14-Mar-12
Water Table to Intermediate														
MW-1	MW-1S	3-13	5.53	11.265	23.735	7.48	-3.25	7.66	-3.92	6.62	-2.28	-1.37E-01	-1.65E-01	-9.61E-02
	MW-1I	30-40		35		4.23		3.74		4.34				
MW-3	MW-3S	3-13	3.42	10.21	27.79	5.48	-1.80	5.52	-1.89	4.94	-1.63	-6.48E-02	-6.80E-02	-5.87E-02
	MW-3I	25-50		38		3.68		3.63		3.31				
MW-4	MW-4S	3-13	4.46	8.28	26.72	1.57	-0.04	1.38	0.54	1.13	0.33	-1.50E-03	2.02E-02	1.24E-02
	MW-4I	30-40		35		1.53		1.92		1.46				
MW-5	MW-5S	3-13	7.18	12.09	22.91	2.14	0.45	1.94	0.06	1.44	0.29	1.96E-02	2.62E-03	1.27E-02
	MW-5I	30-40		35		2.59		2		1.73				
MW-6	MW-6S	3-13	6.20	11.60	23.40	3.80	-1.25	4	-1.93	3.46	-1.58	-5.34E-02	-8.25E-02	-6.75E-02
	MW-6I	30-40		35		2.55		2.07		1.88				
MW-7	MW-7S	3-13	6.17	11.59	23.42	4.43	-1.69	5.02	-2.69	3.99	-1.84	-7.22E-02	-1.15E-01	-7.86E-02
	MW-7I	30-40		35		2.74		2.33		2.15				
MW-8	MW-8S	3-13	4.51	10.76	24.25	2.60	0.00	2.55	-0.47	2.11	-0.11	0.00E+00	-1.94E-02	-4.54E-03
	MW-8I	30-40		35		2.60		2.08		2.00				
MW-9	MW-9S	5-15	7.63	11.32	23.69	2.36	-0.77	-1.95	4.00	-0.67	2.58	-3.25E-02	1.69E-01	1.09E-01
	MW-9I	30-40		35		1.59		2.05		1.91				
Intermediate to Deep														
MW-1	MW-1I	30-40	7.39	35	30.00	4.23	-0.65	3.74	0.61	4.34	-0.57	-2.17E-02	2.03E-02	-1.90E-02
	MW-1D	60-70		65		3.58		4.35		3.77				
MW-5	MW-5I	30-40	7.02	35	30.00	2.59	0.04	2	0.01	1.73	0.02	1.33E-03	3.33E-04	6.67E-04
	MW-5D	60-70		65		2.63		2.01		1.75				
MW-9	MW-9I	30-40	6.51	35	70.00	1.59	1.03	2.09	0.00	1.91	0.03	1.47E-02	0.00E+00	4.29E-04
	MW-9D	60-70		-35		2.62		2.09		1.94				
Water Table to Deep														
MW-1	MW-1S	3-13	5.75	35	30	7.48	-3.90	7.66	-3.31	6.62	-2.85	-1.30E-01	-1.10E-01	-9.50E-02
	MW-1D	60-70		65		3.58		4.35		3.77				
MW-5	MW-5S	3-13	7.14	11.07	53.93	2.14	0.49	1.94	0.07	1.44	0.31	9.09E-03	1.30E-03	5.75E-03
	MW-5D	60-70		65		2.63		2.01		1.75				
MW-9	MW-9S	5-15	7.46	12.48	52.52	2.36	0.26	-1.95	4.04	-0.67	2.61	4.95E-03	7.69E-02	4.97E-02
	MW-9D	60-70		65		2.62		2.09		1.94				

Notes:
bgs - below ground surface
ft - feet
NAVD88 - North American Vertical Datum of 1988
Negative numbers indicate downward vertical gradients.
* - For water tables wells, screen midpoint has been replaced by well water column midpoint.

- denotes an upward vertical gradient
- denotes a downward vertical gradient

Table 4-3
Hydraulic Conductivities at Shallow, Intermediate, and Deep Wells
Metropolitan Former MGP, Brooklyn, New York

Well	Test #	Generalized Soil Type in Screened Interval	Screened Interval (ft bgs)	Test Method	Calculated Hydraulic Conductivity (feet/day)
Shallow Water Table Wells					
MW-1S	1	Silt	3 to 13	Rising	1.404
			3 to 13	Falling	0.830
MW-3S	1	Fine-Coarse Sand	3 to 13	Rising Head*	470.3
	2		3 to 13	Falling Head*	521.7
	3		3 to 13	Rising Head	60.2
	4		3 to 13	Falling Head	69.0
MW-5S	1	Sand/Silt	3 to 13	Rising	68.3
	2		3 to 13	Falling	42.6
				Geometric Mean Rising Head	17.9
Intermediate Water Table Wells					
MW-1I	1	Silt	30 to 40	Rising	1.905
MW-3I	1	Fine Sand	40 to 50	Rising	7.072
MW-5I	1	Very Fine Sand	40 to 50	Rising	74.72
				Geometric Mean Rising Head	10.0
Deep Wells					
MW-1D	1	Silt	70 to 72	Rising	1.041
MW-2D	1	Fine Sand	60 to 70	Rising	29.74
MW-5D	1	Fine-Coarse Sand	60 to 70	Rising*	251.8
	2		60 to 70	Rising	38.04
	3		60 to 70	Rising	16.83
				Geometric Mean Rising Head	11.87

Notes:

ft bgs = feet below ground surface

Hydraulic conductivity estimates performed using AQTESOLV Pro (2006).

Bouwer and Rice solution method was used.

Slug tests were conducted on October 7th and October 15th, 2010

* = ouliers not included in the geometric mean.

Table 5-1
Summary of Remedial Investigation Visible and Olfactory Impacts
Metropolitan Former MGP Site, Brooklyn, New York

Boring ID	Ground Surface Elevation NAVD88	Top of impact (ft bgs)	Bottom of Impact (ft bgs)	Top Elevation NAVD88	Bottom Elevation NAVD88	Impacts
SB-1 / MW -1	12.09	0	0.75	12.09	11.34	None
SB-1 / MW -1	12.09	0.75	7	11.34	5.09	strong gasoline-like odor
SB-1 / MW -1	12.09	7	10	5.09	2.09	moderate gasoline-like odor
SB-1 / MW -1	12.09	10	72	2.09	-59.91	None
SB-2 / MW-2	10.26	0	4	10.26	6.26	None
SB-2 / MW-2	10.26	4	5	6.26	5.26	strong gasoline-like odor
SB-2 / MW-2	10.26	5	72	5.26	-61.74	None
SB-3 / MW-3	8.61	0	1	8.61	7.61	None
SB-3 / MW-3	8.61	1	2	7.61	6.61	trace naphthalene-like odor
SB-3 / MW-3	8.61	2	2.5	6.61	6.11	None
SB-3 / MW-3	8.61	2.5	5	6.11	3.61	strong naphthalene-like odor
SB-3 / MW-3	8.61	5	8	3.61	0.61	strong naphthalene-like odor and sheen, slight tar coating
SB-3 / MW-3	8.61	10	12	-1.39	-3.39	strong naphthalene-like odor
SB-3 / MW-3	8.61	12	18	-3.39	-9.39	slight naphthalene-like odor
SB-3 / MW-3	8.61	18	20	-9.39	-11.39	None
SB-3 / MW-3	8.61	20	30	-11.39	-21.39	strong naphthalene-like odor and sheen, pockets of tar satura
SB-3 / MW-3	8.61	30	35	-21.39	-26.39	strong naphthalene-like odor and sheen, tar saturated in sand
SB-3 / MW-3	8.61	35	40	-26.39	-31.39	None
SB-3 / MW-3	8.61	40	45	-31.39	-36.39	strong naphthalene-like odor, tar saturated in sand lenses
SB-3 / MW-3	8.61	45	60	-36.39	-51.39	None
SB-4 / MW-4	6.86	0	21	6.86	-14.14	None
SB-4 / MW-4	6.86	21	25	-14.14	-18.14	moderate naphthalene-like odor and sheen, tar blebs
SB-4 / MW-4	6.86	25	26	-18.14	-19.14	moderate naphthalene-like odor
SB-4 / MW-4	6.86	26	29.5	-19.14	-22.64	slight naphthalene-like odor, tar coating, trace tar stingers
SB-4 / MW-4	6.86	29.5	30	-22.64	-23.14	slight naphthalene-like odor
SB-4 / MW-4	6.86	30	31.5	-23.14	-24.64	strong naphthalene-like odor
SB-4 / MW-4	6.86	31.5	34	-24.64	-27.14	tar saturated
SB-4 / MW-4	6.86	34	40	-27.14	-33.14	slight naphthalene-like odor
SB-4 / MW-4	6.86	40	43	-33.14	-36.14	faint naphthalene-like odor, slight tar-like staining
SB-4 / MW-4	6.86	43	60	-36.14	-53.14	None
MW-4D1	6.85	0	1	6.85	5.85	None
MW-4D1	6.85	1	2	5.85	4.85	slight napthalene-like odor
MW-4D1	6.85	2	2.5	4.85	4.35	None
MW-4D1	6.85	2.5	5	4.35	1.85	slight naphthalene-like odor
MW-4D1	6.85	5	21	1.85	-14.15	None
MW-4D1	6.85	21	25	-14.15	-18.15	moderate naphthalene-like odor and sheen, tar blebs
MW-4D1	6.85	25	26	-18.15	-19.15	moderate naphthalene-like odor
MW-4D1	6.85	26	29.5	-19.15	-22.65	slight naphthalene-like odor, tar coating, trace tar stingers
MW-4D1	6.85	29.5	30	-22.65	-23.15	slight naphthalene-like odor
MW-4D1	6.85	30	31.5	-23.15	-24.65	strong naphthalene-like odor
MW-4D1	6.85	31.5	34	-24.65	-27.15	tar saturated
MW-4D1	6.85	34	40	-27.15	-33.15	slight naphthalene-like odor
MW-4D1	6.85	40	43	-33.15	-36.15	faint naphthalene-like odor, slight tar-like staining
MW-4D1	6.85	43	60	-36.15	-53.15	None
MW-4D1	6.85	60	120	-53.15	-113.15	None
MW-4D2	6.8	0	1	6.8	5.8	none
MW-4D2	6.8	1	3	5.8	3.8	slight naphthalene-like odor
MW-4D2	6.8	3	21	3.8	-14.2	None
MW-4D2	6.8	21	25	-14.2	-18.2	moderate naphthalene-like odor and sheen, tar blebs
MW-4D2	6.8	25	26	-18.2	-19.2	moderate naphthalene-like odor
MW-4D2	6.8	26	29.5	-19.2	-22.7	slight naphthalene-like odor, tar coating, trace tar stingers
MW-4D2	6.8	29.5	30	-22.7	-23.2	slight naphthalene-like odor
MW-4D2	6.8	30	31.5	-23.2	-24.7	strong naphthalene-like odor
MW-4D2	6.8	31.5	34	-24.7	-27.2	tar saturated
MW-4D2	6.8	34	40	-27.2	-33.2	slight naphthalene-like odor
MW-4D2	6.8	40	43	-33.2	-36.2	faint naphthalene-like odor, slight tar-like staining
MW-4D2	6.8	43	150	-36.2	-143.2	None
SB-5 / MW-5	9.79	0	39	9.79	-29.21	None
SB-5 / MW-5	9.79	39	41	-29.21	-31.21	faint naphthalene-like odor

Table 5-1 (continued)
Summary of Remedial Investigation Visible and Olfactory Impacts
Metropolitan Former MGP Site, Brooklyn, New York

Boring ID	Ground Surface Elevation NAVD88	Top of impact (ft bgs)	Bottom of Impact (ft bgs)	Top Elevation NAVD88	Bottom Elevation NAVD88	Impacts
SB-5 / MW-5	9.79	41	72	-31.21	-62.21	None
SB-6 / MW-6	9.81	0	0.25	9.81	9.56	None
SB-6 / MW-6	9.81	0.25	2	9.56	7.81	slight petroleum-like odor
SB-6 / MW-6	9.81	2	3	7.81	6.81	moderate petroleum-like odor
SB-6 / MW-6	9.81	3	5	6.81	4.81	None
SB-6 / MW-6	9.81	5	16	4.81	-6.19	slight petroleum-like odor
SB-6 / MW-6	9.81	16	26.5	-6.19	-16.69	None
SB-6 / MW-6	9.81	26.5	28	-16.69	-18.19	slight naphthalene-like odor
SB-6 / MW-6	9.81	28	30.5	-18.19	-20.69	None
SB-6 / MW-6	9.81	30.5	37	-20.69	-27.19	slight naphthalene-like odor
SB-6 / MW-6	9.81	37	50	-27.19	-40.19	None
SB-7 / MW-7	10.36	0	4	10.36	6.36	None
SB-7 / MW-7	10.36	4	5	6.36	5.36	petroleum-like odor
SB-7 / MW-7	10.36	5	10	5.36	0.36	heavy petroleum-like odor
SB-7 / MW-7	10.36	10	12	0.36	-1.64	heavy petroleum-like odor and sheen
SB-7 / MW-7	10.36	12	50	-1.64	-39.64	None
SB-8 / MW-8	7.46	0	2.5	7.46	4.96	None
SB-8 / MW-8	7.46	2.5	5	4.96	2.46	strong hydrocarbon/NAPL-like odor
SB-8 / MW-8	7.46	5	10	2.46	-2.54	None
SB-8 / MW-8	7.46	10	15	-2.54	-7.54	strong tar-like odor
SB-8 / MW-8	7.46	15	27	-7.54	-19.54	None
SB-8 / MW-8	7.46	27	31	-19.54	-23.54	moderate naphthalene-like odor
SB-8 / MW-8	7.46	31	34	-23.54	-26.54	None
SB-8 / MW-8	7.46	34	35	-26.54	-27.54	strong tar-like odor
SB-8 / MW-8	7.46	35	40	-27.54	-32.54	moderate tar-like odor
SB-8 / MW-8	7.46	40	50	-32.54	-42.54	None
SB-9 / MW-9	9.29	0	2	9.29	7.29	None
SB-9 / MW-9	9.29	2	3	7.29	6.29	faint hydrocarbon/petroleum-like odor
SB-9 / MW-9	9.29	3	4.5	6.29	4.79	None
SB-9 / MW-9	9.29	4.5	5	4.79	4.29	slight hydrocarbon/petroleum-like odor
SB-9 / MW-9	9.29	5	7.5	4.29	1.79	None
SB-9 / MW-9	9.29	7.5	10	1.79	-0.71	faint hydrocarbon/petroleum-like odor
SB-9 / MW-9	9.29	10	15	-0.71	-5.71	slight hydrocarbon/petroleum-like odor detected and sewer-like odor, slight sheen
SB-9 / MW-9	9.29	15	20	-5.71	-10.71	strong hydrocarbon/petroleum-like odors, small tar blebs
SB-9 / MW-9	9.29	20	25	-10.71	-15.71	strong tar-like odor, water has NAPL tar blebs
SB-9 / MW-9	9.29	25	30	-15.71	-20.71	None
SB-9 / MW-9	9.29	30	40	-20.71	-30.71	NAPL coating, strong tar-like odor
SB-9 / MW-9	9.29	40	45	-30.71	-35.71	NAPL coating
SB-9 / MW-9	9.29	45	50	-35.71	-40.71	None
SB-9 / MW-9	9.29	50	55	-40.71	-45.71	moderate NAPL-like odor, sheen
SB-9 / MW-9	9.29	55	55	-45.71	-45.71	coated NAPL globual 2-inch by 2-inch
SB-9 / MW-9	9.29	55	60	-45.71	-50.71	None
SB-9 / MW-9	9.29	60	60	-50.71	-50.71	faint tar-like odor
SB-9 / MW-9	9.29	60	80	-50.71	-70.71	None
SB-10	9.27	0	50	9.27	-40.73	None
SB-11	9.44	0	0.25	9.44	9.19	None
SB-11	9.44	0.25	1	9.19	8.44	moderate naphthalene-like odor
SB-11	9.44	1	8	8.44	1.44	strong naphthalene-like odor
SB-11	9.44	8	29	1.44	-19.56	None
SB-11	9.44	29	40	-19.56	-30.56	strong naphthalene-like odor
SB-11	9.44	40	42	-30.56	-32.56	slight naphthalene-like odor
SB-11	9.44	42	47	-32.56	-37.56	strong naphthalene-like odor
SB-11	9.44	47	48	-37.56	-38.56	slight naphthalene-like odor
SB-11	9.44	48	50	-38.56	-40.56	strong naphthalene-like odor
SB-11	9.44	50	60	-40.56	-50.56	None
SB-12	9.56	0	4	9.56	5.56	None
SB-12	9.56	4	7	5.56	2.56	strong naphthalene-like odor
SB-12	9.56	7	8	2.56	1.56	None

Table 5-1 (continued)
Summary of Remedial Investigation Visible and Olfactory Impacts
Metropolitan Former MGP Site, Brooklyn, New York

Boring ID	Ground Surface Elevation NAVD88	Top of impact (ft bgs)	Bottom of Impact (ft bgs)	Top Elevation NAVD88	Bottom Elevation NAVD88	Impacts
SB-12	9.56	8	9	1.56	0.56	strong naphthalene-like odor
SB-12	9.56	9	10	0.56	-0.44	None
SB-12	9.56	10	16	-0.44	-6.44	strong naphthalene-like odor, tar blebs
SB-12	9.56	16	19	-6.44	-9.44	strong naphthalene-like odor
SB-12	9.56	19	25	-9.44	-15.44	moderate naphthalene-like odor
SB-12	9.56	25	30	-15.44	-20.44	strong naphthalene-like odor, sheen, tar blebs
SB-12	9.56	30	35	-20.44	-25.44	lenses saturated with tar
SB-12	9.56	35	50	-25.44	-40.44	None
SB-13	8.42	0	0.25	8.42	8.17	None
SB-13	8.42	0.25	2	8.17	6.42	moderate tar-like odor
SB-13	8.42	2	5	6.42	3.42	strong tar-like odor
SB-13	8.42	5	14	3.42	-5.58	strong tar-like odor, heavy tar sheen
SB-13	8.42	14	14	-5.58	-5.58	tar coating
SB-13	8.42	14	15	-5.58	-6.58	strong tar-like odor, heavy tar sheen
SB-13	8.42	15	18	-6.58	-9.58	moderate tar-like odor
SB-13	8.42	18	20	-9.58	-11.58	None
SB-13	8.42	20	23	-11.58	-14.58	moderate tar-like odor
SB-13	8.42	23	25	-14.58	-16.58	strong tar-like odor
SB-13	8.42	25	27	-16.58	-18.58	strong tar-like odor
SB-13	8.42	27	27	-18.58	-18.58	saturated with tar
SB-13	8.42	27	31	-18.58	-22.58	strong tar-like odor
SB-13	8.42	31	37	-22.58	-28.58	strong tar-like odor, saturated with tar
SB-13	8.42	37	40	-28.58	-31.58	strong tar-like odor, small seams of heavy tar sheen
SB-13	8.42	40	45	-31.58	-36.58	strong tar-like odor, heavy tar sheen
SB-13	8.42	45	50	-36.58	-41.58	strong tar-like odor, small blebs of tar in groundwater
SB-13	8.42	50	58	-41.58	-49.58	strong tar-like odor, heavy tar sheen
SB-13	8.42	58	70	-49.58	-61.58	None
SB-14	9.23	0	2	9.23	7.23	None
SB-14	9.23	2	6	7.23	3.23	strong tar-like odor, tar sheen
SB-14	9.23	6	8	3.23	1.23	moderate tar-like odor, tar sheen
SB-14	9.23	8	50	1.23	-40.77	None
SB-14	9.23	50	55	-40.77	-45.77	moderate coal/tar-like odor
SB-14	9.23	55	70	-45.77	-60.77	None
SB-15	11.46	0	0.25	11.46	11.21	None
SB-15	11.46	0.25	4	11.21	7.46	slight tar-like odor
SB-15	11.46	4	5	7.46	6.46	strong tar-like odor, small blebs of tar
SB-15	11.46	5	10	6.46	1.46	strong tar-like odor, heavy tar sheen, slight coating of tar
SB-15	11.46	10	15	1.46	-3.54	strong tar-like odor, heavy tar sheen
SB-15	11.46	15	20	-3.54	-8.54	moderate organic-like odor
SB-15	11.46	20	25	-8.54	-13.54	faint tar-like odor
SB-15	11.46	25	34	-13.54	-22.54	strong tar-like odor, weeping tar, heavy tar sheen
SB-15	11.46	34	34	-22.54	-22.54	tar coating
SB-15	11.46	34	35	-22.54	-23.54	strong tar-like odor
SB-15	11.46	35	37	-23.54	-25.54	moderate tar-like odor
SB-15	11.46	37	39	-25.54	-27.54	saturated with tar
SB-15	11.46	39	40	-27.54	-28.54	strong tar-like odor
SB-15	11.46	45	49	-33.54	-37.54	faint tar sheen, moderate tar-like odor
SB-15	11.46	49	52	-37.54	-40.54	faint tar-like odor
SB-15	11.46	52	70	-40.54	-58.54	None
SB-16	7.58	0	10	7.58	-2.42	None
SB-16	7.58	10	13	-2.42	-5.42	strong tar-like odor, tar coating
SB-16	7.58	13	20	-5.42	-12.42	None
SB-16	7.58	20	31	-12.42	-23.42	moderate tar-like odor
SB-16	7.58	31	36	-23.42	-28.42	strong tar-like odor
SB-16	7.58	36	70	-28.42	-62.42	moderate tar-like odor
SB-17	7.15	0	0.25	7.15	6.90	slight hydrocarbon/naphthalene odor
SB-17	7.15	0.25	2	6.90	5.15	slight hydrocarbon/naphthalene-like odor
SB-17	7.15	2	4	5.15	3.15	moderate hydrocarbon/naphthalene-like odor
SB-17	7.15	4	5	3.15	2.15	strong hydrocarbon/naphthalene-like odor

Table 5-1 (continued)
Summary of Remedial Investigation Visible and Olfactory Impacts
Metropolitan Former MGP Site, Brooklyn, New York

Boring ID	Ground Surface Elevation NAVD88	Top of impact (ft bgs)	Bottom of Impact (ft bgs)	Top Elevation NAVD88	Bottom Elevation NAVD88	Impacts
SB-17	7.15	5	11	2.15	-3.85	None
SB-17	7.15	11	15	-3.85	-7.85	strong tar-like odor
SB-17	7.15	15	30	-7.85	-22.85	None
SB-17	7.15	30	32	-22.85	-24.85	slight tar-like odor
SB-17	7.15	32	50	-24.85	-42.85	None
SB-18	7.00	0	0.75	7.00	6.25	None
SB-18	7.00	0.75	4	6.25	3.00	strong tar-like odor
SB-18	7.00	4	5	3.00	2.00	strong tar-like odor, slight tar sheen
SB-18	7.00	5	10	2.00	-3.00	slight tar-like odor
SB-18	7.00	10	16	-3.00	-9.00	slight organic odor
SB-18	7.00	16	16	-9.00	-9.00	small bleb
SB-18	7.00	16	21	-9.00	-14.00	slight organic odor
SB-18	7.00	21	24	-14.00	-17.00	moderate tar-like odor
SB-18	7.00	24	26	-17.00	-19.00	slight tar-like odor
SB-18	7.00	26	28	-19.00	-21.00	strong tar-like odor
SB-18	7.00	28	30	-21.00	-23.00	strong tar-like odor, tar saturated
SB-18	7.00	30	34.5	-23.00	-27.50	strong tar-like odor, tar weeping from soil, heavy tar sheen
SB-18	7.00	34.5	50	-27.50	-43.00	strong tar-like odor
SB-18	7.00	50	61	-43.00	-54.00	slight tar-like odor
SB-18	7.00	61	70	-54.00	-63.00	None
SB-19/MW-19S/I	10.91	0	5	10.91	5.91	None
SB-19/MW-19S/I	10.91	5	10	5.91	0.91	non-MGP staining
SB-19/MW-19S/I	10.91	10	13	0.91	-2.09	tar-like odor
SB-19/MW-19S/I	10.91	13	15	-2.09	-4.09	trace DNAPL
SB-19/MW-19S/I	10.91	15	25	-4.09	-14.09	None
SB-19/MW-19S/I	10.91	25	27.5	-14.09	-16.59	slight organic odor
SB-19/MW-19S/I	10.91	27.5	30	-16.59	-19.09	naphthalene-like odor, two inch tar coated lens
SB-19/MW-19S/I	10.91	30	32.5	-19.09	-21.59	moderate naphthalene-like odor
SB-19/MW-19S/I	10.91	32.5	34	-21.59	-23.09	tar coating
SB-19/MW-19S/I	10.91	34	37	-23.09	-26.09	slight naphthalene-like odor, top 4 inches tar-like staining
SB-19/MW-19S/I	10.91	37	37.5	-26.09	-26.59	trace NAPL, tar coated and tar saturated
SB-19/MW-19S/I	10.91	37.5	40.5	-26.59	-29.59	slight naphthalene-like odor
SB-19/MW-19S/I	10.91	40.5	43.5	-29.59	-32.59	moderate naphthalene-like odor
SB-19/MW-19S/I	10.91	43.5	55	-32.59	-44.09	None
SB-19/MW-19S/I	10.91	55	57.5	-44.09	-46.59	slight naphthalene-like odor
SB-19/MW-19S/I	10.91	57.5	60	-46.59	-49.09	None
SB-19/MW-19S/I	10.91	60	63	-49.09	-52.09	slight naphthalene-like odor
SB-19/MW-19S/I	10.91	63	65	-52.09	-54.09	None
SB-19/MW-19S/I	10.91	65	69	-54.09	-58.09	slight naphthalene-like odor
SB-19/MW-19S/I	10.91	69	70	-58.09	-59.09	None
SB-19/MW-19S/I	10.91	70	75	-59.09	-64.09	slight naphthalene-like odor
SB-19/MW-19S/I	10.91	75	85	-64.09	-74.09	None
SB-20/MW-201I/S	11.69	0	4	11.69	7.69	None
SB-20/MW-201I/S	11.69	4	5	7.69	6.69	trace black staining
SB-20/MW-201I/S	11.69	5	7	6.69	4.69	slight black staining
SB-20/MW-201I/S	11.69	7	9	4.69	2.69	trace black staining
SB-20/MW-201I/S	11.69	9	10	2.69	1.69	tar-like odor, slight black staining
SB-20/MW-201I/S	11.69	10	12.5	1.69	-0.81	slight tar-like odor, little tar-like staining
SB-20/MW-201I/S	11.69	12.5	15	-0.81	-3.31	tar-like odor, black staining
SB-20/MW-201I/S	11.69	15	20	-3.31	-8.31	naphthalene-like odor
SB-20/MW-201I/S	11.69	20	30	-8.31	-18.31	None
SB-20/MW-201I/S	11.69	30	32	-18.31	-20.31	slight tar-like odor
SB-20/MW-201I/S	11.69	32	32	-20.31	-20.31	black stained lens
SB-20/MW-201I/S	11.69	32	35	-20.31	-23.31	slight tar-like odor
SB-20/MW-201I/S	11.69	35	40	-23.31	-28.31	None
SB-20/MW-201I/S	11.69	40	45	-28.31	-33.31	slight naphthalene-like odor
SB-20/MW-201I/S	11.69	45	50	-33.31	-38.31	naphthalene-like odor
SB-20/MW-201I/S	11.69	50	57.5	-38.31	-45.81	moderate naphthalene-like odor
SB-20/MW-201I/S	11.69	57.5	60	-45.81	-48.31	naphthalene-like odor

Table 5-1 (continued)
Summary of Remedial Investigation Visible and Olfactory Impacts
Metropolitan Former MGP Site, Brooklyn, New York

Boring ID	Ground Surface Elevation NAVD88	Top of impact (ft bgs)	Bottom of Impact (ft bgs)	Top Elevation NAVD88	Bottom Elevation NAVD88	Impacts
SB-20/MW-201I/S	11.69	60	68	-48.31	-56.31	None
SB-20/MW-201I/S	11.69	68	70	-56.31	-58.31	slight naphthalene-like odor
SB-20/MW-201I/S	11.69	70	85	-58.31	-73.31	None
SB-21/MW-21/D	10.07	0	10	10.07	0.07	None
SB-21/MW-21/D	10.07	10	14	0.07	-3.93	trace black staining
SB-21/MW-21/D	10.07	14	22	-3.93	-11.93	little black staining
SB-21/MW-21/D	10.07	22	28	-11.93	-17.93	slight naphthalene-like odor
SB-21/MW-21/D	10.07	28	31	-17.93	-20.93	None
SB-21/MW-21/D	10.07	31	43.5	-20.93	-33.43	naphthalene-like odor
SB-21/MW-21/D	10.07	43.5	90	-33.43	-79.93	None
SB-22/MW-22I/D	8.12	0	12	8.12	-3.88	None
SB-22/MW-22I/D	8.12	12	15	-3.88	-6.88	Tar-like odor
SB-22/MW-22I/D	8.12	15	15.1	-6.88	-6.98	None
SB-22/MW-22I/D	8.12	15.1	15.2	-6.98	-7.08	Tar staining
SB-22/MW-22I/D	8.12	15.2	90	-7.08	-81.88	None
SB-23/MW-23D	5.22	0	90	5.22	-84.78	None
SB-24	8.16	0	90	8.16	-81.84	None
SB-25/MW-25S/I	6.51	0	90	6.51	-83.49	None
SB-26	12.35	0	70	12.35	-57.65	None
TP-1	8.85	0	3.85	8.85	5	None
TP-2	11.4	1	2.5	10.4	8.9	Fuel oil like odor
TP-2	11.4	2.5	4.5	8.9	6.9	MGP-like odor
TP-2	11.4	4.5	4.6	6.9	6.8	2 centimeter thick oil like material on infiltrating water
TP-2	11.4	4.6	6.5	6.8	4.9	MGP-like odor

Notes;
NAVD 88 - North American Vertical Datum of 1988
ft bgs - feet below ground surface
NAPL - non-aqueous phase liquid
DNAPL - dense non-aqueous phase liquid
MGP - manufactured gas plant

Table 5-2
Summary of Previous Investigation Tar Saturation Impacts
Metropolitan Former MGP Site, Brooklyn, New York

Boring ID	Location Type	Ground Surface Elevation	Total Depth (ft bgs)	Visible Impact Summary					Source of Information
				15 to 0 ft NAVD88	0 to -15 ft NAVD88	-15 to -30 ft NAVD88	-30 to -45 ft NAVD88	Below -45 ft NAVD88	
B-21	boring	10.5	81	none	none	none	staining/sheen	none	Mueser Rutledge, Jan 2002
LB-1	boring	11	81	none	none	tar saturated	tar saturated	tar saturated	Mueser Rutledge, Jan 2002
LB-2	boring	11	80	none	none	tar saturated	none	tar saturated	Mueser Rutledge, Jan 2002
LB-3	boring	11	81	none	none	tar saturated	none	none	Mueser Rutledge, Jan 2002
LB-4	boring	11	80	none	none	tar saturated	none	tar saturated	Mueser Rutledge, Jan 2002
LB-5	boring	11	80	none	none	tar saturated	none	none	Mueser Rutledge, Jan 2002
LB-6	boring	11	77	none	none	none	none	none	Mueser Rutledge, Jan 2002
LB-7	boring	11	77	none	tar saturated	tar saturated	none	none	Mueser Rutledge, Jan 2002
LB-8	boring	11	55	none	none	none	tar saturated	none	Mueser Rutledge, Jan 2002
LB-9	boring	11	57	none	none	none	none	none	Mueser Rutledge, Jan 2002
PB-7	boring	8.9	82	none	none	none	none	none	Mueser Rutledge, Jan 2002
PB-8	boring	7.4	82	none	tar saturated	none	none	none	Mueser Rutledge, Jan 2002
RB-1	boring	7.4	80	none	tar saturated	tar saturated	tar saturated	tar saturated	Mueser Rutledge, Jan 2002
RB-2	boring	9	85	none	none	tar saturated	tar saturated	none	Mueser Rutledge, Jan 2002
RB-3	boring	10.1	80	none	none	tar saturated	none	none	Mueser Rutledge, Jan 2002
RB-4	boring	10.4	73	none	none	tar saturated	none	none	Mueser Rutledge, Jan 2002
RB-5	boring	10.6	80	none	none	tar saturated	none	none	Mueser Rutledge, Jan 2002
RB-6	boring	10.6	82	none	none	none	none	none	Mueser Rutledge, Jan 2002
RB-7	boring	10.6	80	none	none	none	none	none	Mueser Rutledge, Jan 2002
RB-8	boring	10.9	82	none	none	none	none	none	Mueser Rutledge, Jan 2002
RB-9	boring	11.2	82	none	none	none	none	none	Mueser Rutledge, Jan 2002
RW-1	recovery well	7.74	47.5	none	none	none	tar saturated	none	Roux, June 2002
RW-10	recovery well	9.06	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-11	recovery well	9.71	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-12	recovery well	10.04	50	none	none	none	tar saturated	none	Roux, June 2002
RW-13	recovery well	10.04	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-14	recovery well	10.37	50	none	none	tar saturated	none	none	Roux, June 2002
RW-15	recovery well	10.37	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-16	recovery well	10.70	49	none	none	none	tar saturated	none	Roux, June 2002
RW-17	recovery well	11.03	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-18	recovery well	11.03	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-19	recovery well	11.35	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-1S	recovery well	12.34	16	none	none				Roux, June 2002
RW-2	recovery well	8.07	47.5	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-20	recovery well	11.68	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-21	recovery well	12.01	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-22	recovery well	12.01	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-23	recovery well	12.34	50	none	none	none	none	none	Roux, June 2002

Notes
ft bgs - feet below ground surface
NAVD88 - North American Vertical Datum of 1988
Source References available in reference list in Section 10 of this report.

Table 5-2 (continued)
Summary of Previous Investigation Tar Saturation Impacts
Metropolitan Former MGP Site, Brooklyn, New York

Boring ID	Location Type	Ground Surface Elevation	Total Depth (ft bgs)	Visible Impact Summary					Source of Information
				15 to 0 ft NAVD88	0 to -15 ft NAVD88	-15 to -30 ft NAVD88	-30 to -45 ft NAVD88	Below -45 ft NAVD88	
RW-25	recovery well	12.67	50	none	none	none	none	none	Roux, June 2002
RW-27	recovery well	12.99	50	none	none	none	none	none	Roux, June 2002
RW-29	recovery well	8.07	50	none	none	none	tar saturated		Roux, June 2002
RW-2S	recovery well	12.01	16	none	none				Roux, June 2002
RW-3	recovery well	8.07	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-30	recovery well	8.4	50	none	none	tar lenses	none	none	Roux, June 2002
RW-31	recovery well	7.74	50	none	tar saturated	tar saturated	tar saturated	none	Roux, June 2002
RW-32	recovery well	8.07	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-33	recovery well	8.4	50	none	tar saturated	none	none	none	Roux, June 2002
RW-34	recovery well	8.4	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-35	recovery well	8.73	49	none	tar saturated	tar saturated	tar saturated	none	Roux, June 2002
RW-36	recovery well	9.06	50	none	tar saturated	tar saturated	tar saturated	none	Roux, June 2002
RW-37	recovery well	9.38	50	none	none	none	tar saturated	none	Roux, June 2002
RW-38	recovery well	9.71	50	none	none	none	tar saturated	none	Roux, June 2002
RW-39	recovery well	10.04	50	none	none	none	tar saturated	none	Roux, June 2002
RW-4	recovery well	8.4	50	none	none	none	tar saturated	none	Roux, June 2002
RW-40	recovery well	10.37	50	none	none	none	tar saturated	none	Roux, June 2002
RW-41	recovery well	10.37	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-42	recovery well	10.7	50	none	none	tar saturated	tar saturated	none	Roux, June 2002
RW-43	recovery well	10.7	50	none	none	none	tar saturated	none	Roux, June 2002
RW-44	recovery well	11.03	50	none	none	none	tar saturated	none	Roux, June 2002
RW-5	recovery well	8.07	50	none	none	none	tar saturated	none	Roux, June 2002
RW-6	recovery well	8.07	50	none	none	none	tar saturated	none	Roux, June 2002
RW-7	recovery well	8.07	50	none	none	none	tar saturated	none	Roux, June 2002
RW-8	recovery well	8.07	50	none	tar saturated	none	none	none	Roux, June 2002
RW-9	recovery well	9.06	50	none	tar saturated	tar saturated	none	none	Roux, June 2002
GP-6	boring	10.7	12	none	none				ARKF, July 2001
GP-17	boring	12.01	16	none	none				ARKF, July 2001
GP-18	boring	11.68	16	tar saturated	tar saturated				ARKF, July 2001
GP-19	boring	11.35	16	none	none				ARKF, July 2001
GP-20	boring	11.03	16	none	none				ARKF, July 2001
GP-21	boring	10.7	16	none	tar saturated				ARKF, July 2001
GP-22	boring	10.37	16	tar saturated	tar saturated				ARKF, July 2001
GP-25	boring	9.06	16	none	tar saturated				ARKF, July 2001
GP-27	boring	9.71	16	none	none				ARKF, July 2001
GP-28	boring	9.71	16	none	none				ARKF, July 2001
GP-30	boring	10.04	12	none	none				ARKF, July 2001
GP-32	boring	12.99	16	none	none				ARKF, July 2001

Notes
ft bgs - feet below ground surface
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Source References available in reference list in Section 10 of this report.

Table 5-2 (continued)
Summary of Previous Investigation Tar Saturation Impacts
Metropolitan Former MGP Site, Brooklyn, New York

Boring ID	Location Type	Ground Surface Elevation	Total Depth (ft bgs)	Visible Impact Summary					Source of Information
				15 to 0 ft NAVD88	0 to -15 ft NAVD88	-15 to -30 ft NAVD88	-30 to -45 ft NAVD88	Below -45 ft NAVD88	
GP-33	boring	13.32	16	none	none				ARKF, July 2001
GP-41	boring	12.99	20	none	none				ARKF, July 2001
GP-42	boring	12.67	20	none	none				ARKF, July 2001
GP-44	boring	12.01	16	tar saturated	tar saturated				ARKF, July 2001
GP-45	boring	11.68	20	none	none				ARKF, July 2001
GP-46	boring	11.35	20	none	none				ARKF, July 2001
GP-47	boring	11.03	20	none	none				ARKF, July 2001
GP-48	boring	10.7	16	none	none				ARKF, July 2001
GP-49	boring	10.37	12	none	none				ARKF, July 2001
GP-50	boring	10.04	20	none	none				ARKF, July 2001
GP-51	boring	9.71	20	none	none				ARKF, July 2001
GP-53	boring	8.4	12	none	none				ARKF, July 2001
DP-2	boring	11.03	27	none	none				ARKF, Jan. 2001
MW-2/DP-1	monitoring well	12.67	27	none	none				ARKF, Jan. 2001
MW-3/DP-9	monitoring well	10.72	40	none	tar saturated				ARKF, Jan. 2001
MW-5/DP-11	monitoring well	8	32	none	none	none			ARKF, Jan. 2001
MW-6/DP-12	monitoring well	6.5	32	none	none	tar saturated			ARKF, Jan. 2001
MW-7/DP-13	monitoring well	8	32	none	none	none			ARKF, Jan. 2001
PB-1	boring	5.02	82	none	none	none	tar saturated	tar saturated	Mueser Rutledge, Jan 2002
PB-2	boring	9.44	82	none	none	none	none	none	Mueser Rutledge, Jan 2002
PB-3	boring	5.53	82	none	none	none	none	none	Mueser Rutledge, Jan 2002
PB-4	boring	9.7	82	none	none	none	none	none	Mueser Rutledge, Jan 2002
PB-5	boring	7.53	82	none	none	none	none	tar saturated	Mueser Rutledge, Jan 2002
PB-6	boring	6.5	82	none	none	none	none	tar saturated	Mueser Rutledge, Jan 2002
PB-7	boring	10.08	82	none	none	none	none	none	Mueser Rutledge, Jan 2002
PB-8	boring	5.02	82	none	none	none	none	tar saturated	Mueser Rutledge, Jan 2002
GCMW-44	monitoring well	4.72	45	staining/sheen	none	none	none		US EPA, January 2011
GCMW-45	monitoring well	4.49	41	none	none	tar saturated	tar saturated		US EPA, January 2011
GCMW-46	monitoring well	4.76	57	none	none	none	none	none	US EPA, January 2011
GCMW-47	monitoring well	4.62	47	none	none	stainin/sheen	tar saturated		US EPA, January 2011

Notes
ft bgs - feet below ground surface
NAVD88 - North American Vertical Datum of 1988
Source References available in reference list in Section 10 of this report.

Table 5-3
Summary of Surface Soil Anayltical Results
Former Metropolitan MGP, Brooklyn, New York

Sample Location Sample Date Sample Interval (feet)	CAS Number	NYSDEC PART 375-6 Unrestricted	NYSDEC Part 375-6 Commercial	CP-51	SS-01 9/14/2010 0-2"	SS-02 9/14/2010 0-2"	SS-03 9/16/2010 0-2"
BTEX (mg/Kg)							
Total BTEX	***CALC-BTEX***	***NL***	***NL***	***NL***	***ND***	***ND***	***ND***
Volatile Organic Compounds (VOCs)(mg/Kg)							
1,1-Dichloroethene	75-35-4	0.33	500	NL	< 0.0065 U	**0.0016 J**	< 0.0053 U
Total VOCs	*CALC-VOC*	*NL*	*NL*	*NL*	*ND*	***0.0016***	*ND*
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)							
Acenaphthene	83-32-9	20	500	NL	< 0.21 U	**0.042 J**	**0.039 J**
Acenaphthylene	208-96-8	100	500	NL	**0.081 J**	**0.083 J**	**0.082 J**
Anthracene	120-12-7	100	500	NL	**0.073 J**	**0.14 J**	**0.1 J**
Benzo(a)anthracene	56-55-3	1	5.6	NL	**0.55**	**0.63**	**0.38**
Benzo(a)pyrene	50-32-8	1	1	NL	**0.62**	**0.66**	**0.41**
Benzo(b)fluoranthene	205-99-2	1	5.6	NL	**0.9**	**1.1**	**0.58**
Benzo(ghi)perylene	191-24-2	100	500	NL	**0.52**	**0.63**	**0.32**
Benzo(k)fluoranthene	207-08-9	0.8	56	NL	**0.4**	**0.46**	**0.3**
Chrysene	218-01-9	1	56	NL	**0.57**	**0.79**	**0.47**
Dibenz(a,h)anthracene	53-70-3	0.33	0.56	NL	**0.13 J**	**0.16 J**	**0.091 J**
Fluoranthene	206-44-0	100	500	NL	**0.65**	**1.2**	**0.77**
Fluorene	86-73-7	30	500	NL	< 0.21 U	**0.038 J**	**0.038 J**
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	5.6	NL	**0.42**	**0.52**	**0.27**
Naphthalene	91-20-3	12	500	NL	< 0.21 U	< 0.23 U	**0.032 J**
Phenanthrene	85-01-8	100	500	NL	**0.26**	**0.54**	**0.38**
Pyrene	129-00-0	100	500	NL	**1**	**1.2**	**0.69**
Total PAHs	*CALC-PAH*	*NL*	*NL*	*500*	***6.174***	***8.193***	***4.952***
Other Semivolatile Organic Compounds (SVOCs) (mg/Kg)							
Acetophenone	98-86-2	NL	500	NL	< 0.21 U	**0.048 J**	< 0.18 U
Benzaldehyde	100-52-7	NL	NL	NL	**0.054 J**	**0.096 J**	**0.043 J**
bis(2-Ethylhexyl) phthalate	117-81-7	NL	NL	NL	**26**	**1.1**	**0.54**
Butyl benzyl phthalate	85-68-7	NL	NL	NL	**0.36**	**0.49**	**0.35**
Caprolactam	105-60-2	NL	NL	NL	**0.028 J**	**0.099 J**	**0.035 J**
Carbazole	86-74-8	NL	NL	NL	**0.036 J**	**0.089 J**	**0.053 J**
Di-n-butyl phthalate	84-74-2	NL	NL	NL	**0.086 J**	**0.25**	**0.092 J**
Total Other SVOCs	*CALC-SVOC*	*NL*	*NL*	*NL*	***32.738***	***10.365***	***6.065***
Inorganic Compounds (mg/Kg)							
Aluminum	7429-90-5	NL	NL	NL	**3320**	NS	NS
Antimony	7440-36-0	NL	NL	NL	**2.7**	NS	NS
Arsenic	7440-38-2	13	16	NL	**3.6**	**5.1**	**4.1**
Barium	7440-39-3	350	400	NL	**128**	**180**	**126**
Beryllium	7440-41-7	7.2	590	NL	**0.11 J**	NS	NS
Cadmium	7440-43-9	2.5	9.3	NL	**3.7**	**5.9**	**3.7**
Calcium	7440-70-2	NL	NL	NL	**10700**	NS	NS
Chromium	7440-47-3	30	1500	NL	**51.4**	**65.9**	**29.1**
Cobalt	7440-48-4	NL	NL	NL	**5.5**	NS	NS
Copper	7440-50-8	50	270	NL	**119**	NS	NS
Iron	7439-89-6	NL	NL	NL	**14300**	NS	NS
Lead	7439-92-1	63	1000	NL	**300**	**445**	**218**
Magnesium	7439-95-4	NL	NL	NL	**2910**	NS	NS
Manganese	7439-96-5	1600	10000	NL	**186**	NS	NS
Mercury	7439-97-6	0.18	2.8	NL	**0.5**	**0.66**	**0.32**
Nickel	7440-02-0	30	310	NL	**54**	NS	NS
Potassium	7440-09-7	NL	NL	NL	**514**	NS	NS
Silver	7440-22-4	2	1500	NL	**1.0 J**	**2**	**0.89 J**
Sodium	7440-23-5	NL	NL	NL	**202**	NS	NS
Vanadium	7440-62-2	NL	NL	NL	**14.4**	NS	NS
Zinc	7440-66-6	109	10000	NL	**693**	NS	NS
Total Cyanide	57-12-5	27	27	NL	**0.312 J**	**0.319 J**	**0.226 J**
Pesticides (mg/Kg)							
DDT,4,4-	50-29-3	0.0033	47	NL	**0.014 NJ**	NS	NS
Endrin aldehyde	7421-93-4	NL	NL	NL	**0.045 J**	NS	NS
Endrin ketone	53494-70-5	NL	NL	NL	**0.016 NJ**	NS	NS
PCBs (mg/Kg)							
Aroclor 1254	11097-69-1	NL	NL	NL	**0.62 J**	NS	NS
Aroclor 1260	11096-82-5	NL	NL	NL	**0.51 J**	NS	NS
PCB (Total) (ppm)	*CALC-PCBs*	*0.1*	*1*	*NL*	***1.13***	*NS*	*NS*
Herbicides (mg/Kg)							
Herbicides	93-72-1	3.8	500	NL	ND	NS	NS
Percent Solids/Moisture							
Moisture, percent	MOIST	NL	NL	NL	**23**	**30**	**12**
Percent Solids	SOLIDS	NL	NL	NL	**77**	**70**	**88**

Notes:

mg/Kg - milligrams per kilogram

NA = Not Analyzed

ND = Not Detected

NL = Not Listed

J = The associated numerical value is an estimated quantity.

R = The associated data is rejected.

Quantitation Limit (PQL).

UJ = The analyte was not detected at or above the PQL. However, the reported PQL is approximate and may be inaccurate or imprecise.

Bold indicates the analyte detected at a concentration greater than the MDL.

Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Unrestricted Use Soil Cleanup Objective

Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Commercial Use Soil Cleanup Objective Commercial value.

Green highlight indicates result is above the NYSDEC CP-51 Alternate Criteria of 500 mg/Kg for Total PAHs.

Table 5-4
Summary of Subsurface Soil Anayltical Results
Former Metropolitan MGP, Brooklyn, New York

Sample Location Sample Date Sample Interval (feet)	CAS Number	NYSDEC PART 375-6 Unrestricted	NYSDEC Part 375-6 Commercial	CP-51	SB-01 4/5/2010 4-5	SB-01 4/5/2010 40-45	SB-01 4/5/2010 71-72	SB-01 4/8/2010 5-7	SB-02 4/8/2010 1-2	SB-02 4/9/2010 40-45	SB-02 4/9/2010 71-72	SB-03 4/13/2010 4-5	SB-03 4/13/2010 30-35	SB-03 4/13/2010 59-60	SB-04 DUP 4/27/2010 32-34	SB-04 4/27/2010 4-5	SB-04 4/27/2010 32-34	SB-04 4/27/2010 58-60	SB-05 4/21/2010 4-5	SB-05 4/22/2010 39-40	SB-05 4/22/2010 70-72	SB-06 4/20/2010 4-5	SB-06 4/20/2010 26-28	SB-06 4/21/2010 49-50	SB-07 4/28/2010 4-5	SB-07 4/28/2010 10-12
BTEX (mg/Kg)																										
Benzene	71-43-2	0.06	44	NL	< 1.27 U	< 0.0073 U	< 0.0060 U	**0.409 J**	< 0.0033 U	< 0.0041 U	< 0.0040 U	< 1.21 U	**20.7 J**	**0.0031 J**	< 6.62 U	< 0.0077 U	**0.809**	< 0.0060 U	< 0.0702 U	**0.0429**	< 0.0054 U	**1.38**	< 0.0716 U	< 0.0066 U	< 0.139 U	< 8.54 U
Ethylbenzene	100-41-4	1	390	NL	**4.74**	< 0.0073 U	< 0.0060 U	**4.43**	< 0.0052 U	< 0.0065 U	< 0.0063 U	**32.5**	**255**	< 0.0049 U	**6.62 J**	< 0.0077 U	**6.24 J**	< 0.0060 U	< 0.0702 U	**0.0075**	< 0.0054 U	**0.958**	< 0.0716 U	< 0.0066 U	**0.159 J**	**47.9**
m+p-Xylene	1330-20-7-M,P	NL	NL	NL	**17.4 J**	< 0.0145 U	< 0.0120 U	**15.9 J**	< 0.0091 U	< 0.0112 U	< 0.0109 U	**23.7 J**	**189 J**	< 0.0097 U	< 13.2 UJ	< 0.0155 U	**5.07 J**	< 0.0119 U	< 0.14 UJ	< 0.0147 U	< 0.0109 U	**0.374 J**	< 0.143 UJ	< 0.0131 U	**0.292 J**	< 17.1 U
o-Xylene	95-47-6	NL	NL	NL	**6.75 J**	< 0.0073 U	< 0.0060 U	**4.91 J**	< 0.0036 U	< 0.0044 U	< 0.0043 U	**9.71 J**	**75 J**	< 0.0049 U	**5.03 J**	< 0.0077 U	**3.93 J**	< 0.0060 U	< 0.0702 UJ	< 0.0074 U	< 0.0054 U	**0.3 J**	< 0.0716 UJ	< 0.0066 U	**0.131 J**	**8.79**
Toluene	108-88-3	0.7	500	NL	**2.16**	< 0.0073 U	< 0.0060 U	**1.4**	< 0.0051 U	< 0.0063 U	< 0.0061 U	< 1.21 U	**160**	**0.0045 J**	< 6.62 U	< 0.0077 U	< 0.685 U	< 0.0060 U	< 0.0702 U	< 0.0074 U	< 0.0054 U	**0.333**	< 0.0716 U	< 0.0066 U	< 0.139 UJ	< 8.54 U
Total Xylenes	Calc-Xylenes	NL	500	NL	**24.15**	< 0.0073	< 0.0060	**20.81**	< 0.0091	< 0.0044	< 0.0043	**33.41**	**264**	< 0.0097	**5.03**	< 0.0077	**9**	< 0.0060	< 0.0702	< 0.0074	< 0.0054	**0.674**	< 0.0716	< 0.0066	**0.423**	**8.79**
Total BTEX	*CALC-BTEX*	*NL*	*NL*	*NL*	***31.05***	*ND*	*ND*	***27.049***	*ND*	*ND*	*ND*	***65.91***	***699.7***	***0.0076***	***11.65***	*ND*	***16.049***	*ND*	*ND*	***0.0504***	*ND*	***3.345***	*ND*	*ND*	***0.582***	***56.69***
Volatile Organic Compounds (VOCs)(mg/Kg)																										
1,1,1-Trichloroethane	71-55-6	0.68	500	NL	< 1.27 U	< 0.0073 U	< 0.0060 U	< 0.634 U	< 0.0053 U	< 0.0065 U	< 0.0063 U	< 1.21 U	< 26.6 U	< 0.0049 U	< 6.62 U	< 0.0077 U	< 0.685 U	< 0.0060 U	**0.249**	< 0.0074 U	< 0.0054 U	< 0.0963 U	< 0.0716 U	< 0.0066 U	< 0.139 U	< 8.54 UJ
1,1-Dichloroethane	75-34-3	0.27	240	NL	< 1.27 U	< 0.0073 U	< 0.0060 U	< 0.504 U	< 0.0042 U	< 0.0052 U	< 0.0050 U	< 1.21 U	< 26.6 U	< 0.0049 U	< 6.62 U	< 0.0077 U	< 0.685 U	< 0.0060 U	**0.0582 J**	< 0.0074 U	< 0.0054 U	< 0.0963 U	< 0.0716 U	< 0.0066 U	< 0.139 U	< 8.54 U
1,2,4-Trimethylbenzene	95-63-6	3.6	190	NL	NS	NS	NS	NS	NS	NS	NS	**36.1**	**89.3**	< 0.0049	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	95-50-1	1.1	500	NL	< 1.27 U	< 0.0073 U	< 0.0060 U	< 0.6 U	< 0.0050 U	< 0.0062 U	< 0.0060 U	< 1.21 U	< 26.6 U	< 0.0049 U	< 6.62 U	< 0.0077 U	< 0.685 U	< 0.0060 U	**0.996**	< 0.0074 U	< 0.0054 U	< 0.0963 U	< 0.0716 U	< 0.0066 U	< 0.139 U	< 8.54 U
1,2-Dichloroethane	107-06-2	0.02	30	NL	< 1.27 U	< 0.0073 U	< 0.0060 U	< 0.654 U	< 0.0055 U	< 0.0067 U	< 0.0065 U	< 1.21 U	< 26.6 U	< 0.0049 U	< 6.62 U	< 0.0077 U	< 0.685 U	< 0.0060 U	< 0.0702 U	< 0.0074 U	< 0.0054 U	< 0.0963 U	< 0.0716 U	< 0.0066 U	< 0.139 U	< 8.54 U
1,3,5-Trimethylbenzene	108-67-8	8.4	190	NL	NS	NS	NS	NS	NS	NS	NS	**11.2**	**37.5**	< 0.0049	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,4-Dichlorobenzene	106-46-7	1.8	130	NL	< 1.27 U	< 0.0073 U	< 0.0060 U	< 0.552 U	< 0.0046 U	< 0.0057 U	< 0.0055 U	< 1.21 U	< 26.6 U	< 0.0049 U	< 6.62 U	< 0.0077 U	< 0.685 U	< 0.0060 U	**0.0610 J**	< 0.0074 U	< 0.0054 U	< 0.0963 U	< 0.0716 U	< 0.0066 U	**0.21 J**	< 8.54 U
Acetone	67-64-1	0.05	500	NL	R	**0.0786 J**	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Carbon disulfide	75-15-0	NL	NL	NL	< 2.54 UJ	< 0.0145 U	< 0.0120 U	< 1.36 UJ	< 0.0114 U	< 0.0140 U	< 0.0136 U	< 2.41 UJ	< 53.2 UJ	< 0.0097 U	< 13.2 UJ	< 0.0155 U	< 1.37 UJ	< 0.0119 U	< 0.14 UJ	< 0.0147 U	< 0.0109 U	< 0.193 UJ	< 0.143 UJ	< 0.0131 U	< 0.278 UJ	< 17.1 U
cis-1,2-Dichloroethene	156-59-2	0.25	500	NL	< 1.27 U	< 0.0073 U	< 0.0060 U	< 0.579 U	< 0.0048 U	< 0.0060 U	< 0.0058 U	< 1.21 U	< 26.6 U	< 0.0049 U	< 6.62 U	< 0.0077 U	< 0.685 U	< 0.0060 U	< 0.0702 U	< 0.0074 U	< 0.0054 U	< 0.0963 U	< 0.0716 U	< 0.0066 U	< 0.139 U	< 8.54 U
Cyclohexane	110-82-7	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Isopropylbenzene	98-82-8	NL	NL	NL	**1.37**	< 0.0073 U	< 0.0060 U	**1.02**	< 0.0036 U	< 0.0045 U	< 0.0044 U	**7.04 J**	**22.9 J**	< 0.0049 U	< 6.62 UJ	< 0.0077 U	**2.28 J**	< 0.0060 U	< 0.0702 UJ	< 0.0074 U	< 0.0054 U	**2.28 J**	< 0.0716 UJ	< 0.0066 U	**0.271 J**	**10.8**
Methylcyclohexane	108-87-2	NL	NL	NL	**20**	NS	NS	**21.3**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene chloride	75-09-2	0.05	500	NL	< 2.54 U	< 0.0145 U	< 0.0120 U	< 1.36 UJ	< 0.0114 U	< 0.0140 U	**0.0168**	< 2.41 U	< 53.2 U	< 0.0097 U	< 13.2 U	< 0.0155 U	< 1.37 U	< 0.0119 U	< 0.14 U	< 0.0147 U	< 0.0109 U	< 0.193 U	< 0.143 U	< 0.0131 U	< 0.278 U	< 17.1 U
n-Butylbenzene	104-51-8	12	500	NL	NS	NS	NS	NS	NS	NS	NS	**2.29**	< 26.6	< 0.0049	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Propylbenzene	103-65-1	3.9	500	NL	NS	NS	NS	NS	NS	NS	NS	**3.41**	**21.5**	< 0.0049	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p-Isopropyltoluene	99-87-6	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	**3.7**	< 26.6	< 0.0049	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
sec-Butylbenzene	135-98-8	11	500	NL	NS	NS	NS	NS	NS	NS	NS	**1.15**	< 26.6	< 0.0049	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Styrene	100-42-5	NL	NL	NL	< 1.27 UJ	< 0.0073 U	< 0.0060 U	< 0.341 UJ	< 0.0028 U	< 0.0035 U	< 0.0034 U	**0.941 J**	< 26.6 UJ	**0.0025 J**	< 6.62 UJ	< 0.0077 U	< 0.685 UJ	< 0.0060 U	< 0.0702 UJ	< 0.0074 U	< 0.0054 U	**0.0790 J**	< 0.0716 UJ	< 0.0066 U	< 0.139 UJ	< 8.54 U
Tentatively Identified Compounds	TICS	NL	NL	NL	NS	**0**	**0**	NS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Tetrachloroethene	127-18-4	1.3	150	NL	< 1.27 U	< 0.0073 U	< 0.0060 U	< 0.593 U	< 0.0050 U	< 0.0061 U	< 0.0059 U	< 1.21 U	< 26.6 U	< 0.0049 U	< 6.62 UJ	< 0.0077 U	< 0.685 UJ	< 0.0060 U	**1.08**	< 0.0074 U	< 0.0054 U	< 0.0963 U	< 0.0716 U	< 0.0066 U	**0.159 J**	< 8.54 U
trans-1,2-Dichloroethene	156-60-5	0.19	500	NL	< 1.27 U	< 0.0073 U	< 0.0060 U	< 0.641 U	< 0.0054 U	< 0.0066 U	< 0.0064 U	< 1.21 U	< 26.6 U	< 0.0049 U	< 6.62 U	< 0.0077 U	< 0.685 U	< 0.0060 U	< 0.0702 U	< 0.0074 U	< 0.0054 U	< 0.0963 U	< 0.0716 U	< 0.0066 U	< 0.139 U	< 8.54 U
Trichloroethene	79-01-6	0.47	200	NL	< 1.27 U	< 0.0073 U	< 0.0060 U	< 0.668 U	< 0.0056 U	< 0.0069 U	< 0.0067 U	< 1.21 U	< 26.6 U	< 0.0049 U	< 6.62 U	< 0.0077 U	< 0.685 U	< 0.0060 U	**0.267**	< 0.0074 U	< 0.0054 U	< 0.0963 U	< 0.0716 U	< 0.0066 U	< 0.139 U	< 8.54 U
Total VOCs	*CALC-VOC*	*NL*	*NL*	*NL*	***52.42***	***0.0786***	*ND*	***49.369***	*ND*	*ND*	***0.0168***	***131.741***	***870.9***	***0.0101***	***11.65***	*ND*	***18.329***	*ND*	***2.7112***	***0.0504***	*ND*	***5.704***	*ND*	*ND*	***1.222***	***67.49***
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)																										
2-Methylnaphthalene	91-57-6	NL	NL	NL	**1.03 J**	< 0.104 UJ	< 0.0918 U	**0.511 J**	< 0.931 UJ	< 0.197 UJ	< 0.197 U	**6.61**	**909**	**0.0273 J**	**32.7**	< 0.215 U	**36.1**	**0.0211 J**	< 7.86 U	< 0.205 U	< 0.192 U	**2.54 J**	**0.197 J**	**0.0238 J**	< 0.706 U	**495**
Acenaphthene	83-32-9	20	500	NL	**0.111 J**	< 0.104 U	< 0.0918 U	**0.0323 J**	< 0.931 U	< 0.197 U	< 0.197 U	**0.905 J**	**410**	< 0.26 U	**23.6**	**0.0478 J**	**27.4**	**0.0190 J**	< 7.86 U	**0.0568 J**	< 0.192 U	**22.7 J**	**0.0569 J**	< 0.193 U	**12.5 J**	**238**
Acenaphthylene	208-96-8	100	500	NL	< 0.128 U	< 0.104 U	< 0.0918 U	< 0.291 U	< 0.931 U	< 0.197 U	< 0.197 U	< 2.95 U	**53 J**	< 0.26 U	**4.01 J**	< 0.215 U	**4.7 J**	< 0.18 U	< 7.86 U	< 0.205 U	< 0.192 U	**23.7 J**	< 0.202 U	< 0.193 U	**11.7 J**	**58.5**
Anthracene	120-12-7	100	500	NL	**0.122 J**	< 0.104 U	< 0.0918 U	**0.0323 J**	< 0.931 U	< 0.197 U	< 0.197 U	**0.536 J**	**181**	< 0.26 U	**10.7**	**0.102 J**	**12.5**	< 0.18 U	**1.65 J**	< 0.205 U	< 0.192 U	**42.3 J**	< 0.202 U	< 0.193 U	**34**	**189**
Benzo(a)anthracene	56-55-3	1	5.6	NL	**0.153**	< 0.104 U	< 0.0918 U	**0.0511 J**	**0.5 J**	< 0.197 U	< 0.197 U	**0.733 J**	**100 J**	< 0.26 U	**5.56 J**	**0.192 J**	**6.67 J**	< 0.18 U	**3.57 J**	< 0.205 U	< 0.192 U	**37.4 J**	< 0.202 U	< 0.193 U	**22.5**	**96.7**
Benzo(a)pyrene	50-32-8	1	1	NL	**0.132**	< 0.104 U	< 0.0918 U	**0.0446 J**	**0.564 J**	< 0.197 U	< 0.197 U	**0.661 J**	**74.1 J**	< 0.26 U	**3.84 J**	**0.16 J**	**4.7 J**	< 0.18 U	**3.7 J**	< 0.205 U	< 0.192 U	**49.1 J**	< 0.202 U	< 0.193 U	**22.3**	**81.2**
Benzo(b)fluoranthene	205-99-2	1	5.6	NL	**0.126 J**	< 0.104 U	< 0.0918 U	< 0.291 U	**0.455 J**	< 0.197 U	< 0.197 U	< 2.95 U	**38.3 J**	< 0.26 U	< 9.69 U	**0.113 J**	< 9.74 U	< 0.18 U	< 7.86 U	< 0.205 U	< 0.192 U	**27.3 J**	< 0.202 U	< 0.193 U	**10.8 J**	**35.6 J**
Benzo(ghi)perylene	191-24-2	100	500	NL	**0.0548 J**	< 0.104 U	< 0.0918 U	< 0.291 U	**0.308 J**	< 0.197 U	< 0.197 U	**0.435 J**	**24.3 J**	< 0.26 U	**1.31 J**	**0.0839 J**	**1.67 J**	< 0.18 U	**1.65 J**	< 0.205 UJ	< 0.192 UJ	**22.3 J**	< 0.202 UJ	< 0.193 UJ	**9.96 J**	**31.8 J**
Benzo(k)fluoranthene	207-08-9	0.8	56	NL	**0.106 J**	< 0.104 U	< 0.0918 U	**0.0411 J**	**0.459 J**	< 0.197 U	< 0.197 U	**0.441 J**	**36.3 J**	< 0.26 U	**2.8 J**	**0.165 J**	**3.3 J**	< 0.18 U	**4.14 J**	< 0.205 U	< 0.192 U	**26.6 J**	< 0.202 U	< 0.193 U	**8.32 J**	**37.9 J**
Chrysene	218-01-9	1	56	NL	**0.13**	< 0.104 U	< 0.0918 U	**0.0429 J**	**0.525 J**	< 0.197 U	< 0.197 U	**0.762 J**	**97.5 J**	< 0.26 U	**5.38 J**	**0.19 J**	**6.57 J**	< 0.18 U	**3.83 J**	< 0.205 U	< 0.192 U	**37.5 J**	< 0.202 U	< 0.193 U	**20.1**	**96.5**
Dibenz(a,h)anthracene	53-70-3	0.33	0.56	NL	< 0.128 U	< 0.104 U	< 0.0918 U	< 0.291 U	< 0.931 U	< 0.197 U	< 0.197 U	< 2.95 U	< 122 U	< 0.26 U	< 9.69 U	**0.0239 J**	< 9.74 U	< 0.18 U	< 7.86 U	< 0.205 U	< 0.192 U	**3.33 J**	< 0.202 U	< 0.193 U	< 0.513 U	< 1.55 U
Fluoranthene	206-44-0	100	500	NL	**0.479**	< 0.104 U	< 0.0918 U	**0.146 J**	**0.916 J**	< 0.197 U	< 0.197 U	**1.45 J**	**210**	< 0.26 U	**11.2**	**0.443**	**13**	< 0.18 U	**7.69 J**	< 0.205 U	< 0.192 U	**50.5 J**	< 0.202 U	< 0.193 U	**46.1**	**206**
Fluorene	86-73-7	30	500	NL	**0.121 J**	< 0.104 U	< 0.0918 U	**0.0405 J**	< 0.931 U	< 0.197 U	< 0.197 U	**0.661 J**	**290**	< 0.26 U	**15.6**	**0.0543 J**	**18**	< 0.18 U	< 7.86 U	< 0.205 U	< 0.192 U	**35.8 J**	< 0.202 U	< 0.193 U	**41.3**	**234**
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	5.6	NL	**0.0698 J**	< 0.104 U	< 0.0918 U	< 0.291 U	**0.325 J**	< 0.197 U	< 0.197 U	**0.381 J**	**22.3 J**	< 0.26 U	**1.23 J**	**0.0882 J**	**1.49 J**	< 0.18 U	**1.46 J**	< 0.205 U	< 0.192 U	**16.4 J**	< 0.202 U	< 0.193 U	**7.77 J**	**24.1 J**
Naphthalene	91-20-3	12	500	NL	**2.59**	< 0.104 U	< 0.0918 U	**0.723**	< 0.931 U	< 0.197 U	< 0.197 U	**30.1**	**1720**	**0.0951 J**	**54.1**	**0.0443 J**	**56.6**	**0.0525 J**	< 7.86 U	**0.227**	< 0.192 U	**6.06 J**	**1.14**	**0.0639 J**	< 1.23 U	**949**
Phenanthrene	85-01-8	100	500	NL	**0.512**	< 0.104 U	< 0.0918 U	**0.146 J**	**0.414 J**	< 0.197 U	< 0.197 U	**2.18 J**	**690**	< 0.26 U	**37.6**	**0.385**	**42.5**	**0.0200 J**	**5.57 J**	< 0.205 U	< 0.192 U	**90.9 J**	< 0.202 U	< 0.193 U	**4.09 J**	**518**
Pyrene	129-00-0	100	500	NL	**0.355**	< 0.104 U	< 0.0918 U	**0.107 J**	**0.892 J**	< 0.197 U	< 0.197 U	**1.9 J**	**287**	< 0.26 U	**15.8**	**0.37**	**18.7**	< 0.18 U	**8.21**	< 0.205 U	< 0.192 U	**116 J**	< 0.202 U	< 0.193 U	**77.4**	**330**
Total PAHs	*CALC-PAH*	*NL*	*NL*	*500*	***6.0916***	*ND*	*ND*	***1.9178***	***5.358***	*ND*	*ND*	***47.755***	***5142.8***	***0.1224***	***225.43***	***2.4624***	***253.9***	***0.1126***	***41.47***	***0.2838***	*ND*	***610.43***	***1.3939***	***0.0877***	***328.84***	***3621.3***
Other Semivolatile Organic Compounds (SVOCs) (mg/Kg)																										
1,1'-Biphenyl	92-52-4	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1-Methylnaphthalene	90-12-0	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	**4.94**	**606**	< 0.26	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acetophenone	98-86-2	NL	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzaldehyde	100-52-7	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
bis(2-Ethylhexyl) phthalate	117-81-7	NL	NL	NL	< 0.256 U	< 0.208 U	< 0.184 U	< 0.581 U	< 1.86 U	< 0.393 U	< 0.395 U	< 5.9 U	< 243 U	< 0.52 U	< 19.4 U	< 0.43 U	< 19.5 U	< 0.361 U	< 15.7 U	< 0.41 U	< 0.384 U	R	< 0.405 U	< 0.386 U	< 6.13 U	< 18.6 U
Carbazole	86-74-8	NL	NL	NL	**0.109 J**	< 0.208 U	< 0.184 U	< 0.581 UJ	< 1.86 UJ	< 0.393 UJ	< 0.395 U	< 5.9 U	< 243 U	< 0.52 U	< 19.4 U	**0.0374 J**	< 19.5 U	< 0.361 U	< 15.7 U	< 0.41 U	< 0.384 U	R	< 0.405 U	< 0.386 U	< 1.16 U	< 3.51 U
Dibenzofuran	132-64-9	7	350	NL	**0.0672 J**	< 0.208 U	< 0.184 U	< 0.581 U	< 1.86 U	< 0.393 U	< 0.395 U	< 5.9 U	**24.5 J**	< 0.52 U	**1.57 J**	**0.0243 J**	**1.89 J**	< 0.361 U	< 15.7 U	< 0.41 U	< 0.384 U	R	< 0.405 U	< 0.386 U	< 0.387 U	< 1.17 U
Phenol	108-95-2	0.33	500	NL	< 0.256 U	< 0.208 U	< 0.184 U	< 0.581 U	R	< 0.393 U	< 0.395 U	< 5.9 U	< 243 U	< 0.52 U	< 19.4 U	< 0.43 U	< 19.5 U	< 0.361 U	< 15.7 U	< 0.41 U	< 0.384 U	< 48.4 U	< 0.405 U	< 0.386 U	< 0.645 U	< 1.95 U
Tentatively Identified Compounds	TICS	NL	NL	NL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Other SVOCs	*CALC-SVOC*	*NL*	*NL*	*NL*	***6.2678***	*ND*	*ND*	***1.9178***	***5.358***	*ND*	*ND*	***47.755***	***5167.3***	***0.1224***	***227***	***2.5241***	***255.79***	***0.1126***	***41.47***	***0.2838***	*ND*	***610.43***	***1.3939***	***0.0877***	***328.84***	***3621.3***

Notes:
mg/Kg - milligrams per kilogram
J = The associated numerical value is an estimated quantity.
R = The associated data is rejected.
U = The analyte was analyzed for but not detected at, or above, the Method Detection
UJ = The analyte was not detected at or above the PQL. However, the reported PQL
Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Unrestricted Use Soil Cleanup Objective
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Commercial Use Soil Cleanup Objective Commercial value.
Green highlight indicates result is above the NYSDEC CP-51 Alternate Criteria of 500 mg/Kg for Total PAHs.
NA = Not Analyzed
ND = Not Detected
NL = Not Listed

Table 5-4 (continued)
Summary of Subsurface Soil Anayltical Results
Former Metropolitan MGP, Brooklyn, New York

Sample Location Sample Date Sample Interval (feet)	CAS Number	NYSDEC PART 375-6 Unrestricted	NYSDEC Part 375-6 Commercial	CP-51	SB-01 4/5/2010 4-5	SB-01 4/5/2010 40-45	SB-01 4/5/2010 71-72	SB-01 4/8/2010 5-7	SB-02 4/8/2010 1-2	SB-02 4/9/2010 40-45	SB-02 4/9/2010 71-72	SB-03 4/13/2010 4-5	SB-03 4/13/2010 30-35	SB-03 4/13/2010 59-60	SB-04 DUP 4/27/2010 32-34	SB-04 4/27/2010 4-5	SB-04 4/27/2010 32-34	SB-04 4/27/2010 58-60	SB-05 4/21/2010 4-5	SB-05 4/22/2010 39-40	SB-05 4/22/2010 70-72	SB-06 4/20/2010 4-5	SB-06 4/20/2010 26-28	SB-06 4/21/2010 49-50	SB-07 4/28/2010 4-5	SB-07 4/28/2010 10-12
Inorganic Compounds (mg/Kg)																										
Aluminum	7429-90-5	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2880 J**	**2500 J**	**2440 J**	**6210 J**	**3300 J**	**2200 J**	NS	NS
Antimony	7440-36-0	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 5.98 U	< 5.72 U	< 5.12 U	**0.979 J**	< 5.31 U	< 5.78 U	NS	NS
Arsenic	7440-38-2	13	16	NL	**4.77 J**	**4.29 J**	**3.33 J**	< 4.64 U	**5.45**	< 5.10 UJ	< 4.83 U	**1.62 J**	**2.82 J**	**66.8**	**1.02 J**	**4.22**	**0.850 J**	**4.19**	**8.41**	**2.33**	**8.17**	**7.5**	**4.4**	**0.885 J**	**24.2**	**5.73**
Barium	7440-39-3	350	400	NL	**37.3 J**	**37.2 J**	**58.3 J**	**33.5**	**62.8**	**15.9**	**20.1**	**18.7**	**17**	**11.9**	**23.9 J**	**148 J**	**22.3 J**	**50.1 J**	**82.9 J**	**11.8 J**	**21.8 J**	**134 J**	**10.1 J**	**19.9 J**	**45.4 J**	**34.0 J**
Beryllium	7440-41-7	7.2	590	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0.871**	< 0.572 U	< 0.512 U	< 0.671 U	< 0.531 U	< 0.578 U	NS	NS
Cadmium	7440-43-9	2.5	9.3	NL	**0.508 J**	**0.715**	**0.318 J**	**0.227 J**	**0.724**	**0.142 J**	**0.193 J**	**0.349 J**	**0.319 J**	**0.765**	**0.285 J**	**0.325 J**	**0.259 J**	**0.632**	**0.380 J**	**0.158 J**	**0.423 J**	**1.3**	**0.191 J**	**0.160 J**	**0.67**	**0.534 J**
Calcium	7440-70-2	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**8300 J**	**330 J**	**777 J**	**54900 J**	**382 J**	**2570 J**	NS	NS
Chromium	7440-47-3	30	1500	NL	**16.2 J**	**16.4 J**	**11.7 J**	**14.3 J**	**26.8 J**	**6.66 J**	**7.36 J**	**7.18**	**6.74**	**17.7**	**7.99**	**6.66**	**7.24**	**9.38**	**7.39**	**6.01**	**9.78**	**9.7**	**6.66**	**4.65**	**11.1 J**	**8.62 J**
Cobalt	7440-48-4	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2.97**	**3.36**	**3.35**	**6.82**	**2.23**	**2.2**	NS	NS
Copper	7440-50-8	50	270	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**39**	**4.92**	**6.38**	**52.5**	**2.96**	**6.13**	NS	NS
Iron	7439-89-6	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10200 J**	**6010 J**	**17700 J**	**16500 J**	**7670 J**	**6010 J**	NS	NS
Lead	7439-92-1	63	1000	NL	**17.2**	**6.22**	**5.96**	**12.9**	**114**	**2.35**	**3.95**	**20.9 J**	**2.86 J**	**3.62 J**	**4.59**	**264**	**4.27**	**3.41**	**34.1**	**3.31**	**2.84**	**333**	**2.19**	**2.83**	**241 J**	**123 J**
Magnesium	7439-95-4	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1580**	**1270**	**1460**	**3000**	**1370**	**1810**	NS	NS
Manganese	7439-96-5	1600	10000	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**119**	**50.4**	**210**	**205**	**54.8**	**85.2**	NS	NS
Mercury	7439-97-6	0.18	2.8	NL	**0.0536**	**0.0071 J**	< 0.0328 U	**0.0243 J**	**0.558**	< 0.0339 U	**0.0058 J**	**0.272**	< 0.0336 U	**0.0050 J**	< 0.0340 UJ	**0.776**	< 0.0342 UJ	**0.0076 J**	**0.167**	< 0.0361 U	**0.0053 J**	**0.614**	< 0.0328 U	< 0.0338 U	**0.688 J**	**0.442 J**
Nickel	7440-02-0	30	310	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**12.1 J**	**9.69 J**	**6.79 J**	**20.9 J**	**5.95 J**	**4.80 J**	NS	NS
Potassium	7440-09-7	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**482**	**441**	**429**	**871**	**523**	**369**	NS	NS
Selenium	7782-49-2	3.9	1500	NL	< 1.64 U	< 1.87 U	< 1.56 U	< 1.55 U	**0.355 J**	< 1.70 U	< 1.61 U	< 1.56 U	< 1.68 U	< 1.50 U	**0.282 J**	**0.641 J**	**0.376 J**	**0.826 J**	**0.532 J**	**0.320 J**	**0.675 J**	**2.76**	**0.393 J**	< 1.73 U	**2.99 J**	**2.24 J**
Silver	7440-22-4	2	1500	NL	**0.508 J**	< 1.87 U	**0.396 J**	< 1.55 U	< 1.42 U	< 1.70 U	< 1.61 U	**0.416 J**	< 1.68 U	< 1.50 U	< 1.63 UJ	< 1.78 UJ	< 1.55 UJ	< 1.68 UJ	< 1.79 U	< 1.72 U	< 1.53 U	< 2.01 U	< 1.59 U	< 1.73 U	< 1.65 U	< 1.91 U
Sodium	7440-23-5	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**168**	**49.7**	**76.4**	**633**	**322**	**132**	NS	NS
Thallium	7440-28-0	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 3.59 U	< 3.43 U	< 3.07 U	< 4.02 U	< 3.18 U	< 3.47 U	NS	NS
Vanadium	7440-62-2	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**8.23**	**11.8**	**14.4**	**26.5**	**7.26**	**7.75**	NS	NS
Zinc	7440-66-6	109	10000	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**69.8**	**15.2**	**16.4**	**136**	**14.4**	**12.9**	NS	NS
Cyanide, Free	57-12-5-Free	NL	NL	NL	< 1.20 U	< 1.18 U	< 1.08 U	< 1.05 U	< 1.19 U	< 1.07 U	< 1.14 U	< 1.05 U	**0.395 J**	< 1.12 U	< 1.28 U	< 1.31 U	< 1.08 U	< 1.05 U	< 1.15 U	< 1.32 U	< 1.03 U	**0.939 J**	< 1.12 U	< 1.19 U	< 2.07 UJ	**7.36 J**
Total Cyanide	57-12-5	27	27	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Available cyanide	57-12-5-A	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PCBs (mg/Kg)																										
Aroclor 1254	11097-69-1	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.0240 U	< 0.0245 U	< 0.0229 U	< 0.0273 U	< 0.0229 U	< 0.0238 U	NS	NS
PCB (Total) (ppm)	***CALC-PCBs***	*0.1*	*1*	*NL*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*< 0.0240*	*< 0.0245*	*< 0.0229*	*< 0.0273*	*< 0.0229*	*< 0.0238*	*NS*	*NS*
Pesticides (mg/Kg)																										
Pesticides					NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	ND	NS	NS
Herbicides (mg/Kg)																										
2,4,5-TP (Silvex)	93-72-1	3.8	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.00800 U	< 0.00800 U	< 0.00767 U	< 0.00976 U	< 0.00796 U	< 0.00750 U	NS	NS
2,4-D	94-75-7	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.00800 U	< 0.00800 U	< 0.00767 U	< 0.00976 U	< 0.00796 U	< 0.00750 U	NS	NS
2,4-DB	94-82-6	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.00800 U	< 0.00800 U	< 0.00767 U	< 0.00976 U	< 0.00796 U	< 0.00750 U	NS	NS
T,2,4,5-	93-76-5	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.00800 U	< 0.00800 U	< 0.00767 U	< 0.00976 U	< 0.00796 U	< 0.00750 U	NS	NS
Percent Solids/Moisture																										
Moisture, percent	MOIST	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Percent Solids	SOLIDS	NL	NL	NL	**86.4**	**77.7**	**89**	**84.7**	**88.3**	**82.3**	**83.1**	**91.2**	**84.6**	**89.7**	**84.1**	**76.5**	**83.8**	**88.6**	**83.1**	**78.6**	**85.5**	**67.2**	**81.4**	**84**	**77.4**	**73**

Notes:
mg/Kg - milligrams per kilogram
J = The associated numerical value is an estimated quantity.
R = The associated data is rejected.
U = The analyte was analyzed for but not detected at, or above, the Method Detection
UJ = The analyte was not detected at or above the PQL. However, the reported PQL
Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Unrestricted Use Soil Cleanup Objective
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Commercial Use Soil Cleanup Objective Commercial value.
Green highlight indicates result is above the NYSDEC CP-51 Alternate Criteria of 500 mg/Kg for Total PAHs.
NA = Not Analyzed
ND = Not Detected
NL = Not Listed

Table 5-4 (continued)
Summary of Subsurface Soil Anayltical Results
Former Metropolitan MGP, Brooklyn, New York

Sample Location Sample Date Sample Interval (feet)	CAS Number	NYSDEC PART 375-6 Unrestricted	NYSDEC Part 375-6 Commercial	CP-51	SB-07 4/29/2010 37-40	SB-07 4/29/2010 48-50	SB-08 5/5/2010 3-4	SB-08 5/5/2010 34-35	SB-08 5/5/2010 48-50	SB-09 9/14/2010 4.5-5	SB-09 9/15/2010 40-45	SB-09 9/15/2010 55-60	SB-09 9/16/2010 75-80	SB-10 4/15/2010 4-5	SB-10 4/15/2010 35-40	SB-10 4/15/2010 49-50	SB-11 4/19/2010 4-5	SB-11 4/19/2010 30-33	SB-11 4/19/2010 59-60	SB-12 4/12/2010 2-3.5	SB-12 4/12/2010 30-35	SB-12 4/12/2010 49-50	SB-13 4/14/2010 4-5	SB-13 4/14/2010 35-40	SB-13 4/15/2010 69-70	SB-14 4/1/2010 4-5
BTEX (mg/Kg)																										
Benzene	71-43-2	0.06	44	NL	< 0.0083 U	< 0.0066 U	< 3.17 U	**21.5**	**0.0166**	< 0.0054 U	**1.1**	< 0.011 U	< 0.0051 U	< 0.0052 U	**0.0371**	< 0.0058 U	**2.12**	**0.164**	**0.181**	**0.0150 J**	**0.163**	**0.0157**	**6.93 J**	**311**	< 0.0045 U	< 0.38 U
Ethylbenzene	100-41-4	1	390	NL	< 0.0083 U	< 0.0066 U	< 3.17 U	**2.36**	< 0.0078 U	< 0.0054 U	**34**	**0.0046 J**	< 0.0051 U	< 0.0052 U	**0.066**	< 0.0058 U	**4.05**	< 0.0761 U	< 0.0065 U	**0.0070 J**	**1.18**	**0.0313**	NS	**206**	< 0.0045 U	**1.33**
m+p-Xylene	1330-20-7-M,P	NL	NL	NL	< 0.0165 U	< 0.0132 U	< 6.34 U	**0.676**	< 0.0157 U	**0.0031 J**	**37**	< 0.011 U	< 0.0051 U	< 0.0105 U	**0.0087 J**	< 0.0116 U	**2.96 J**	< 0.152 UJ	< 0.0130 U	**0.0235 J**	**0.884 J**	**0.122**	**108 J**	**360 J**	< 0.0090 U	**1.8 J**
o-Xylene	95-47-6	NL	NL	NL	< 0.0083 U	< 0.0066 U	< 3.17 U	**0.36**	< 0.0078 U	**0.0017 J**	**18 J**	**0.0025 J**	< 0.0051 U	< 0.0052 U	**0.0143**	< 0.0058 U	**1.39 J**	< 0.0761 UJ	< 0.0065 U	**0.0150 J**	**0.475 J**	**0.0734**	**49.6 J**	**161 J**	< 0.0045 U	**0.859 J**
Toluene	108-88-3	0.7	500	NL	< 0.0083 U	< 0.0066 U	< 3.17 U	< 0.0745 U	< 0.0078 U	**0.0018 J**	**0.95**	< 0.011 U	< 0.0051 U	< 0.0052 U	**0.0096**	< 0.0058 U	**0.287**	< 0.0761 U	< 0.0065 U	**0.0801 J**	**0.357**	**0.167**	**10.8**	**601**	< 0.0045 U	< 0.38 U
Total Xylenes	Calc-Xylenes	NL	500	NL	< 0.0083	< 0.0066	< 6.34	**1.036**	< 0.0078	**0.0048 J**	**56**	**0.0050 J**	< 0.0051 U	< 0.0052	**0.023**	< 0.0058	**4.35**	< 0.0761	< 0.0065	**0.0385**	**1.359**	**0.1954**	**157.6**	**521**	< 0.0090	**2.659**
Total BTEX	*CALC-BTEX*	*NL*	*NL*	*NL*	*ND*	*ND*	*ND*	***24.896***	***0.0166***	***0.0066***	***92.05***	***0.0096***	*ND*	*ND*	***0.1357***	*ND*	***10.807***	***0.164***	***0.181***	***0.1406***	***3.059***	***0.4094***	***175.33***	***1639***	*ND*	***3.989***
Volatile Organic Compounds (VOCs)(mg/Kg)																										
1,1,1-Trichloroethane	71-55-6	0.68	500	NL	< 0.0083 U	< 0.0066 U	< 3.17 UJ	< 0.0745 UJ	< 0.0078 U	< 0.0054 U	< 0.049 U	< 0.011 U	< 0.0051 U	< 0.0052 U	< 0.0050 U	< 0.0058 U	< 0.0631 U	< 0.0761 U	< 0.0065 U	< 0.0077 U	< 0.131 U	< 0.0065 U	< 7.29 U	< 6.43 U	< 0.0045 U	< 0.38 U
1,1-Dichloroethane	75-34-3	0.27	240	NL	< 0.0083 U	< 0.0066 U	< 3.17 U	< 0.0745 U	< 0.0078 U	< 0.0054 U	< 0.049 U	< 0.011 U	< 0.0051 U	< 0.0052 U	< 0.0050 U	< 0.0058 U	< 0.0631 U	< 0.0761 U	< 0.0065 U	< 0.0077 U	< 0.131 U	< 0.0065 U	< 7.29 U	< 6.43 U	< 0.0045 U	< 0.38 U
1,2,4-Trimethylbenzene	95-63-6	3.6	190	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.0077	**0.649**	**0.023**	NS	NS	NS	NS
1,2-Dichlorobenzene	95-50-1	1.1	500	NL	< 0.0083 U	< 0.0066 U	< 3.17 U	< 0.0745 U	< 0.0078 U	< 0.0054 U	< 0.049 U	< 0.011 U	< 0.0051 U	< 0.0052 U	< 0.0050 U	< 0.0058 U	< 0.0631 U	< 0.0761 U	< 0.0065 U	< 0.0077 U	< 0.131 U	< 0.0065 U	< 7.29 U	< 6.43 U	< 0.0045 U	< 0.38 U
1,2-Dichloroethane	107-06-2	0.02	30	NL	< 0.0083 U	< 0.0066 U	< 3.17 U	< 0.0745 U	< 0.0078 U	< 0.0054 U	**0.027 J**	< 0.011 U	< 0.0051 U	< 0.0052 U	< 0.0050 U	< 0.0058 U	< 0.0631 U	< 0.0761 U	< 0.0065 U	< 0.0077 U	< 0.131 U	< 0.0065 U	< 7.29 U	< 6.43 U	< 0.0045 U	< 0.38 U
1,3,5-Trimethylbenzene	108-67-8	8.4	190	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.0077	**0.228**	**0.0079**	NS	NS	NS	NS
1,4-Dichlorobenzene	106-46-7	1.8	130	NL	< 0.0083 U	< 0.0066 U	< 3.17 U	< 0.0745 U	< 0.0078 U	< 0.0054 U	< 0.049 U	< 0.011 U	< 0.0051 U	< 0.0052 U	< 0.0050 U	< 0.0058 U	< 0.0631 U	< 0.0761 U	< 0.0065 U	< 0.0077 U	< 0.131 U	< 0.0065 U	< 7.29 U	< 6.43 U	< 0.0045 U	< 0.38 U
Acetone	67-64-1	0.05	500	NL	R	R	R	R	R	R	**0.023 J**	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Carbon disulfide	75-15-0	NL	NL	NL	< 0.0165 U	< 0.0132 U	< 6.34 U	< 0.149 U	< 0.0157 U	< 0.0054 U	< 0.049 U	< 0.011 U	< 0.0051 U	< 0.0105 U	< 0.0101 U	< 0.0116 U	< 0.126 UJ	< 0.152 UJ	< 0.0130 U	< 0.0153 U	< 0.262 UJ	< 0.0130 U	< 14.6 UJ	< 12.9 UJ	< 0.0090 U	< 0.761 UJ
cis-1,2-Dichloroethene	156-59-2	0.25	500	NL	**0.0127**	< 0.0066 U	< 3.17 U	< 0.0745 U	< 0.0078 U	< 0.0054 U	< 0.049 U	< 0.011 U	< 0.0051 U	< 0.0052 U	< 0.0050 U	< 0.0058 U	< 0.0631 U	< 0.0761 U	< 0.0065 U	< 0.0077 U	< 0.131 U	< 0.0065 U	< 7.29 U	< 6.43 U	< 0.0045 U	< 0.38 U
Cyclohexane	110-82-7	NL	NL	NL	NS	NS	NS	NS	NS	< 0.0054 U	< 0.049 U	< 0.011 U	< 0.0051 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Isopropylbenzene	98-82-8	NL	NL	NL	< 0.0083 U	< 0.0066 U	< 3.17 U	< 0.0745 U	< 0.0078 U	< 0.0054 U	**1.8**	< 0.011 U	< 0.0051 U	< 0.0052 U	**0.0086**	< 0.0058 U	**2.98**	< 0.0761 UJ	< 0.0065 U	< 0.0077 U	**0.136 J**	< 0.0065 U	**25.5 J**	**5.78 J**	< 0.0045 U	**0.749**
Methylcyclohexane	108-87-2	NL	NL	NL	NS	NS	NS	NS	NS	< 0.0054 U	< 0.049 U	< 0.011 U	< 0.0051 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene chloride	75-09-2	0.05	500	NL	< 0.0165 U	< 0.0132 U	< 6.34 U	< 0.149 U	< 0.0157 U	< 0.0054 U	< 0.049 U	< 0.011 U	< 0.0051 U	< 0.0105 U	< 0.0101 U	< 0.0116 U	< 0.126 UJ	< 0.152 U	< 0.0130 U	< 0.0153 U	< 0.262 U	< 0.0130 U	< 14.6 U	< 12.9 UJ	< 0.0090 U	< 0.761 U
n-Butylbenzene	104-51-8	12	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.0077	**0.123**	< 0.0065	NS	NS	NS	NS
n-Propylbenzene	103-65-1	3.9	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.0077	**0.144**	< 0.0065	NS	NS	NS	NS
p-Isopropyltoluene	99-87-6	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.0077	**0.434**	< 0.0065	NS	NS	NS	NS
sec-Butylbenzene	135-98-8	11	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.0077	< 0.131	< 0.0065	NS	NS	NS	NS
Styrene	100-42-5	NL	NL	NL	< 0.0083 U	< 0.0066 U	< 3.17 U	< 0.0745 U	< 0.0078 U	< 0.0054 U	**0.62**	< 0.011 U	< 0.0051 U	< 0.0052 U	< 0.0050 U	< 0.0058 U	**0.0568 J**	< 0.0761 UJ	< 0.0065 U	**0.0282 J**	**0.553 J**	**0.0859**	< 7.29 UJ	**288 J**	< 0.0045 U	**0.373 J**
Tentatively Identified Compounds	TICS	NL	NL	NL	**0**	**0**	**0**	**0**	**0**	NS	NS	NS	NS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Tetrachloroethene	127-18-4	1.3	150	NL	< 0.0083 U	< 0.0066 U	< 3.17 U	< 0.0745 U	< 0.0078 U	**0.0012 J**	< 0.049 U	< 0.011 U	< 0.0051 U	< 0.0052 U	< 0.0050 U	< 0.0058 U	< 0.0631 U	< 0.0761 U	< 0.0065 U	< 0.0077 U	< 0.131 U	< 0.0065 U	< 7.29 U	< 6.43 U	< 0.0045 U	< 0.38 U
trans-1,2-Dichloroethene	156-60-5	0.19	500	NL	< 0.0083 U	< 0.0066 U	< 3.17 U	< 0.0745 U	< 0.0078 U	< 0.0054 U	< 0.049 U	< 0.011 U	< 0.0051 U	< 0.0052 U	< 0.0050 U	< 0.0058 U	< 0.0631 U	< 0.0761 U	< 0.0065 U	< 0.0077 U	< 0.131 U	< 0.0065 U	< 7.29 U	< 6.43 U	< 0.0045 U	< 0.38 U
Trichloroethene	79-01-6	0.47	200	NL	**0.0291**	< 0.0066 U	< 3.17 U	< 0.0745 U	< 0.0078 U	< 0.0054 U	< 0.049 U	< 0.011 U	< 0.0051 U	< 0.0052 U	< 0.0050 U	< 0.0058 U	< 0.0631 U	< 0.0761 U	< 0.0065 U	< 0.0077 U	< 0.131 U	< 0.0065 U	< 7.29 U	< 6.43 U	< 0.0045 U	< 0.38 U
Total VOCs	*CALC-VOC*	*NL*	*NL*	*NL*	***0.0418***	*ND*	*ND*	***24.896***	***0.0166***	***0.0078***	***94.52***	***0.0096***	*ND*	*ND*	***0.1443***	*ND*	***13.8438***	***0.164***	***0.181***	***0.1688***	***5.326***	***0.5262***	***200.83***	***1932.78***	*ND*	***5.111***
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)																										
2-Methylnaphthalene	91-57-6	NL	NL	NL	< 0.0113 U	**0.0334 J**	**50.6**	< 0.0120 U	< 0.0114 U	**4.7**	**130**	**0.15 J**	< 0.19 U	**0.142 J**	**0.0231 J**	**0.0387 J**	**4.73**	**0.0208 J**	< 0.204 U	**0.176 J**	**4.59**	< 0.195 U	**18.6**	**2490**	**0.0255 J**	**6.68**
Acenaphthene	83-32-9	20	500	NL	< 0.0123 U	< 0.0107 U	**30.1**	< 0.0131 U	< 0.0125 U	< 1.8 U	< 0.19 U	**0.19 J**	< 0.19 U	**0.0867 J**	**0.0223 J**	< 0.208 U	**2.87**	< 0.202 U	< 0.204 U	**0.198 J**	**3.37**	< 0.195 U	< 13.1 U	< 507 U	< 0.185 U	< 3.26 U
Acenaphthylene	208-96-8	100	500	NL	< 0.0154 U	< 0.0134 U	**10.4**	< 0.0164 U	< 0.0156 U	**20**	**25**	**0.11 J**	< 0.19 U	**0.0742 J**	< 0.187 U	< 0.208 U	**3.92**	< 0.202 U	< 0.204 U	**0.0896 J**	**0.242 J**	< 0.195 U	< 13.1 U	**1050**	< 0.185 U	< 3.26 U
Anthracene	120-12-7	100	500	NL	< 0.0154 U	< 0.0134 U	**19.1**	< 0.0164 U	< 0.0156 U	**9.1**	**39**	**0.14 J**	< 0.19 U	**0.195 J**	< 0.187 U	< 0.208 U	**4.62**	< 0.202 U	< 0.204 U	**0.275 J**	**1.99**	< 0.195 U	< 13.1 U	**430 J**	< 0.185 U	< 3.26 U
Benzo(a)anthracene	56-55-3	1	5.6	NL	< 0.0329 U	< 0.0285 U	**22.6**	< 0.0350 U	< 0.0332 U	**5.5**	**20**	**0.081 J**	< 0.19 U	**0.403**	< 0.187 U	< 0.208 U	**6.41**	< 0.202 U	< 0.204 U	**0.46**	**1.25 J**	< 0.195 U	< 13.1 U	**233 J**	< 0.185 U	< 3.26 U
Benzo(a)pyrene	50-32-8	1	1	NL	< 0.0174 U	< 0.0151 U	**21.4**	< 0.0186 U	< 0.0176 U	**9.6**	**16**	**0.063 J**	< 0.19 U	**0.402**	< 0.187 U	< 0.208 U	**6.11**	< 0.202 U	< 0.204 U	**0.432 J**	**0.752 J**	< 0.195 U	< 13.1 U	**192 J**	< 0.185 U	< 3.26 U
Benzo(b)fluoranthene	205-99-2	1	5.6	NL	< 0.0679 U	< 0.0588 U	**13.4**	< 0.0723 U	< 0.0686 U	**8**	**12 J**	**0.049 J**	< 0.19 U	**0.362 J**	< 0.187 U	< 0.208 U	**4.47**	< 0.202 U	< 0.204 U	**0.373 J**	**0.375 J**	< 0.195 U	< 13.1 U	< 507 U	< 0.185 U	< 3.26 U
Benzo(ghi)perylene	191-24-2	100	500	NL	< 0.0144 UJ	< 0.0124 UJ	**6.07**	< 0.0153 U	< 0.0145 U	**15**	**6.4 J**	**0.032 J**	< 0.19 U	**0.225 J**	< 0.187 U	< 0.208 U	**2.63**	< 0.202 UJ	< 0.204 UJ	**0.136 J**	**0.217 J**	< 0.195 U	< 13.1 U	< 507 U	< 0.185 U	< 3.26 U
Benzo(k)fluoranthene	207-08-9	0.8	56	NL	< 0.0205 U	< 0.0178 U	**17.6**	< 0.0219 U	< 0.0207 U	**4.2**	**6.1 J**	**0.027 J**	< 0.19 U	**0.279 J**	< 0.187 U	< 0.208 U	**2.84**	< 0.202 U	< 0.204 U	**0.269 J**	**0.375 J**	< 0.195 U	< 13.1 U	**91.2 J**	< 0.185 U	< 3.26 U
Chrysene	218-01-9	1	56	NL	< 0.00726 U	< 0.00629 U	**21.8**	< 0.00772 U	< 0.00733 U	**6.5**	**19**	**0.074 J**	< 0.19 U	**0.405**	< 0.187 U	< 0.208 U	**5.87**	< 0.202 U	< 0.204 U	**0.54**	**1.27 J**	< 0.195 U	**1.35 J**	**235 J**	< 0.185 U	< 3.26 U
Dibenz(a,h)anthracene	53-70-3	0.33	0.56	NL	< 0.00818 U	< 0.00709 U	**1.72 J**	< 0.00871 U	< 0.00827 U	**4.1**	**2.3**	< 0.19 U	< 0.19 U	**0.0633 J**	< 0.187 U	< 0.208 U	**0.835 J**	< 0.202 U	< 0.204 U	< 0.452 U	< 1.34 U	< 0.195 U	< 13.1 U	< 507 U	< 0.185 U	< 3.26 U
Fluoranthene	206-44-0	100	500	NL	< 0.0123 U	< 0.0107 U	**36.4**	< 0.0131 U	< 0.0125 U	**4.2**	**42**	**0.15 J**	< 0.19 U	**0.982**	< 0.187 U	< 0.208 U	**11**	< 0.202 U	< 0.204 U	**0.801**	**2.04**	< 0.195 U	**2.55 J**	**532**	< 0.185 U	< 3.26 U
Fluorene	86-73-7	30	500	NL	< 0.0123 U	< 0.0107 U	**23.2**	< 0.0131 U	< 0.0125 U	**5.5**	**44**	**0.16 J**	< 0.19 U	**0.127 J**	< 0.187 U	< 0.208 U	**6.4**	< 0.202 U	< 0.204 U	**0.239 J**	**2.51**	< 0.195 U	< 13.1 U	**715**	< 0.185 U	< 3.26 U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	5.6	NL	< 0.0236 U	< 0.0205 U	**6.51**	< 0.0251 U	< 0.0239 U	**8.7**	**5.2 J**	**0.023 J**	< 0.19 U	**0.249 J**	< 0.187 U	< 0.208 U	**2.42**	< 0.202 U	< 0.204 U	**0.146 J**	**0.198 J**	< 0.195 U	< 13.1 U	< 507 U	< 0.185 U	< 3.26 U
Naphthalene	91-20-3	12	500	NL	< 0.0196 U	< 0.0170 U	**83.6 J**	< 0.0209 U	< 0.0198 U	**1.2 J**	**180**	**0.37**	< 0.19 U	**0.332 J**	**0.146 J**	**0.0914 J**	**5.5**	**0.11 J**	< 0.204 U	**0.151 J**	**3.09**	< 0.195 U	**112**	**5730**	**0.0872 J**	**61**
Phenanthrene	85-01-8	100	500	NL	< 0.0236 U	**0.0432 J**	**61.6**	< 0.0251 U	**0.0286 J**	**2.2**	**120**	**0.45**	< 0.19 U	**0.755**	< 0.187 U	**0.0253 J**	**18.2**	**0.0216 J**	< 0.204 U	**0.974**	**6.61**	< 0.195 U	**3.4 J**	**1700**	**0.0243 J**	< 3.26 U
Pyrene	129-00-0	100	500	NL	< 0.0361 U	< 0.0313 U	**46.5**	< 0.0384 U	< 0.0365 U	**11**	**51**	**0.21**	< 0.19 U	**0.829**	< 0.187 U	< 0.208 U	**16.6**	< 0.202 U	< 0.204 U	**0.992**	**2.76**	< 0.195 U	**2.36 J**	**708**	< 0.185 U	< 3.26 U
Total PAHs	*CALC-PAH*	*NL*	*NL*	*500*	*ND*	***0.0766***	***472.6***	*ND*	***0.0286***	***119.5***	***718***	***2.279***	*ND*	***5.9112***	***0.1914***	***0.1554***	***105.425***	***0.1524***	*ND*	***6.2516***	***31.639***	*ND*	***140.26***	***14106.2***	***0.137***	***67.68***
Other Semivolatile Organic Compounds (SVOCs) (mg/Kg)																										
1,1'-Biphenyl	92-52-4	NL	NL	NL	NS	NS	NS	NS	NS	< 1.8 U	**15 J**	**0.04 J**	< 0.19 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1-Methylnaphthalene	90-12-0	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0.25**	**3.5**	< 0.195	NS	NS	NS	NS
Acetophenone	98-86-2	NL	500	NL	NS	NS	NS	NS	NS	**0.37 J**	< 0.19 U	< 0.19 U	< 0.19 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzaldehyde	100-52-7	NL	NL	NL	NS	NS	NS	NS	NS	**1.2 J**	< 0.19 UJ	< 0.19 UJ	< 0.19 UJ	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
bis(2-Ethylhexyl) phthalate	117-81-7	NL	NL	NL	< 0.0979 U	< 0.0848 U	< 1.69 U	< 0.104 U	< 0.0989 U	< 1.8 U	< 0.19 UJ	< 0.19 U	< 0.19 U	< 0.773 U	< 0.374 U	< 0.417 U	< 3.55 U	< 0.404 U	< 0.408 U	< 0.905 U	< 2.69 U	< 0.39 U	< 26.3 U	< 1010 U	< 0.371 U	< 6.52 U
Carbazole	86-74-8	NL	NL	NL	< 0.0185 U	< 0.0160 U	**0.783 J**	< 0.0197 U	< 0.0187 U	< 1.8 U	**2.8 J**	< 0.19 U	< 0.19 U	**0.0555 J**	< 0.374 U	< 0.417 U	< 3.55 U	< 0.404 U	< 0.408 U	< 0.905 U	< 2.69 U	< 0.39 U	< 26.3 U	< 1010 U	< 0.371 U	< 6.52 U
Dibenzofuran	132-64-9	7	350	NL	< 0.00617 U	< 0.00535 U	**2.43 J**	< 0.00657 U	< 0.00624 U	< 1.8 U	**3.1**	< 0.19 U	< 0.19 U	**0.0516 J**	< 0.374 U	< 0.417 U	**0.688 J**	< 0.404 U	< 0.408 U	< 0.905 U	**0.198 J**	< 0.39 U	< 26.3 U	**62.5 J**	< 0.371 U	< 6.52 U
Phenol	108-95-2	0.33	500	NL	< 0.0103 U	< 0.00892 U	< 0.178 U	< 0.0110 U	< 0.0104 U	< 1.8 U	**0.025 J**	< 0.19 U	< 0.19 U	< 0.773 U	< 0.374 U	< 0.417 U	< 3.55 U	< 0.404 U	< 0.408 U	< 0.905 U	< 2.69 U	< 0.39 U	< 26.3 U	< 1010 UJ	< 0.371 U	< 6.52 U
Tentatively Identified Compounds	TICS	NL	NL	NL	**0**	**0**	**0**	**0**	**0**	NS	NS	NS	NS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Other SVOCs	*CALC-SVOC*	*NL*	*NL*	*NL*	*ND*	***0.0766***	***475.813***	*ND*	***0.0286***	***121.07***	***738.925***	***2.319***	*ND*	***6.0183***	***0.1914***	***0.1554***	***106.113***	***0.1524***	*ND*	***6.5016***	***35.337***	*ND*	***140.26***	***14168.7***	***0.137***	***67.68***

Notes:
mg/Kg - milligrams per kilogram
J = The associated numerical value is an estimated quantity.
R = The associated data is rejected.
U = The analyte was analyzed for but not detected at, or above, the Method Detection
UJ = The analyte was not detected at or above the PQL. However, the reported PQL
Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Unrestricted Use Soil Cleanup Objective
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Commercial Use Soil Cleanup Objective Commercial va
Green highlight indicates result is above the NYSDEC CP-51 Alternate Criteria of 500 mg/Kg for Total PAHs.
NA = Not Analyzed
ND = Not Detected
NL = Not Listed

Table 5-4 (continued)
Summary of Subsurface Soil Anayltical Results
Former Metropolitan MGP, Brooklyn, New York

Sample Location Sample Date Sample Interval (feet)	CAS Number	NYSDEC PART 375-6 Unrestricted	NYSDEC Part 375-6 Commercial	CP-51	SB-07 4/29/2010 37-40	SB-07 4/29/2010 48-50	SB-08 5/5/2010 3-4	SB-08 5/5/2010 34-35	SB-08 5/5/2010 48-50	SB-09 9/14/2010 4.5-5	SB-09 9/15/2010 40-45	SB-09 9/15/2010 55-60	SB-09 9/16/2010 75-80	SB-10 4/15/2010 4-5	SB-10 4/15/2010 35-40	SB-10 4/15/2010 49-50	SB-11 4/19/2010 4-5	SB-11 4/19/2010 30-33	SB-11 4/19/2010 59-60	SB-12 4/12/2010 2-3.5	SB-12 4/12/2010 30-35	SB-12 4/12/2010 49-50	SB-13 4/14/2010 4-5	SB-13 4/14/2010 35-40	SB-13 4/15/2010 69-70	SB-14 4/1/2010 4-5
Inorganic Compounds (mg/Kg)																										
Aluminum	7429-90-5	NL	NL	NL	NS	NS	**4480 J**	**3400 J**	**2460 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2420 J**	NS	NS	NS	NS	NS	NS	**13600**
Antimony	7440-36-0	NL	NL	NL	NS	NS	**0.949 J**	< 6.35 UJ	< 5.57 UJ	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 5.33 U	NS	NS	NS	NS	NS	NS	< 5.46 U
Arsenic	7440-38-2	13	16	NL	**2.41**	**1.96**	**10.2**	**16.9**	**1.28 J**	**8.9**	**2.2**	**4.6**	**0.76**	**6.39**	**0.402 J**	**2.97**	**6.64**	**1.8**	**0.853 J**	**8.04**	**2.00 J**	**6.1**	**13**	**2.65**	**2.89**	**3.41**
Barium	7440-39-3	350	400	NL	**14.1 J**	**11.1 J**	**118 J**	**26.2 J**	**12.5 J**	**109**	**18.4**	**55.1**	**17.9**	**179 J**	**12.6 J**	**28.2 J**	**102 J**	**17.5 J**	**11.8 J**	**201**	**17.2**	**16.5**	**424**	**15.6**	**33.5**	**69.8**
Beryllium	7440-41-7	7.2	590	NL	NS	NS	**0.694**	**0.287 J**	**0.171 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0.584**
Cadmium	7440-43-9	2.5	9.3	NL	**0.360 J**	**0.221 J**	**1.35**	**0.367 J**	**0.263 J**	**0.91**	**0.18**	**0.26**	**0.096 J**	**1.24**	**0.193 J**	**0.284 J**	**1.04**	**0.211 J**	**0.153 J**	**1.83**	**0.200 J**	**0.339 J**	**1.31**	**0.202 J**	**0.156 J**	**0.284 J**
Calcium	7440-70-2	NL	NL	NL	NS	NS	**10500 J**	**593 J**	**300 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1570**
Chromium	7440-47-3	30	1500	NL	**9.51 J**	**5.57 J**	**13.0 J**	**7.88 J**	**4.65 J**	**21**	**6.9**	**11.1**	**5.6**	**38.9 J**	**6.62 J**	**6.81 J**	**19.0 J**	**5.73**	**4.5**	**95.7**	**11**	**7.14**	**27.8 J**	**6.89 J**	**12.4 J**	**16.3 J**
Cobalt	7440-48-4	NL	NL	NL	NS	NS	**5.81 J**	**12.5 J**	**3.57 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**3.51**	NS	NS	NS	NS	NS	NS	**6.33 J**
Copper	7440-50-8	50	270	NL	NS	NS	**73.9**	**4.79**	**4.65**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**4.12**	NS	NS	NS	NS	NS	NS	**12.1**
Iron	7439-89-6	NL	NL	NL	NS	NS	**14000 J**	**9390 J**	**6860 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5900 J**	NS	NS	NS	NS	NS	NS	**13700**
Lead	7439-92-1	63	1000	NL	**6.16 J**	**2.63 J**	**454 J**	**3.52 J**	**2.90 J**	**268**	**4.2**	**3**	**2.9**	**354 J**	**3.69 J**	**3.37 J**	**159 J**	**2.69**	**2.84**	**383 J**	**3.91 J**	**4.48 J**	**1230**	**4.19**	**3.19**	**42**
Magnesium	7439-95-4	NL	NL	NL	NS	NS	**3400 J**	**1210 J**	**1190 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2850**
Manganese	7439-96-5	1600	10000	NL	NS	NS	**150 J**	**43.4 J**	**67.0 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**59.2**	NS	NS	NS	NS	NS	NS	**258**
Mercury	7439-97-6	0.18	2.8	NL	**0.0107 J**	< 0.0367 U	**0.536 J**	**0.0084 J**	< 0.0334 U	**0.72**	**0.0032 J**	< 0.043 U	< 0.046 U	**0.428**	< 0.0343 U	< 0.0343 U	**0.276**	< 0.0332 U	**0.0088 J**	**0.358**	**0.0057 J**	< 0.0351 U	**0.61**	< 0.0342 U	< 0.0302 U	**0.271 J**
Nickel	7440-02-0	30	310	NL	NS	NS	**20.6 J**	**15.2 J**	**7.44 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**6.44 J**	NS	NS	NS	NS	NS	NS	**21.5 J**
Potassium	7440-09-7	NL	NL	NL	NS	NS	**669 J**	**418 J**	**384 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**370**	NS	NS	NS	NS	NS	NS	R
Selenium	7782-49-2	3.9	1500	NL	**0.440 J**	< 3.54 U	**1.12 J**	**0.533 J**	< 3.34 U	< 1.1 U	< 0.88 U	< 0.91 U	< 1.1 U	**2.07**	**0.318 J**	**0.330 J**	**1.33 J**	< 1.77 U	**0.293 J**	**0.468 J**	**0.331 J**	< 1.67 U	**0.907 J**	< 1.55 U	< 1.61 U	**3.54**
Silver	7440-22-4	2	1500	NL	< 1.78 U	< 1.77 U	< 1.68 U	< 1.90 U	< 1.67 U	**0.12 J**	< 0.88 U	< 0.91 U	< 1.1 U	< 3.04 U	< 2.98 U	< 3.73 U	< 3.50 U	< 1.77 U	< 1.60 U	**0.585 J**	< 1.46 U	< 1.67 U	**0.778 J**	< 1.55 U	**0.799 J**	< 1.64 U
Sodium	7440-23-5	NL	NL	NL	NS	NS	**1350 J**	**227 J**	**72.4 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**30.5**	NS	NS	NS	NS	NS	NS	**555 J**
Thallium	7440-28-0	NL	NL	NL	NS	NS	< 3.37 U	< 3.81 U	< 3.34 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 3.20 U	NS	NS	NS	NS	NS	NS	< 3.28 U
Vanadium	7440-62-2	NL	NL	NL	NS	NS	**18.1**	**11**	**6.16**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**4.63**	NS	NS	NS	NS	NS	NS	**21.2**
Zinc	7440-66-6	109	10000	NL	NS	NS	**332 J**	**23.2 J**	**17.9 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**46.6 J**
Cyanide, Free	57-12-5-Free	NL	NL	NL	< 1.28 UJ	< 1.13 UJ	< 1.15 U	< 1.28 U	< 1.23 U	NS	NS	NS	NS	< 1.06 U	< 1.10 U	< 1.20 U	**1.12 J**	< 1.18 U	< 1.05 U	< 1.38 U	< 1.13 U	< 1.17 U	**0.391 J**	< 1.14 U	< 1.08 U	< 1.21 U
Total Cyanide	57-12-5	27	27	NL	NS	NS	NS	NS	NS	**0.530 J**	< 0.227 U	< 0.216 U	< 0.237 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Available cyanide	57-12-5-A	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PCBs (mg/Kg)																										
Aroclor 1254	11097-69-1	NL	NL	NL	NS	NS	< 0.0134 U	< 0.0149 U	< 0.0145 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.0233 U
PCB (Total) (ppm)	***CALC-PCBs***	*0.1*	*1*	*NL*	*NS*	*NS*	*< 0.00967*	*< 0.00835*	*< 0.00988*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*< 0.0233*
Pesticides (mg/Kg)																										
Pesticides					NS	NS	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Herbicides (mg/Kg)																										
2,4,5-TP (Silvex)	93-72-1	3.8	500	NL	NS	NS	< 0.00393 U	< 0.00429 U	< 0.00422 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.00789 U
2,4-D	94-75-7	NL	NL	NL	NS	NS	< 0.00425 U	< 0.00465 U	< 0.00456 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.00789 U
2,4-DB	94-82-6	NL	NL	NL	NS	NS	< 0.00598 U	< 0.00654 U	< 0.00642 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.00789 U
T,2,4,5-	93-76-5	NL	NL	NL	NS	NS	< 0.00567 U	< 0.00620 U	< 0.00609 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.00789 U
Percent Solids/Moisture																										
Moisture, percent	MOIST	NL	NL	NL	NS	NS	NS	NS	NS	**12**	**15**	**13**	**16**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Percent Solids	SOLIDS	NL	NL	NL	**74.1**	**80**	**86.1**	**76.4**	**80.5**	**88**	**85**	**87**	**84**	**84.6**	**85.7**	**78.2**	**83.8**	**79.6**	**80**	**72.3**	**87.3**	**83.2**	**80**	**81.8**	**87.8**	**81**

Notes:
mg/Kg - milligrams per kilogram
J = The associated numerical value is an estimated quantity.
R = The associated data is rejected.
U = The analyte was analyzed for but not detected at, or above, the Method Detection
UJ = The analyte was not detected at or above the PQL. However, the reported PQL
Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Unrestricted Use Soil Cleanup Objective
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Commercial Use Soil Cleanup Objective Commercial va
Green highlight indicates result is above the NYSDEC CP-51 Alternate Criteria of 500 mg/Kg for Total PAHs.
NA = Not Analyzed
ND = Not Detected
NL = Not Listed

Table 5-4 (continued)
Summary of Subsurface Soil Anayltical Results
Former Metropolitan MGP, Brooklyn, New York

Sample Location Sample Date Sample Interval (feet)	CAS Number	NYSDEC PART 375-6 Unrestricted	NYSDEC Part 375-6 Commercial	CP-51	SB-14 4/1/2010 5-6	SB-14 4/1/2010 9-10	SB-14 4/2/2010 69-70	SB-15 4/14/2010 4-5	SB-15 DUP 4/14/2010 37-39	SB-15 4/14/2010 37-39	SB-15 4/14/2010 69-70	SB-16 5/5/2010 4-5	SB-16 5/6/2010 10-13	SB-16 5/6/2010 68-70	SB-17 5/3/2010 4-5	SB-17 5/4/2010 30-32	SB-17 5/4/2010 48-50	SB-18 4/20/2010 1-2	SB-18 4/20/2010 28-30	SB-18 4/20/2010 69-70	SB-19 10/2/2011 37-37.5	SB-19 10/2/2011 72.5-75	SB-20 10/16/2011 9-10	SB-20 10/16/2011 82.5-85	SB-21 10/18/2011 25-27.5	SB-21 10/18/2011 87.5-90
BTEX (mg/Kg)																										
Benzene	71-43-2	0.06	44	NL	< 1.59 U	**0.0095**	< 0.0067 U	< 7.26 U	**108 J**	**195 J**	< 0.0760 U	**0.267**	< 6.55 U	**0.122**	**0.877 J**	< 0.0059 U	< 0.0062 U	**1.34**	**245**	< 0.0070 U	**1.3**	< 0.0011 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
Ethylbenzene	100-41-4	1	390	NL	**75.9**	**0.019**	< 0.0067 U	**56.1**	**121**	**131**	< 0.0760 U	**0.337**	**221 J**	**0.0676 J**	**30.6**	< 0.0059 U	< 0.0062 U	**27.2**	**437**	< 0.0070 U	**19**	**0.00082 J**	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
m+p-Xylene	1330-20-7-M,P	NL	NL	NL	**138 J**	**0.0319**	< 0.0133 U	**207 J**	**172 J**	**220 J**	< 0.152 UJ	< 0.137 U	**186 J**	< 0.133 UJ	**16.6**	< 0.0118 U	< 0.0124 U	**2.86 J**	**327 J**	< 0.0140 U	**27**	**0.0012 J**	**0.23**	< 0.0022 U	< 0.0022 U	< 0.0020 U
o-Xylene	95-47-6	NL	NL	NL	**63 J**	**0.0204**	< 0.0067 U	**89.5 J**	**79.7 J**	**113 J**	< 0.0760 UJ	< 0.0686 U	**81.6 J**	**0.0431 J**	**13.1**	< 0.0059 U	< 0.0062 U	**1.68 J**	**138 J**	< 0.0070 U	**12**	**0.00097 J**	**0.038 J**	< 0.0011 U	< 0.0011 U	< 0.00099 U
Toluene	108-88-3	0.7	500	NL	**6.91**	< 0.0066 U	< 0.0067 U	< 7.26 U	**248**	**374**	< 0.0760 U	< 0.0686 U	**6.29 J**	< 0.0663 U	**2.12**	< 0.0059 U	< 0.0062 U	**1.41**	**471**	< 0.0070 U	**2.1**	< 0.0011 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
Total Xylenes	Calc-Xylenes	NL	500	NL	**201**	**0.0523**	< 0.0067	**296.5**	**251.7**	**333**	< 0.0760	< 0.0686	**267.6**	**0.0431**	**29.7**	< 0.0059	< 0.0062	**4.54**	**465**	< 0.0070	**39**	**0.00217**	**0.268**	< 0.0022	< 0.0022	< 0.0020
Total BTEX	*CALC-BTEX*	*NL*	*NL*	*NL*	***283.81***	***0.0808***	*ND*	***352.6***	***728.7***	***1033***	*ND*	***0.604***	***494.89***	***0.2327***	***63.297***	*ND*	*ND*	***34.49***	***1618***	*ND*	***61.4***	***0.00299***	***0.268***	*ND*	*ND*	*ND*
Volatile Organic Compounds (VOCs)(mg/Kg)																										
1,1,1-Trichloroethane	71-55-6	0.68	500	NL	< 1.59 U	< 0.0066 U	< 0.0067 U	< 7.26 U	< 6.94 U	< 0.678 U	< 0.0760 U	< 0.0686 UJ	< 6.55 UJ	< 0.0663 U	< 1.46 UJ	< 0.0059 U	< 0.0062 U	< 0.988 U	< 63 U	< 0.0070 U	< 1.2 U	< 0.0011 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
1,1-Dichloroethane	75-34-3	0.27	240	NL	< 1.59 U	< 0.0066 U	< 0.0067 U	< 7.26 U	< 6.94 U	< 0.678 U	< 0.0760 U	< 0.0686 U	< 6.55 U	< 0.0663 U	< 1.46 U	< 0.0059 U	< 0.0062 U	< 0.988 U	< 63 U	< 0.0070 U	< 1.2 U	< 0.0011 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
1,2,4-Trimethylbenzene	95-63-6	3.6	190	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	95-50-1	1.1	500	NL	< 1.59 U	< 0.0066 U	< 0.0067 U	< 7.26 U	< 6.94 U	< 0.678 U	< 0.0760 U	< 0.0686 U	< 6.55 U	< 0.0663 U	< 1.46 U	< 0.0059 U	< 0.0062 U	< 0.988 U	< 63 U	< 0.0070 U	< 1.2 U	< 0.0011 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
1,2-Dichloroethane	107-06-2	0.02	30	NL	< 1.59 U	< 0.0066 U	< 0.0067 U	< 7.26 U	< 6.94 U	< 0.678 U	< 0.0760 U	< 0.0686 U	< 6.55 U	< 0.0663 U	< 1.46 U	< 0.0059 U	< 0.0062 U	< 0.988 U	< 63 U	< 0.0070 U	< 1.2 U	< 0.0011 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
1,3,5-Trimethylbenzene	108-67-8	8.4	190	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,4-Dichlorobenzene	106-46-7	1.8	130	NL	< 1.59 U	< 0.0066 U	< 0.0067 U	< 7.26 U	< 6.94 U	< 0.678 U	< 0.0760 U	< 0.0686 U	< 6.55 U	< 0.0663 U	< 1.46 U	< 0.0059 U	< 0.0062 U	< 0.988 U	< 63 U	< 0.0070 U	< 1.2 U	< 0.0011 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
Acetone	67-64-1	0.05	500	NL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	< 0.011 U	R	**0.0043 J**	**0.011 J**	**0.0049 J**
Carbon disulfide	75-15-0	NL	NL	NL	< 3.18 UJ	< 0.0132 U	< 0.0133 U	< 14.5 UJ	< 13.9 UJ	< 1.36 UJ	< 0.152 UJ	< 0.137 U	< 13.1 UJ	< 0.133 UJ	< 2.92 U	< 0.0118 U	< 0.0124 U	< 1.98 UJ	< 126 UJ	< 0.0140 U	< 1.2 U	< 0.0011 U	< 0.11 U	< 0.0011 U	**0.00077 J**	< 0.00099 U
cis-1,2-Dichloroethene	156-59-2	0.25	500	NL	< 1.59 U	< 0.0066 U	< 0.0067 U	< 7.26 U	< 6.94 U	< 0.678 U	< 0.0760 U	< 0.0686 U	< 6.55 U	< 0.0663 U	< 1.46 U	< 0.0059 U	< 0.0062 U	< 0.988 U	< 63 U	< 0.0070 U	< 1.2 U	< 0.0011 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
Cyclohexane	110-82-7	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 1.2 UJ	< 0.0011 U	**0.3**	< 0.0011 U	< 0.0011 U	< 0.00099 U
Isopropylbenzene	98-82-8	NL	NL	NL	**5.45**	< 0.0066 U	< 0.0067 U	**6.32 J**	< 6.94 UJ	**1.97 J**	< 0.0760 UJ	**0.104**	**23.3 J**	< 0.0663 UJ	**13.6**	< 0.0059 U	< 0.0062 U	**20.2 J**	< 63 UJ	< 0.0070 U	**0.54 J**	< 0.0011 U	**0.23**	< 0.0011 U	< 0.0011 U	< 0.00099 U
Methylcyclohexane	108-87-2	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 1.2 UJ	< 0.0011 U	**1.1**	< 0.0011 U	< 0.0011 U	< 0.00099 U
Methylene chloride	75-09-2	0.05	500	NL	< 3.18 U	< 0.0132 U	< 0.0133 U	< 14.5 U	< 13.9 UJ	< 1.36 UJ	< 0.152 U	< 0.137 U	< 13.1 U	< 0.133 U	< 2.92 U	< 0.0118 U	< 0.0124 U	< 1.98 U	< 126 U	< 0.0140 U	< 1.2 U	< 0.0013 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
n-Butylbenzene	104-51-8	12	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Propylbenzene	103-65-1	3.9	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p-Isopropyltoluene	99-87-6	NL	NL	NL	NS	NS	NS	< 7.26	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
sec-Butylbenzene	135-98-8	11	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Styrene	100-42-5	NL	NL	NL	**17.9 J**	**0.0078**	< 0.0067 U	**8.93 J**	**104 J**	**156 J**	< 0.0760 UJ	< 0.0686 U	< 6.55 U	< 0.0663 UJ	< 1.46 U	< 0.0059 U	< 0.0062 U	< 0.988 UJ	< 63 UJ	< 0.0070 U	**9.2**	< 0.0011 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
Tentatively Identified Compounds	TICS	NL	NL	NL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	NS	NS	NS	NS	NS	NS
Tetrachloroethene	127-18-4	1.3	150	NL	< 1.59 U	< 0.0066 U	< 0.0067 U	< 7.26 U	< 6.94 U	< 0.678 U	< 0.0760 U	< 0.0686 U	< 6.55 U	< 0.0663 UJ	< 1.46 U	< 0.0059 U	< 0.0062 U	< 0.988 U	< 63 U	< 0.0070 U	< 1.2 UJ	< 0.0011 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
trans-1,2-Dichloroethene	156-60-5	0.19	500	NL	< 1.59 U	< 0.0066 U	< 0.0067 U	< 7.26 U	< 6.94 U	< 0.678 U	< 0.0760 U	< 0.0686 U	< 6.55 U	< 0.0663 U	< 1.46 U	< 0.0059 U	< 0.0062 U	< 0.988 U	< 63 U	< 0.0070 U	< 1.2 U	< 0.0011 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
Trichloroethene	79-01-6	0.47	200	NL	< 1.59 U	< 0.0066 U	< 0.0067 U	< 7.26 U	< 6.94 U	< 0.678 U	< 0.0760 U	< 0.0686 U	< 6.55 U	< 0.0663 U	< 1.46 U	< 0.0059 U	< 0.0062 U	< 0.988 U	< 63 U	< 0.0070 U	< 1.2 U	< 0.0011 U	< 0.11 U	< 0.0011 U	< 0.0011 U	< 0.00099 U
Total VOCs	*CALC-VOC*	*NL*	*NL*	*NL*	***307.16***	***0.0886***	*ND*	***367.85***	***832.7***	***1190.97***	*ND*	***0.708***	***518.19***	***0.2327***	***76.897***	*ND*	*ND*	***54.69***	***1618***	*ND*	***71.14***	***0.00299***	***1.898***	***0.0043***	***0.01177***	***0.0049***
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)																										
2-Methylnaphthalene	91-57-6	NL	NL	NL	**19.3**	< 0.0983 U	< 0.0962 U	**39.9 J**	**1120 J**	**1070**	**0.0554 J**	**0.0434 J**	**104**	< 0.00886 U	**139**	**0.0751 J**	< 0.00935 U	**30.6**	**1960 J**	**0.0930 J**	**20**	**0.093 J**	< 0.4 U	< 0.4 U	< 0.37 U	< 0.37 U
Acenaphthene	83-32-9	20	500	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	**49.4 J**	< 409 U	< 0.208 U	**0.32**	**32.7**	< 0.00971 U	**39.9**	**0.0636 J**	< 0.0102 U	**7.56 J**	**523 J**	< 0.198 U	**4.9 J**	< 0.36 U	**0.083 J**	< 0.4 U	< 0.37 U	< 0.37 U
Acenaphthylene	208-96-8	100	500	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	**489 J**	**481**	< 0.208 U	**0.0378 J**	**6.03 J**	< 0.0121 U	**5.66 J**	< 0.0156 U	< 0.0128 U	**5.99 J**	**555 J**	**0.0219 J**	**37**	< 0.36 U	< 0.4 U	< 0.4 U	< 0.37 U	< 0.37 U
Anthracene	120-12-7	100	500	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	**206 J**	**201 J**	< 0.208 U	**0.583**	**16.9**	< 0.0121 U	**22.1 J**	< 0.0156 U	< 0.0128 U	**15.7 J**	**419 J**	< 0.198 U	**38**	< 0.36 U	**0.49**	< 0.4 U	< 0.37 U	< 0.37 U
Benzo(a)anthracene	56-55-3	1	5.6	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	**112 J**	**111 J**	< 0.208 U	**1.09**	**11.1 J**	< 0.0259 U	**14.5 J**	< 0.0333 U	< 0.0273 U	**25.1**	**235 J**	< 0.198 U	**23**	< 0.036 U	**0.96**	< 0.04 U	< 0.037 U	< 0.037 U
Benzo(a)pyrene	50-32-8	1	1	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	**88.2 J**	**86.8 J**	< 0.208 U	**1.16**	**8.72 J**	< 0.0137 U	**11.3 J**	< 0.0177 U	< 0.0145 U	**20.6 J**	**158 J**	< 0.198 U	**20**	< 0.036 U	**0.97**	< 0.04 U	< 0.037 U	< 0.037 U
Benzo(b)fluoranthene	205-99-2	1	5.6	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	< 400 UJ	< 409 U	< 0.208 U	**0.854**	< 4.28 U	< 0.0534 U	< 10.1 U	< 0.0688 U	< 0.0563 U	**10.8 J**	< 364 UJ	< 0.198 U	**14**	< 0.036 U	**0.76**	< 0.04 U	< 0.037 U	< 0.037 U
Benzo(ghi)perylene	191-24-2	100	500	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	< 400 UJ	< 409 U	< 0.208 U	**0.395**	**3.18 J**	< 0.0113 U	**4.36 J**	< 0.0146 UJ	< 0.0119 UJ	**8.1 J**	**47.9 J**	< 0.198 UJ	**8.5**	< 0.36 U	**0.71**	< 0.4 U	< 0.37 U	< 0.37 U
Benzo(k)fluoranthene	207-08-9	0.8	56	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	**50.2 J**	**47.1 J**	< 0.208 U	**0.984**	**6.42 J**	< 0.0161 U	**6.2 J**	< 0.0208 U	< 0.0170 U	**14.3 J**	**120 J**	< 0.198 U	**5.2**	< 0.036 U	**0.32**	< 0.04 U	< 0.037 U	< 0.037 U
Chrysene	218-01-9	1	56	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	**108 J**	**109 J**	< 0.208 U	**1.06**	**10.9 J**	< 0.00570 U	**14.7 J**	< 0.00735 U	< 0.00602 U	**29.5**	**248 J**	< 0.198 U	**24**	< 0.36 U	**1**	< 0.4 U	< 0.37 U	< 0.37 U
Dibenz(a,h)anthracene	53-70-3	0.33	0.56	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	< 400 UJ	< 409 U	< 0.208 U	**0.0923 J**	< 0.515 U	< 0.00643 U	< 1.22 U	< 0.00829 U	< 0.00679 U	< 24.3 U	< 364 UJ	< 0.198 U	**1.8**	< 0.036 U	**0.17**	< 0.04 U	< 0.037 U	< 0.037 U
Fluoranthene	206-44-0	100	500	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	**240 J**	**239 J**	< 0.208 U	**2.13**	**21.1**	< 0.00971 U	**27.2 J**	< 0.0125 U	< 0.0102 U	**26.4**	**438 J**	< 0.198 U	**38**	< 0.36 U	**1.4**	< 0.4 U	< 0.37 U	< 0.37 U
Fluorene	86-73-7	30	500	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	**318 J**	**317 J**	< 0.208 U	**0.164 J**	**21.4**	< 0.00971 U	**29.1 J**	< 0.0125 U	< 0.0102 U	**14.6 J**	**516 J**	< 0.198 U	**37**	< 0.36 U	**0.15 J**	< 0.4 U	< 0.37 U	< 0.37 U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	5.6	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	< 400 UJ	< 409 U	< 0.208 U	**0.408**	**2.92 J**	< 0.0186 U	**4.67 J**	< 0.0239 U	< 0.0196 U	**6.43 J**	**41.2 J**	< 0.198 U	**8.2**	< 0.036 U	**0.6**	< 0.04 U	< 0.037 U	< 0.037 U
Naphthalene	91-20-3	12	500	NL	**122**	< 0.0983 U	< 0.0962 U	**525**	**2630 J**	**2560**	**0.385**	**0.358**	**234**	< 0.0154 U	**447**	**0.136 J**	< 0.0163 U	**244**	**3940 J**	**0.301**	**4.2 J**	< 0.36 U	< 0.4 U	< 0.4 U	< 0.37 U	< 0.37 U
Phenanthrene	85-01-8	100	500	NL	**1.03 J**	< 0.0983 U	< 0.0962 U	< 62.5 U	**779 J**	**775**	< 0.208 U	**1.05**	**57.2**	< 0.0186 U	**75.7**	**0.0522 J**	< 0.0196 U	**45.5**	**1420 J**	**0.0279 J**	**150**	< 0.36 U	**1.3**	< 0.4 U	< 0.37 U	< 0.37 U
Pyrene	129-00-0	100	500	NL	< 3.54 U	< 0.0983 U	< 0.0962 U	< 62.5 U	**326 J**	**327 J**	< 0.208 U	**2.13**	**27.5**	< 0.0284 U	**42.2**	< 0.0366 U	< 0.0300 U	**62.4**	**614 J**	< 0.198 U	**73**	< 0.36 U	**1.9**	< 0.4 U	< 0.37 U	< 0.37 U
Total PAHs	*CALC-PAH*	*NL*	*NL*	*500*	***142.33***	*ND*	*ND*	***564.9***	***6515.8***	***6323.9***	***0.4404***	***12.8595***	***564.07***	*ND*	***883.59***	***0.3269***	*ND*	***567.58***	***11235.1***	***0.4438***	***506.8***	***0.093***	***10.813***	*ND*	*ND*	*ND*
Other Semivolatile Organic Compounds (SVOCs) (mg/Kg)																										
1,1'-Biphenyl	92-52-4	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5.3 J**	< 0.36 U	< 0.4 U	< 0.4 U	< 0.37 U	< 0.37 U
1-Methylnaphthalene	90-12-0	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acetophenone	98-86-2	NL	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 7.8 U	< 0.36 U	< 0.4 U	< 0.4 U	< 0.37 U	< 0.37 U
Benzaldehyde	100-52-7	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 7.8 UJ	< 0.36 UJ	< 0.4 UJ	< 0.4 UJ	< 0.37 UJ	< 0.37 UJ
bis(2-Ethylhexyl) phthalate	117-81-7	NL	NL	NL	< 7.09 U	< 0.197 U	< 0.192 U	< 125 U	< 801 UJ	< 818 U	< 0.416 U	< 0.0959 U	< 6.16 U	< 0.0769 U	< 14.6 U	< 0.0992 U	< 0.0812 U	< 48.6 U	< 729 UJ	< 0.395 U	< 7.8 U	**0.26 J**	< 0.4 U	< 0.4 U	< 0.37 U	< 0.37 U
Carbazole	86-74-8	NL	NL	NL	< 7.09 U	< 0.197 U	< 0.192 U	< 125 U	< 801 UJ	< 818 U	< 0.416 U	< 0.0182 U	< 1.17 U	< 0.0146 U	< 2.75 U	< 0.0188 U	< 0.0154 U	< 48.6 U	< 729 UJ	< 0.395 U	< 7.8 U	< 0.36 U	**0.063 J**	< 0.4 U	< 0.37 U	< 0.37 U
Dibenzofuran	132-64-9	7	350	NL	< 7.09 U	< 0.197 U	< 0.192 U	< 125 U	< 801 UJ	< 818 U	< 0.416 U	**0.0610 J**	**2.43 J**	< 0.00485 U	< 0.918 U	< 0.00626 U	< 0.00512 U	< 48.6 U	**50.8 J**	< 0.395 U	**3.1 J**	< 0.36 U	**0.072 J**	< 0.4 U	< 0.37 U	< 0.37 U
Phenol	108-95-2	0.33	500	NL	< 7.09 U	< 0.197 U	< 0.192 U	< 125 U	< 801 UJ	< 818 U	< 0.416 U	< 0.0101 U	< 0.649 U	< 0.00809 U	< 1.53 U	< 0.0104 U	< 0.00854 U	< 48.6 U	< 729 U	< 0.395 U	< 7.8 U	< 0.36 U	< 0.4 U	< 0.4 U	< 0.37 U	< 0.37 U
Tentatively Identified Compounds	TICS	NL	NL	NL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	NS	NS	NS	NS	NS	NS
Total Other SVOCs	*CALC-SVOC*	*NL*	*NL*	*NL*	***142.33***	*ND*	*ND*	***564.9***	***6515.8***	***6323.9***	***0.4404***	***12.9205***	***566.5***	*ND*	***883.59***	***0.3269***	*ND*	***567.58***	***11285.9***	***0.4438***	***515.2***	***0.353***	***10.948***	*ND*	*ND*	*ND*

Notes:
mg/Kg - milligrams per kilogram
J = The associated numerical value is an estimated quantity.
R = The associated data is rejected.
U = The analyte was analyzed for but not detected at, or above, the Method Detection
UJ = The analyte was not detected at or above the PQL. However, the reported PQL
Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Unrestricted Use Soil Cleanup Objective
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Commercial Use Soil Cleanup Objective Commercial va
Green highlight indicates result is above the NYSDEC CP-51 Alternate Criteria of 500 mg/Kg for Total PAHs.
NA = Not Analyzed
ND = Not Detected
NL = Not Listed

Table 5-4 (continued)
Summary of Subsurface Soil Anayltical Results
Former Metropolitan MGP, Brooklyn, New York

Sample Location Sample Date Sample Interval (feet)	CAS Number	NYSDEC PART 375-6 Unrestricted	NYSDEC Part 375-6 Commercial	CP-51	SB-14 4/1/2010 5-6	SB-14 4/1/2010 9-10	SB-14 4/2/2010 69-70	SB-15 4/14/2010 4-5	SB-15 DUP 4/14/2010 37-39	SB-15 4/14/2010 37-39	SB-15 4/14/2010 69-70	SB-16 5/5/2010 4-5	SB-16 5/6/2010 10-13	SB-16 5/6/2010 68-70	SB-17 5/3/2010 4-5	SB-17 5/4/2010 30-32	SB-17 5/4/2010 48-50	SB-18 4/20/2010 1-2	SB-18 4/20/2010 28-30	SB-18 4/20/2010 69-70	SB-19 10/2/2011 37-37.5	SB-19 10/2/2011 72.5-75	SB-20 10/16/2011 9-10	SB-20 10/16/2011 82.5-85	SB-21 10/18/2011 25-27.5	SB-21 10/18/2011 87.5-90
Inorganic Compounds (mg/Kg)																										
Aluminum	7429-90-5	NL	NL	NL	**4620**	**9500**	**4500**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Antimony	7440-36-0	NL	NL	NL	< 5.79 U	**0.936 J**	**0.702 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Arsenic	7440-38-2	13	16	NL	**5.17**	**3.27**	**1.99**	**5.27**	**1.55 J**	**1.57 J**	**4.59**	**3.24**	**4.3**	**4.08**	**6.97**	**2.68**	**7.37**	**9.29**	**1.97**	**1.29 J**	**4.2**	**1.9**	**4.9**	< 1.1 U	**2.4**	**1.4**
Barium	7440-39-3	350	400	NL	**83.9**	**46.3**	**41.2**	**62**	**16.7**	**18.7**	**42.8**	**39.3 J**	**22.7 J**	**40.0 J**	**57.8 J**	**9.93 J**	**21.8 J**	**37.3 J**	**10.9 J**	**38.4 J**	**21.3 J**	**18.9 J**	**90.8**	**29.0 J**	**9.9 J**	**31.0 J**
Beryllium	7440-41-7	7.2	590	NL	**0.255 J**	**0.341 J**	**0.197 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cadmium	7440-43-9	2.5	9.3	NL	**0.301 J**	**0.411 J**	**0.197 J**	**0.423 J**	**0.171 J**	**0.214 J**	**0.481 J**	**0.448 J**	**0.412 J**	**0.379 J**	**0.645**	**0.309 J**	**0.591**	**1.08**	**0.229 J**	**0.184 J**	< 1.1 U	< 1.1 U	< 1.2 U	< 1.1 U	< 1.0 U	< 1.1 U
Calcium	7440-70-2	NL	NL	NL	**5220**	**1060**	**7470**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chromium	7440-47-3	30	1500	NL	**12.8 J**	**15.7 J**	**8.34 J**	**14.8 J**	**8.22 J**	**9.17 J**	**11.9 J**	**9.10 J**	**9.61 J**	**6.80 J**	**10.6 J**	**7.09 J**	**5.53 J**	**9.21**	**5.05**	**7**	**8.4**	**7.9**	**10.8**	**11.3**	**6.2**	**9.3**
Cobalt	7440-48-4	NL	NL	NL	**4.60 J**	**6.64 J**	**3.91 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Copper	7440-50-8	50	270	NL	**27.5**	**14.8**	**9.49**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron	7439-89-6	NL	NL	NL	**9250**	**13400**	**8120**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Lead	7439-92-1	63	1000	NL	**560**	**11.4**	**5.8**	**124**	**3.98**	**4.5**	**9.18**	**63.5 J**	**40.6 J**	**3.09 J**	**875 J**	**2.48 J**	**2.99 J**	**98.9**	**2.15**	**4.15**	**3.5**	**4.1**	**185**	**3.7**	**3.5**	**5.7**
Magnesium	7439-95-4	NL	NL	NL	**1070**	**2880**	**3150**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese	7439-96-5	1600	10000	NL	**132**	**161**	**191**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Mercury	7439-97-6	0.18	2.8	NL	**1.24 J**	**0.0090 J**	< 0.0330 U	**0.632**	< 0.0353 U	< 0.0353 U	**0.0097 J**	**0.440 J**	**0.187 J**	**0.0059 J**	**0.523 J**	**0.0059 J**	< 0.0324 U	**0.309**	< 0.0305 U	**0.0054 J**	< 0.038 U	< 0.035 U	**0.34**	< 0.039 U	< 0.036 U	< 0.035 U
Nickel	7440-02-0	30	310	NL	**11.1 J**	**20.3 J**	**8.17 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Potassium	7440-09-7	NL	NL	NL	R	R	R	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Selenium	7782-49-2	3.9	1500	NL	**1.96**	**2.37**	**1.23 J**	< 1.51 U	< 1.65 U	< 1.65 U	< 1.78 U	**0.573 J**	**0.637 J**	**0.447 J**	**1.20 J**	**0.292 J**	**0.624 J**	**5.16**	**0.386 J**	< 1.55 U	< 2.3 U	< 2.1 U	< 2.4 U	< 2.2 U	< 2.1 U	< 2.1 U
Silver	7440-22-4	2	1500	NL	< 1.74 U	< 1.62 U	< 1.69 U	**0.776 J**	< 1.65 U	< 1.65 U	**0.451 J**	< 1.67 U	< 1.53 U	< 1.74 U	< 1.57 U	< 1.65 U	< 1.63 U	< 2.17 U	< 1.59 U	< 1.55 U	< 2.3 U	< 2.1 U	< 2.4 U	< 2.2 U	< 2.1 U	< 2.1 U
Sodium	7440-23-5	NL	NL	NL	**442 J**	**280 J**	**164 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Thallium	7440-28-0	NL	NL	NL	< 3.47 U	< 3.24 U	< 3.37 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vanadium	7440-62-2	NL	NL	NL	**15.9**	**23.9**	**13.3**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Zinc	7440-66-6	109	10000	NL	**71.6 J**	**39.2 J**	**27.4 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cyanide, Free	57-12-5-Free	NL	NL	NL	< 1.15 U	< 1.10 U	< 1.10 U	< 1.14 U	< 1.14 U	< 1.21 U	< 1.20 U	< 1.22 U	< 1.11 U	< 1.25 U	< 1.07 U	< 1.29 U	< 1.12 U	**1.9**	< 1.15 U	< 1.19 U	NS	NS	NS	NS	NS	NS
Total Cyanide	57-12-5	27	27	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Available cyanide	57-12-5-A	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.047 U	< 0.044 U	**0.024 J**	< 0.049 U	< 0.045 U	< 0.045 U
PCBs (mg/Kg)																										
Aroclor 1254	11097-69-1	NL	NL	NL	< 0.0239 U	< 0.0230 U	< 0.0228 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB (Total) (ppm)	***CALC-PCBs***	*0.1*	*1*	*NL*	*< 0.0239*	*< 0.0230*	*< 0.0228*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
Pesticides (mg/Kg)																										
Pesticides					ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Herbicides (mg/Kg)																										
2,4,5-TP (Silvex)	93-72-1	3.8	500	NL	< 0.00831 U	< 0.00801 U	< 0.00785 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2,4-D	94-75-7	NL	NL	NL	< 0.00831 U	< 0.00801 U	< 0.00785 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2,4-DB	94-82-6	NL	NL	NL	< 0.00831 U	< 0.00801 U	< 0.00785 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
T,2,4,5-	93-76-5	NL	NL	NL	< 0.00831 U	< 0.00801 U	< 0.00785 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Percent Solids/Moisture																										
Moisture, percent	MOIST	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Percent Solids	SOLIDS	NL	NL	NL	**77.6**	**81.6**	**84.3**	**82.9**	**82.5**	**80.9**	**78.4**	**79.7**	**82.8**	**81.9**	**81.8**	**76.5**	**81.3**	**67**	**88.2**	**81.5**	NS	NS	NS	NS	NS	NS

Notes:
mg/Kg - milligrams per kilogram
J = The associated numerical value is an estimated quantity.
R = The associated data is rejected.
U = The analyte was analyzed for but not detected at, or above, the Method Detection
UJ = The analyte was not detected at or above the PQL. However, the reported PQL
Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Unrestricted Use Soil Cleanup Objective
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Commercial Use Soil Cleanup Objective Commercial va
Green highlight indicates result is above the NYSDEC CP-51 Alternate Criteria of 500 mg/Kg for Total PAHs.
NA = Not Analyzed
ND = Not Detected
NL = Not Listed

Table 5-4 (continued)
Summary of Subsurface Soil Anayltical Results
Former Metropolitan MGP, Brooklyn, New York

Sample Location Sample Date Sample Interval (feet)	CAS Number	NYSDEC PART 375-6 Unrestricted	NYSDEC Part 375-6 Commercial	CP-51	SB-22 10/5/2011 30-33	SB-22 10/6/2011 87.5-90	SB-23 10/4/2011 80-82.5	SB-23 10/4/2011 87-90	SB-24 10/11/2011 87.5-90	SB-24 10/12/2011 65-67.5	SB-25 10/13/2011 67.5-70	SB-25 10/13/2011 87.5-90	SB-26 3/13/2012 47-49	SB-26 3/13/2012 47-49	SB-26 3/13/2012 69-70	TP-01 5/19/2010 1.5-1.5	TP-01 5/19/2010 3.8-3.8	TP-02 5/20/2010 4-4.5	MW-4D1 4/28/2011 116-118	MW-4D2 DUP 4/27/2011 142-144	MW-4D2 4/27/2011 142-144
BTEX (mg/Kg)																					
Benzene	71-43-2	0.06	44	NL	**0.022**	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	**0.0246**	**1.48**	< 0.0057 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
Ethylbenzene	100-41-4	1	390	NL	**0.082**	**0.0014**	**0.00039 J**	**0.00025 J**	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	**0.0237**	**10.3 J**	**0.0527**	< 0.0049 U	< 0.0056 U	< 0.0057 U
m+p-Xylene	1330-20-7-M,P	NL	NL	NL	**0.021**	< 0.0025 U	< 0.0021 U	< 0.0022 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0023 U	< 0.0024 U	< 0.0022 U	< 0.0021 U	**0.0918**	**3.72 J**	**0.0195**	< 0.0049 U	< 0.0056 U	< 0.0057 U
o-Xylene	95-47-6	NL	NL	NL	**0.01**	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	**0.0347**	**1.3 J**	**0.0132**	< 0.0049 U	< 0.0056 U	< 0.0057 U
Toluene	108-88-3	0.7	500	NL	**0.0081**	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	**0.00027 J**	**0.00021 J**	**0.00015 J**	**0.0111**	**0.261**	< 0.0057 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
Total Xylenes	Calc-Xylenes	NL	500	NL	**0.031**	< 0.0025	< 0.0021	< 0.0022	< 0.0021	< 0.0021	< 0.0021	< 0.0023	< 0.0024	< 0.0022	< 0.0021	**0.1265**	**5.02**	**0.0327**	< 0.0049 U	< 0.0056 U	< 0.0057 U
Total BTEX	*CALC-BTEX*	*NL*	*NL*	*NL*	***0.1431***	***0.0014***	***0.00039***	***0.00025***	*ND*	*ND*	*ND*	*ND*	***0.00027***	***0.00021***	***0.00015***	***0.1859***	***17.061***	***0.0854***	*ND*	*ND*	*ND*
Volatile Organic Compounds (VOCs)(mg/Kg)																					
1,1,1-Trichloroethane	71-55-6	0.68	500	NL	< 0.0011 U	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	< 0.0063 U	< 0.162 U	< 0.0057 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
1,1-Dichloroethane	75-34-3	0.27	240	NL	< 0.0011 U	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	< 0.0063 U	< 0.162 U	< 0.0057 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
1,2,4-Trimethylbenzene	95-63-6	3.6	190	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	95-50-1	1.1	500	NL	< 0.0011 U	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	< 0.0063 U	< 0.162 U	< 0.0057 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
1,2-Dichloroethane	107-06-2	0.02	30	NL	< 0.0011 U	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	< 0.0063 U	< 0.162 U	< 0.0057 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
1,3,5-Trimethylbenzene	108-67-8	8.4	190	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,4-Dichlorobenzene	106-46-7	1.8	130	NL	< 0.0011 U	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	< 0.0063 U	< 0.162 U	< 0.0057 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
Acetone	67-64-1	0.05	500	NL	**0.013 J**	< 0.012 U	< 0.013 U	< 0.011 U	< 0.012 UJ	< 0.011 UJ	< 0.016 UJ	< 0.012 UJ	**0.035**	**0.042**	< 0.013 U	R	R	**0.101 J**	R	R	R
Carbon disulfide	75-15-0	NL	NL	NL	< 0.0011 U	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	**0.0019**	< 0.0012 U	**0.0014**	**0.00059 J**	< 0.0010 U	< 0.0125 U	< 0.324 UJ	< 0.0114 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
cis-1,2-Dichloroethene	156-59-2	0.25	500	NL	**0.00029 J**	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	**0.0086**	< 0.0012 U	**0.0012 J**	**0.0041 J**	< 0.0010 U	< 0.0063 U	< 0.162 U	< 0.0057 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
Cyclohexane	110-82-7	NL	NL	NL	**0.00054 J**	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	NS	NS	NS	< 0.0049 U	< 0.0056 U	< 0.0057 U
Isopropylbenzene	98-82-8	NL	NL	NL	**0.0016**	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	**0.0293**	**2.45 J**	**0.0447**	< 0.0049 U	< 0.0056 U	< 0.0057 U
Methylcyclohexane	108-87-2	NL	NL	NL	**0.0013**	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	NS	NS	NS	< 0.0049 U	< 0.0056 U	< 0.0057 U
Methylene chloride	75-09-2	0.05	500	NL	**0.00065 J**	**0.0047**	**0.011**	**0.00083 J**	< 0.0011 U	< 0.0011 U	**0.0034**	**0.0049**	**0.0084**	**0.0097**	**0.0043**	< 0.0125 U	< 0.324 U	< 0.0114 U	< 0.0049 U	< 0.0056 UJ	< 0.0057 UJ
n-Butylbenzene	104-51-8	12	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Propylbenzene	103-65-1	3.9	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p-Isopropyltoluene	99-87-6	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
sec-Butylbenzene	135-98-8	11	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Styrene	100-42-5	NL	NL	NL	**0.0021**	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0010 U	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	< 0.0063 U	< 0.162 UJ	< 0.0057 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
Tentatively Identified Compounds	TICS	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0**	**0**	**0**	NS	NS	NS
Tetrachloroethene	127-18-4	1.3	150	NL	< 0.0011 U	< 0.0012 U	**0.00036 J**	< 0.0011 U	**0.00051 J**	< 0.0011 U	**0.0027**	**0.0010 J**	< 0.0012 U	< 0.0011 U	< 0.0010 U	< 0.0063 U	< 0.162 UJ	< 0.0057 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
trans-1,2-Dichloroethene	156-60-5	0.19	500	NL	< 0.0011 U	< 0.0012 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	**0.00042 J**	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	< 0.0063 U	< 0.162 U	< 0.0057 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
Trichloroethene	79-01-6	0.47	200	NL	< 0.0011 U	< 0.0012 U	< 0.0011 U	< 0.0011 U	**0.011**	< 0.0011 U	**0.009**	< 0.0012 U	< 0.0012 U	< 0.0011 U	< 0.0010 U	< 0.0063 U	< 0.162 U	< 0.0057 U	< 0.0049 U	< 0.0056 U	< 0.0057 U
Total VOCs	*CALC-VOC*	*NL*	*NL*	*NL*	***0.16258***	***0.0061***	***0.01175***	***0.00108***	***0.01151***	*ND*	***0.02602***	***0.0059***	***0.04627***	***0.0566***	***0.00445***	***0.2152***	***19.511***	***0.2311***	*ND*	*ND*	*ND*
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)																					
2-Methylnaphthalene	91-57-6	NL	NL	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**0.351**	**1.61**	< 0.186	< 0.18 U	< 0.19 U	< 0.19 U
Acenaphthene	83-32-9	20	500	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**0.328**	**0.2**	< 0.186	< 0.18 U	< 0.19 U	< 0.19 U
Acenaphthylene	208-96-8	100	500	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**0.0968**	< 0.424	**0.0523**	< 0.18 U	< 0.19 U	< 0.19 U
Anthracene	120-12-7	100	500	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**0.744**	**0.168**	**0.0407**	< 0.18 U	< 0.19 U	< 0.19 U
Benzo(a)anthracene	56-55-3	1	5.6	NL	< 0.04 U	< 0.041 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.037 U	< 0.04 U	< 0.041 U	< 0.042 U	< 0.041 U	**2.61**	**0.688**	**0.194**	< 0.18 U	< 0.19 U	< 0.19 U
Benzo(a)pyrene	50-32-8	1	1	NL	< 0.04 U	< 0.041 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.037 U	< 0.04 U	< 0.041 U	< 0.042 U	< 0.041 U	**2.92**	**0.829**	**0.294**	< 0.18 U	< 0.19 U	< 0.19 U
Benzo(b)fluoranthene	205-99-2	1	5.6	NL	< 0.04 U	< 0.041 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.037 U	< 0.04 U	< 0.041 U	< 0.042 U	< 0.041 U	**2.94**	**0.664**	**0.195**	< 0.18 U	< 0.19 U	< 0.19 U
Benzo(ghi)perylene	191-24-2	100	500	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**1.33**	**0.445**	**0.209**	< 0.18 U	< 0.19 U	< 0.19 U
Benzo(k)fluoranthene	207-08-9	0.8	56	NL	< 0.04 U	< 0.041 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.037 U	< 0.04 U	< 0.041 U	< 0.042 U	< 0.041 U	**1.97**	**0.587**	**0.16**	< 0.18 U	< 0.19 U	< 0.19 U
Chrysene	218-01-9	1	56	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**2.58**	**0.697**	**0.219**	< 0.18 U	< 0.19 U	< 0.19 U
Dibenz(a,h)anthracene	53-70-3	0.33	0.56	NL	< 0.04 U	< 0.041 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.037 U	< 0.04 U	< 0.041 U	< 0.042 U	< 0.041 U	**0.357**	**0.0882**	< 0.186	< 0.18 U	< 0.19 U	< 0.19 U
Fluoranthene	206-44-0	100	500	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**5.4**	**1.15**	**0.237**	< 0.18 U	< 0.19 U	< 0.19 U
Fluorene	86-73-7	30	500	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**0.494**	**0.141**	< 0.186	< 0.18 U	< 0.19 U	< 0.19 U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	5.6	NL	< 0.04 U	< 0.041 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.037 U	< 0.04 U	< 0.041 U	< 0.042 U	< 0.041 U	**1.54**	**0.402**	**0.141**	< 0.18 U	< 0.19 U	< 0.19 U
Naphthalene	91-20-3	12	500	NL	**0.59**	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**1.42**	**7.62**	< 0.186	< 0.18 U	< 0.19 U	< 0.19 U
Phenanthrene	85-01-8	100	500	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**3.13**	**0.671**	**0.148**	< 0.18 U	< 0.19 U	< 0.19 U
Pyrene	129-00-0	100	500	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**4.35**	**1.19**	**0.411**	< 0.18 U	< 0.19 U	< 0.19 U
Total PAHs	*CALC-PAH*	*NL*	*NL*	*500*	***0.59***	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	***32.5608***	***17.1502***	***2.301***	*ND*	*ND*	*ND*
Other Semivolatile Organic Compounds (SVOCs) (mg/Kg)																					
1,1'-Biphenyl	92-52-4	NL	NL	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	NS	NS	NS	< 0.18 U	< 0.19 U	< 0.19 U
1-Methylnaphthalene	90-12-0	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acetophenone	98-86-2	NL	500	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	NS	NS	NS	< 0.18 UJ	< 0.19 UJ	< 0.19 UJ
Benzaldehyde	100-52-7	NL	NL	NL	< 0.4 UJ	< 0.41 UJ	< 0.39 UJ	< 0.39 UJ	< 0.39 UJ	< 0.39 UJ	< 0.37 UJ	< 0.4 UJ	< 0.41 UJ	< 0.42 UJ	< 0.41 UJ	NS	NS	NS	< 0.18 UJ	< 0.19 UJ	< 0.19 UJ
bis(2-Ethylhexyl) phthalate	117-81-7	NL	NL	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**0.465**	< 0.848	< 0.373	**0.042 J**	**0.024 J**	**0.035 J**
Carbazole	86-74-8	NL	NL	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**0.323**	< 0.848	< 0.373	< 0.18 U	< 0.19 U	< 0.19 U
Dibenzofuran	132-64-9	7	350	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	**0.169**	< 0.848	< 0.373	< 0.18 U	< 0.19 U	< 0.19 U
Phenol	108-95-2	0.33	500	NL	< 0.4 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.37 U	< 0.4 U	< 0.41 U	< 0.42 U	< 0.41 U	< 1.88	< 0.848	< 0.373	< 0.18 U	< 0.19 U	< 0.19 U
Tentatively Identified Compounds	TICS	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0**	**0**	**0**	NS	NS	NS
Total Other SVOCs	*CALC-SVOC*	*NL*	*NL*	*NL*	***0.59***	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	***33.5178***	***17.1502***	***2.301***	***0.042***	***0.024***	***0.035***

Notes:
mg/Kg - milligrams per kilogram
J = The associated numerical value is an estimated quantity.
R = The associated data is rejected.
U = The analyte was analyzed for but not detected at, or above, the Method Detection
UJ = The analyte was not detected at or above the PQL. However, the reported PQL
Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Unrestricted Use Soil Cleanup Objective
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Commercial Use Soil Cleanup Objective Commercial va
Green highlight indicates result is above the NYSDEC CP-51 Alternate Criteria of 500 mg/Kg for Total PAHs.
NA = Not Analyzed
ND = Not Detected
NL = Not Listed

Table 5-4 (continued)
Summary of Subsurface Soil Anayltical Results
Former Metropolitan MGP, Brooklyn, New York

Sample Location Sample Date Sample Interval (feet)	CAS Number	NYSDEC PART 375-6 Unrestricted	NYSDEC Part 375-6 Commercial	CP-51	SB-22 10/5/2011 30-33	SB-22 10/6/2011 87.5-90	SB-23 10/4/2011 80-82.5	SB-23 10/4/2011 87-90	SB-24 10/11/2011 87.5-90	SB-24 10/12/2011 65-67.5	SB-25 10/13/2011 67.5-70	SB-25 10/13/2011 87.5-90	SB-26 3/13/2012 47-49	SB-26 3/13/2012 47-49	SB-26 3/13/2012 69-70	TP-01 5/19/2010 1.5-1.5	TP-01 5/19/2010 3.8-3.8	TP-02 5/20/2010 4-4.5	MW-4D1 4/28/2011 116-118	MW-4D2 DUP 4/27/2011 142-144	MW-4D2 4/27/2011 142-144
Inorganic Compounds (mg/Kg)																					
Aluminum	7429-90-5	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5060**	**3780**	**4070**
Antimony	7440-36-0	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.67 UJ	< 0.61 UJ	< 0.71 UJ
Arsenic	7440-38-2	13	16	NL	**4**	**1.0 J**	**0.98 J**	**0.95 J**	**3.2**	< 1.1 U	**3**	< 1.1 U	**1.8**	**1.8**	< 1.2 U	**7.22**	**7.22**	**4.97**	**1.5**	**1.6**	**0.99**
Barium	7440-39-3	350	400	NL	**35.5 J**	**15.4 J**	**13.9 J**	**11.2 J**	**51.9**	**20.6 J**	**11.7 J**	**8.5 J**	**9.1 J**	**9.2 J**	**21.9 J**	**153 J**	**117 J**	**67.6 J**	**17.3**	**13.9**	**14.5**
Beryllium	7440-41-7	7.2	590	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0.3**	**0.16**	**0.18**
Cadmium	7440-43-9	2.5	9.3	NL	< 1.1 U	**0.19 J**	**0.29 J**	**0.26 J**	< 1.2 U	< 1.1 U	< 1.1 U	< 1.1 U	< 1.2 U	< 1.2 U	< 1.2 U	**1.32**	**1.3**	**0.657**	**0.074 J**	< 0.15 U	< 0.18 U
Calcium	7440-70-2	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5150 J**	**1940 J**	**3000 J**
Chromium	7440-47-3	30	1500	NL	**17.9**	**4.6**	**5.9**	**4.2**	**9.4**	**5.9**	**10.6**	**5.7**	**7**	**6.7**	**8.7**	**59.8 J**	**23.7 J**	**19.2 J**	**8.6**	**6.8**	**6.3**
Cobalt	7440-48-4	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5.5**	**2.8**	**2.9**
Copper	7440-50-8	50	270	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**11.6**	**9.1**	**9.8**
Iron	7439-89-6	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**11600**	**7650**	**8820**
Lead	7439-92-1	63	1000	NL	**9.6**	**6.1**	**3.9**	**3.1**	**3.3**	**2.9**	**3.2**	**2**	**6.3**	**5.8**	**3**	**578 J**	**580 J**	**162 J**	**4.2**	**2.6**	**2.6**
Magnesium	7439-95-4	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2980**	**2130**	**2730**
Manganese	7439-96-5	1600	10000	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**331**	**135**	**129**
Mercury	7439-97-6	0.18	2.8	NL	< 0.036 U	< 0.038 U	< 0.037 U	< 0.037 U	< 0.037 U	< 0.039 U	< 0.034 U	< 0.040 U	< 0.041 U	< 0.038 U	< 0.040 U	**0.478 J**	**0.776 J**	**0.424 J**	< 0.040 U	< 0.039 U	< 0.043 U
Nickel	7440-02-0	30	310	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**11.3**	**7.4**	**8.1**
Potassium	7440-09-7	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**677**	**335**	**425**
Selenium	7782-49-2	3.9	1500	NL	< 2.2 U	< 2.5 U	< 2.3 U	< 2.4 U	< 2.4 U	< 2.3 U	< 2.2 U	< 2.1 U	< 2.3 U	< 2.4 U	< 2.4 U	**1.05 J**	**1.30 J**	**1.01 J**	**0.52 J**	< 0.92 U	< 1.1 U
Silver	7440-22-4	2	1500	NL	< 2.2 U	< 2.5 U	< 2.3 U	< 2.4 U	< 2.4 U	< 2.3 U	< 2.2 U	< 2.1 U	< 2.3 U	< 2.4 U	< 2.4 U	< 1.58 U	< 1.87 U	< 1.67 U	**0.16 J**	**0.069 J**	**0.089 J**
Sodium	7440-23-5	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**854 J**	**155 J**	**99.3 J**
Thallium	7440-28-0	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.67 U	< 0.61 U	< 0.71 U
Vanadium	7440-62-2	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**9.6 J**	**7.1 J**	**10.0 J**
Zinc	7440-66-6	109	10000	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**28.6**	**16.7**	**19.4**
Cyanide, Free	57-12-5-Free	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0.637 J**	**0.647 J**	< 1.16 U	NS	NS	NS
Total Cyanide	57-12-5	27	27	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Available cyanide	57-12-5-A	NL	NL	NL	< 0.048 UJ	< 0.050 U	< 0.047 U	< 0.048 U	< 0.047 U	< 0.047 U	< 0.045 U	< 0.049 U	NS	NS	NS	NS	NS	NS	NS	NS	NS
PCBs (mg/Kg)																					
Aroclor 1254	11097-69-1	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.018 U	**0.022 J**	< 0.019 UJ
PCB (Total) (ppm)	***CALC-PCBs***	*0.1*	*1*	*NL*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*< 0.018*	***0.022***	*< 0.019*
Pesticides (mg/Kg)																					
Pesticides					NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Herbicides (mg/Kg)																					
2,4,5-TP (Silvex)	93-72-1	3.8	500	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2,4-D	94-75-7	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2,4-DB	94-82-6	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
T,2,4,5-	93-76-5	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Percent Solids/Moisture																					
Moisture, percent	MOIST	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**9.3 J**	**16**	**12**
Percent Solids	SOLIDS	NL	NL	NL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**86.9**	**76.2**	**86**	NS	NS	NS

Notes:
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Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Unrestricted Use Soil Cleanup Objective
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Green highlight indicates result is above the NYSDEC CP-51 Alternate Criteria of 500 mg/Kg for Total PAHs.
NA = Not Analyzed
ND = Not Detected
NL = Not Listed

Table 5-5
Summary of Groundwater Analytical Results
Metropolitan Former MGP Site, Brooklyn, New York

Sample Location Sample Date Sample ID Laboratory Identification Sample Type	CAS Number	NYSDEC Groundwater Guidance or Standard Value[1]	MW-01S 10/4/2010 MW-1S (100410) J1926 Sample	MW-01I 10/4/2010 MW-1I (100410) J1926 Sample	MW-01D 10/4/2010 MW-1D (100410) J1926 Sample	MW-02D 10/5/2010 MW-2D(100510) J1926 Sample	MW-03S 10/5/2010 MW-3S(100510) J1926 Sample	MW-03I 10/5/2010 MW-3I(100510) J1926 Sample	MW-04S 10/5/2010 MW-4S (100510) J1926 Sample	MW-04I 10/5/2010 MW-4I (100510) J1926 Sample	MW-4D1 3/15/2012 MW-4D1-031512 460380151 Sample	MW-4D1 3/15/2012 DUP-1-031512 460380151 Duplicate	MW-4D2 3/15/2012 MW-4D2-031512 460380151 Sample	MW-05S 10/6/2010 MW-5S (100610) J1946 Sample	MW-05S 10/6/2010 MW-5S (100610) DUP J1946 Duplicate	MW-05I 10/6/2010 MW-5I (100610) J1946 Sample	MW-05D 10/6/2010 MW-5D (100610) J1946 Sample	MW-06S 10/5/2010 MW-6S(100510) J1946 Sample	MW-06I 10/5/2010 MW-6I(100510) J1946 Sample	MW-07S 10/4/2010 MW-7S(100410) J1926 Sample	MW-07I 10/4/2010 MW-7I(100410) J1926 Sample
BTEX (ug/L)																					
Benzene	71-43-2	1	**690**	<5.0 U	<5.0 U	<5.0 U	**710**	**1200**	<5.0 U	**1100**	<1.0 U	<1.0 U	<1.0 U	**3.7 J**	<5.0 U	**1600**	<5.0 U	**6100**	**1400**	**40**	**25**
Ethylbenzene	100-41-4	5	**120**	<5.0 U	<5.0 U	<5.0 U	**3400**	**6500**	<5.0 U	**630**	<1.0 U	<1.0 U	<1.0 U	**1.1 J**	<5.0 U	**200**	<5.0 U	**640**	**930**	**340**	**18**
m+p-Xylene	1330-20-7-M,P	NL	**210**	<5.0 U	<5.0 U	<5.0 U	**2000**	**3700**	<5.0 U	**51**	<2.0 U	<2.0 U	<2.0 U	<5.0 U	<5.0 U	**10 J**	<5.0 U	**19**	**210**	**53**	**7.9**
o-Xylene	95-47-6	NL	**100**	<5.0 U	<5.0 U	<5.0 U	**1500**	**2100**	<5.0 U	**240**	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	**50**	<5.0 U	**16**	**290**	**25 J**	**5.8**
Toluene	108-88-3	5	**71**	<5.0 U	<5.0 U	<5.0 U	**1500**	**1600**	<5.0 U	**12**	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	**5.2**	**30**	**14 J**	**3.5 J**
Xylenes (total)	1330-20-7	5	**320**	<5.0 U	<5.0 U	<5.0 U	**3500**	**5800**	<5.0 U	**290**	ND	ND	ND	<5.0 U	<5.0 U	**60**	<5.0 U	**35**	**500**	**78**	**14**
Total BTEX		NL	**1201**	ND	ND	ND	**9110**	**15100**	ND	**2032**	ND	ND	ND	**4.8**	ND	**1860**	ND	**6780.2**	**2860**	**472**	**60.5**
Volatile Organic Compounds (VOCs) (ug/L)																					
1,1,1-Trichloroethane	71-55-6	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,1,2,2-Tetrachloroethane	79-34-5	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,1,2-Trichloroethane	79-00-5	1	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,1-Dichloroethane	75-34-3	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,1-Dichloroethene	75-35-4	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,2,3-Trichlorobenzene	87-61-6	NL	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 UJ	<1.0 UJ	<1.0 UJ	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	120-82-1	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,2-Dibromo-3-chloropropane	96-12-8	0.04	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,2-Dibromoethane	106-93-4	NL	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,2-Dichlorobenzene	95-50-1	3	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,2-Dichloroethane	107-06-2	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	**0.23 J**	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,2-Dichloropropane	78-87-5	1	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,3-Dichlorobenzene	541-73-1	3	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
1,4-Dichlorobenzene	106-46-7	3	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	**11 J**	<5.0 U
1,4-Dioxane	123-91-1	NL	NA	NA	NA	NA	NA	NA	NA	NA	<50 UJ	<50 UJ	<50 UJ	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	78-93-3	50	R	R	<5.0 U	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
2-Hexanone	591-78-6	50	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
4-Methyl-2-pentanone	108-10-1	NL	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Acetone	67-64-1	50	R	**4.5 J**	**5.2 J**	R	R	R	R	R	<5.0 U	<5.0 U	<5.0 U	R	<5.0 U	<50 U	<5.0 U	R	R	R	**5.1 J**
Bromochloromethane	74-97-5	NL	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 U	<1.0 U	<1.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	75-27-4	50	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Bromoform	75-25-2	50	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 UJ	<1.0 UJ	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Bromomethane	74-83-9	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Carbon disulfide	75-15-0	60	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Carbon tetrachloride	56-23-5	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 UJ	<5.0 U	<50 U	<5.0 U	<5.0 UJ	<5.0 U	<25 U	<5.0 U
Chlorobenzene	108-90-7	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	**84**	<5.0 U
Chloroethane	75-00-3	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Chloroform	67-66-3	7	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	**0.11 J**	**0.11 J**	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Chloromethane	74-87-3	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
cis-1,2-Dichloroethene	156-59-2	5	<25 U	<5.0 U	<5.0 U	**84**	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	**0.58 J**	<5.0 U	<5.0 U	**14 J**	**5.1**	<5.0 U	**3.2 J**	<25 U	<5.0 U
cis-1,3-Dichloropropene	10061-01-5	0.4	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Cyclohexane	110-82-7	NL	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	NA	NA
Dibromochloromethane	124-48-1	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Dichlorodifluoromethane	75-71-8	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 UJ	<50 UJ	<5.0 UJ	<5.0 U	<5.0 U	<25 U	<5.0 U
Isopropylbenzene	98-82-8	5	**18 J**	<5.0 U	<5.0 U	<5.0 U	**210**	**340**	<5.0 U	**65**	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	**13 J**	<5.0 U	**100**	**60**	**33**	<5.0 U
Methyl acetate	79-20-9	NL	NA	NA	NA	NA	NA	NA	NA	NA	<2.0 U	<2.0 U	<2.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	NA	NA
Methyl tert-butyl ether	1634-04-4	10	**51**	**1.2 J**	<5.0 U	<5.0 U	<200 U	<200 U	**6.0**	<5.0 U	<1.0 U	<1.0 U	**8.1**	**1.6 J**	**1.5 J**	<50 U	<5.0 U	**5.5**	**1.4 J**	<25 U	**3.5 J**
Methylcyclohexane	108-87-2	NL	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	NA	NA
Methylene chloride	75-09-2	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Styrene	100-42-5	5	<25 U	<5.0 U	<5.0 U	<5.0 U	**120 J**	**410**	<5.0 U	<5.0 U	<1.0 UJ	<1.0 UJ	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Tetrachloroethene	127-18-4	5	<25 U	<5.0 U	**2.1 J**	**11**	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 UJ	<5.0 U	<50 UJ	<5.0 U	<5.0 UJ	<5.0 U	<25 U	<5.0 U
trans-1,2-Dichloroethene	156-60-5	5	<25 U	<5.0 U	<5.0 U	**1.2 J**	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	**9.7**	<25 U	**3.2 J**
trans-1,3-Dichloropropene	10061-02-6	0.4	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Trichloroethene	79-01-6	5	<25 U	<5.0 U	<5.0 U	**18**	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Trichlorofluoromethane	75-69-4	5	<25 U	<5.0 U	<5.0 U	<5.0 U	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<25 U	<5.0 U
Vinyl chloride	75-01-4	2	<25 U	<5.0 U	**21**	**31**	<200 U	<200 U	<5.0 U	<5.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<5.0 U	**12 J**	<5.0 U	<5.0 U	**12 J**	<25 U	**2.2 J**
Total VOCs		NL	**112.4**	**5.7**	**28.3**	**147.4**	**2650.1**	**5390.5**	**11.4**	**4645.4**	**0.11**	**0.11**	**8.91**	**8.5**	**8.4**	**343.9**	**5.1**	**714.9**	**1841.7**	**671.7**	**22**

Notes:

mg/Kg - milligrams per kilogram
µg/L - micrograms per liter
J = The associated data is an estimated quantity.
R = The associated data is rejected.

NA = Not Analyzed
ND = Not Detected
NL = Not Listed

U = The analyte was analyzed for but not detected at, or above, the Method Detection Limit (MDL). The associated numerical value is the Practical Quantitation Limit (PQL).
UJ = The analyte was not detected at or above the PQL. However, the reported PQL is approximate and may be inaccurate or imprecise.
Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Restricted Use Soil Cleanup Objective Commercial value.
[1] Guidance or Standard Values - NYSDEC, Division of Water, TOGS (1.1.1) - 6 NYCRR 703.5 [NYSDEC, 1998].

Table 5-5 continued
Summary of Groundwater Analytical Results
Metropolitan Former MGP Site, Brooklyn, New York

Sample Location Sample Date Sample ID Laboratory Identification Sample Type	CAS Number	NYSDEC Groundwater Guidance or Standard Value[1]	MW-01S 10/4/2010 MW-1S (100410) J1926 Sample	MW-01I 10/4/2010 MW-1I (100410) J1926 Sample	MW-01D 10/4/2010 MW-1D (100410) J1926 Sample	MW-02D 10/5/2010 MW-2D(100510) J1926 Sample	MW-03S 10/5/2010 MW-3S(100510) J1926 Sample	MW-03I 10/5/2010 MW-3I(100510) J1926 Sample	MW-04S 10/5/2010 MW-4S (100510) J1926 Sample	MW-04I 10/5/2010 MW-4I (100510) J1926 Sample	MW-4D1 3/15/2012 MW-4D1-031512 460380151 Sample	MW-4D1 3/15/2012 DUP-1-031512 460380151 Duplicate	MW-4D2 3/15/2012 MW-4D2-031512 460380151 Sample	MW-05S 10/6/2010 MW-5S (100610) J1946 Sample	MW-05S 10/6/2010 MW-5S (100610) DUP J1946 Duplicate	MW-05I 10/6/2010 MW-5I (100610) J1946 Sample	MW-05D 10/6/2010 MW-5D (100610) J1946 Sample	MW-06S 10/5/2010 MW-6S(100510) J1946 Sample	MW-06I 10/5/2010 MW-6I(100510) J1946 Sample	MW-07S 10/4/2010 MW-7S(100410) J1926 Sample	MW-07I 10/4/2010 MW-7I(100410) J1926 Sample
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)																					
2-Methylnaphthalene	91-57-6	NL	**3.4 J**	<10 U	<10 U	<10 U	**160**	**270 J**	<10 U	**340 J**	<10 U	<10 U	<10 U	<10 U	<10 U	**6.6 J**	<10 U	**7.9 J**	**150**	**27**	<10 U
Acenaphthene	83-32-9	20	<10 U	<10 U	<10 U	<10 U	**21**	**32**	**1.6 J**	**130**	<10 U	<10 U	<10 U	**6.9 J**	**6.9 J**	**26**	<10 U	**1.5 J**	**59**	**26**	**1.7 J**
Acenaphthylene	208-96-8	NL	<10 U	<10 U	<10 U	<10 U	**5.5 J**	**5.7 J**	<10 U	**3.6 J**	<10 U	<10 U	<10 U	<10 U	<10 U	**2.3 J**	<10 U	<10 U	**11**	<10 U	<10 U
Anthracene	120-12-7	50	<10 U	<10 U	<10 U	<10 U	**3.2 J**	**3.1 J**	<10 U	**9.6 J**	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**2.4 J**	**2.5 J**	<10 U
Benzo(a)anthracene	56-55-3	0.002	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Benzo(a)pyrene	50-32-8	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Benzo(b)fluoranthene	205-99-2	0.002	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Benzo(g,h,i)perylene	191-24-2	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Benzo(k)fluoranthene	207-08-9	0.002	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Chrysene	218-01-9	0.002	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Dibenz(a,h)anthracene	53-70-3	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Fluoranthene	206-44-0	50	<10 U	<10 U	<10 U	<10 U	**1.2 J**	**1.2 J**	<10 U	**2.2 J**	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**1.0 J**	<10 U
Fluorene	86-73-7	50	<10 U	<10 U	<10 U	<10 U	**13 J**	**12 J**	<10 U	**49 J**	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**19 J**	**8.9 J**	<10 U
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 UJ	<1.0 UJ	<1.0 UJ	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Naphthalene	91-20-3	10	**40**	<10 U	<10 U	**2.2 J**	**2100**	**4300**	**2.0 J**	**4000**	<10 U	<10 U	<10 U	<10 U	<10 U	**270**	<10 U	**600**	**1500**	**480**	**6.3 J**
Phenanthrene	85-01-8	50	<10 U	<10 U	<10 U	<10 U	**15**	**15**	**1.8 J**	**44**	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**14**	**7.8 J**	<10 U
Pyrene	129-00-0	50	<10 U	<10 U	<10 U	<10 U	**1.2 J**	**1.5 J**	<10 U	**2.0 J**	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**1.5 J**	<10 U
Total PAHs		NL	**43.4**	ND	ND	**2.2**	**2320.1**	**4640.5**	**5.4**	**4580.4**	ND	ND	ND	**6.9**	**6.9**	**304.9**	ND	**609.4**	**1755.4**	**554.7**	**8**
Other Semivolatile Organic Compounds (SVOCs) (ug/L)																					
1,1'-Biphenyl	92-52-4	5	NA	NA	NA	NA	NA	NA	NA	NA	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**14**	NA	NA
1,2,4,5-Tetrachlorobenzene	95-94-3	NL	NA	NA	NA	NA	NA	NA	NA	NA	<10 U	<10 U	<10 U	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-oxybis(1-Chloropropane)	108-60-1	NL	NA	NA	NA	NA	NA	NA	NA	NA	<10 U	<10 U	<10 U	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol	58-90-2	NL	NA	NA	NA	NA	NA	NA	NA	NA	<10 U	<10 U	<10 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95-95-4	NL	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<10 U	<10 U	<10 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U
2,4,6-Trichlorophenol	88-06-2	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2,4-Dichlorophenol	120-83-2	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2,4-Dimethylphenol	105-67-9	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2,4-Dinitrophenol	51-28-5	10	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<31 U	<31 U	<31 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U
2,4-Dinitrotoluene	121-14-2	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<2.0 U	<2.0 U	<2.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2,6-Dinitrotoluene	606-20-2	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<2.0 U	<2.0 U	<2.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2-Chloronaphthalene	91-58-7	10	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2-Chlorophenol	95-57-8	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2-Methylphenol	95-48-7	NL	<10 U	<10 U	<10 U	<10 U	**2.6 J**	**6.2 J**	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2-Nitroaniline	88-74-4	5	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U
2-Nitrophenol	88-75-5	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
3,3'-Dichlorobenzidine	91-94-1	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<20 U	<20 U	<20 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
3-Nitroaniline	99-09-2	5	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U
4,6-Dinitro-2-methylphenol	534-52-1	NL	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<31 U	<31 U	<31 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U
4-Bromophenyl phenyl ether	101-55-3	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
4-Chloro-3-methylphenol	59-50-7	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
4-Chloroaniline	106-47-8	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
4-Chlorophenyl phenyl ether	7005-72-3	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
4-Methylphenol	106-44-5	NL	<10 U	<10 U	<10 U	<10 U	**1.6 J**	**5.8 J**	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
4-Nitroaniline	100-01-6	5	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U
4-Nitrophenol	100-02-7	NL	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<31 U	<31 U	<31 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U
Acetophenone	98-86-2	NL	NA	NA	NA	NA	NA	NA	NA	NA	<10 U	<10 U	<10 U	<10 U	<10 U	**1.5 J**	<10 U	**5.4 J**	**9.3 J**	NA	NA
Atrazine	1912-24-9	7.5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Benzaldehyde	100-52-7	NL	NA	NA	NA	NA	NA	NA	NA	NA	<10 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ	NA	NA
bis(2-Chloroethoxy)methane	111-91-1	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
bis(2-Chloroethyl) ether	111-44-4	1	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
bis(2-Ethylhexyl) phthalate	117-81-7	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**1.5 J**	<10 U	<10 U	<10 U	<10 U	<10 U
Butyl benzyl phthalate	85-68-7	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Caprolactam	105-60-2	NL	NA	NA	NA	NA	NA	NA	NA	NA	<10 U	<10 U	<10 U	<10 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ	NA	NA
Carbazole	86-74-8	NL	**1.3 J**	<10 U	<10 U	<10 U	<10 U	**4.2 J**	<10 U	**27**	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**13**	<10 U	<10 U
Dibenzofuran	132-64-9	NL	<10 U	<10 U	<10 U	<10 U	**2.7 J**	**2.2 J**	<10 U	**9.5 J**	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**2.7 J**	<10 U	<10 U
Diethyl phthalate	131-11-3	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Dimethyl phthalate	84-66-2	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**1.0 J**	<10 U
Di-n-butyl phthalate	84-74-2	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Di-n-octyl phthalate	117-84-0	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**1.2 J**
Hexachlorobenzene	118-74-1	0.4	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Hexachlorobutadiene	87-68-3	0.5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<2.0 U	<2.0 U	<2.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Hexachlorocyclopentadiene	77-47-4	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Hexachloroethane	67-72-1	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Isophorone	78-59-1	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Nitrobenzene	98-95-3	0.4	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
N-Nitrosodi-n-propylamine	621-64-7	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
N-Nitrosodiphenylamine	86-30-6	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Pentachlorophenol	87-86-5	1	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<31 U	<31 U	<31 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U
Phenol	108-95-2	1	**6.8 J**	<10 U	<10 U	<10 U	**2.4 J**	**7.6 J**	<10 U	**9.5 J**	<10 U	<10 U	<10 U	<10 U	<10 U	**21**	<10 U	**69**	**20**	<10 U	<10 U
Total Other SVOCs		NL	**8.1**	ND	ND	ND	**9.3**	**26**	ND	**46**	ND	ND	ND	ND	ND	**24**	ND	**74.4**	**59**	**1**	**1.2**

Notes:

mg/Kg - milligrams per kilogram
µg/L - micrograms per liter
J = The associated data is an estimated quantity.
R = The associated data is rejected.

NA = Not Analyzed
ND = Not Detected
NL = Not Listed

U = The analyte was analyzed for but not detected at, or above, the Method Detection Limit (MDL). The associated numerical value is the Practical Quantitation Limit (PQL).
UJ = The analyte was not detected at or above the PQL. However, the reported PQL is approximate and may be inaccurate or imprecise.
Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Restricted Use Soil Cleanup Objective Commercial value.
[1] Guidance or Standard Values - NYSDEC, Division of Water, TOGS (1.1.1) - 6 NYCRR 703.5 [NYSDEC, 1998].

Table 5-5 continued
Summary of Groundwater Analytical Results
Metropolitan Former MGP Site, Brooklyn, New York

Sample Location Sample Date Sample ID Laboratory Identification Sample Type	CAS Number	NYSDEC Groundwater Guidance or Standard Value[1]	MW-01S 10/4/2010 MW-1S (100410) J1926 Sample	MW-01I 10/4/2010 MW-1I (100410) J1926 Sample	MW-01D 10/4/2010 MW-1D (100410) J1926 Sample	MW-02D 10/5/2010 MW-2D(100510) J1926 Sample	MW-03S 10/5/2010 MW-3S(100510) J1926 Sample	MW-03I 10/5/2010 MW-3I(100510) J1926 Sample	MW-04S 10/5/2010 MW-4S (100510) J1926 Sample	MW-04I 10/5/2010 MW-4I (100510) J1926 Sample	MW-4D1 3/15/2012 MW-4D1-031512 460380151 Sample	MW-4D1 3/15/2012 DUP-1-031512 460380151 Duplicate	MW-4D2 3/15/2012 MW-4D2-031512 460380151 Sample	MW-05S 10/6/2010 MW-5S (100610) J1946 Sample	MW-05S 10/6/2010 MW-5S (100610) DUP J1946 Duplicate	MW-05I 10/6/2010 MW-5I (100610) J1946 Sample	MW-05D 10/6/2010 MW-5D (100610) J1946 Sample	MW-06S 10/5/2010 MW-6S(100510) J1946 Sample	MW-06I 10/5/2010 MW-6I(100510) J1946 Sample	MW-07S 10/4/2010 MW-7S(100410) J1926 Sample	MW-07I 10/4/2010 MW-7I(100410) J1926 Sample
Inorganic Compounds (ug/L)																					
Aluminum	7429-90-5	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<200 U	<200 U	<200 U	<200 U	**314**	<200 U	NA	NA
Antimony	7440-36-0	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<20 U	<20 U	<20 U	<20 U	**11.4 J**	**14.6 J**	NA	NA
Arsenic	7440-38-2	25	**37.7**	<20 U	**4.9 J**	**6.2 J**	<20 U	**5.5 J**	<20 U	**4.4 J**	**13.6**	**10.6**	<5.0 U	<20 U	<20 U	<20 U	**7.4 J**	<20 U	**39.7**	**5.7 J**	<20 U
Barium	7440-39-3	1000	**1060**	**329**	**147 J**	**323**	**128 J**	**163 J**	**1140**	**254**	**276**	**268**	**70.5 J**	**99.3 J**	**95.7 J**	**475**	**901**	**585**	**869**	**129 J**	**354**
Beryllium	7440-41-7	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	NA	NA
Cadmium	7440-43-9	5	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U
Calcium	7440-70-2	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**254000**	**248000**	**106000**	**121000**	**180000**	**156000**	NA	NA
Chromium	7440-47-3	50	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	**7.8 J**	**8.6 J**	**4.6 J**	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U
Cobalt	7440-48-4	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<50 U	<50 U	<50 U	<50 U	<50 U	<50 U	NA	NA
Copper	7440-50-8	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<30 U	<30 U	<30 U	<30 U	<30 U	<30 U	NA	NA
Iron	7439-89-6	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**685**	**617**	**17000**	**2460**	**23000**	**64400**	NA	NA
Lead	7439-92-1	25	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<5.0 U	<5.0 U	<5.0 U	<10 U	<10 U	<10 U	<10 U	**9.3 J**	<10 U	<10 U	<10 U
Magnesium	7439-95-4	35000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**47500**	**47100**	**55300**	**64100**	**21100**	**133000**	NA	NA
Manganese	7439-96-5	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2950**	**2900**	**2300**	**3560**	**1430**	**836**	NA	NA
Mercury	7439-97-6	0.7	<0.20 U	**0.050 J**	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	**0.040 J**	<0.20 U	<0.20 U	<0.20 U
Nickel	7440-02-0	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<50 U	<50 U	<50 U	<50 U	<50 U	<50 U	NA	NA
Potassium	7440-09-7	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**39200**	**37600**	**17600**	**11700**	**30900**	**60300**	NA	NA
Selenium	7782-49-2	10	<30.0 U	<30.0 U	<30.0 U	<30.0 U	<30.0 U	<30.0 U	<30.0 U	<30.0 U	<10.0 U	<10.0 U	<10.0 U	<30.0 U	<30.0 U	<30.0 U	<30.0 U	<30.0 U	<30.0 U	<30.0 U	<30.0 U
Silver	7440-22-4	50	<30 U	<30 U	<30 U	<30 U	<30 U	<30 U	<30 U	<30 U	<10.0 U	<10.0 U	<10.0 U	<30 U	<30 U	<30 U	<30 U	<30 U	<30 U	<30 U	<30 U
Sodium	7440-23-5	20000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1220000**	**1180000**	**150000**	**226000**	**262000**	**1000000**	NA	NA
Thallium	7440-28-0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	NA	NA
Vanadium	7440-62-2	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<50 U	<50 U	<50 U	<50 U	<50 U	<50 U	NA	NA
Zinc	7440-66-6	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<50 U	<50 U	<50 U	<50 U	<50 U	<50 U	NA	NA
Cyanide (ug/L)																					
Total Cyanide	57-12-5	200	**8.7 J**	<20 U	<20 U	<20 U	**94.8**	**156**	**279**	**18.1 J**	<10 U	**6.4 J**	<10 U	<20 U	<20 U	**47.1**	**28.6**	**79.7**	<20 U	**252**	**10 J**
Pesticides (ug/L)																					
Aldrin	309-00-2	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	NA	NA
Alpha-BHC	319-84-6	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**R**	NA	NA
Beta-BHC	319-85-7	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.050 U	<0.050 U	**0.072 J**	<0.050 U	**0.51**	**R**	NA	NA
Chlordane, alpha	5103-71-9	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	NA	NA
Chlordane, trans-	5103-74-2	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	NA	NA
DDD,4,4-	72-54-8	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	NA	NA
DDE,4,4-	72-55-9	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	NA	NA
DDT,4,4-	50-29-3	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	NA	NA
Delta-BHC	319-86-8	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**0.078**	<0.050 U	NA	NA
Dieldrin	60-57-1	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	NA	NA
Endosulfan I	959-98-8	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	NA	NA
Endosulfan II	33213-65-9	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	NA	NA
Endosulfan sulfate	1031-07-8	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	NA	NA
Endrin	72-20-8	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	NA	NA
Endrin aldehyde	7421-93-4	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	NA	NA
Endrin ketone	53494-70-5	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	NA	NA
Gamma BHC (Lindane)	58-89-9	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**0.072**	<0.050 U	NA	NA
Heptachlor	76-44-8	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	NA	NA
Heptachlor Epoxide	1024-57-3	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	NA	NA
Methoxychlor	72-43-5	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	NA	NA
Toxaphene	8001-35-2	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	NA	NA
Polychlorinated biphenyls (ug/L)																					
Aroclor 1016	12674-11-2	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	NA	NA
Aroclor 1221	11104-28-2	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	NA	NA
Aroclor 1232	11141-16-5	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	NA	NA
Aroclor 1242	53469-21-9	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	NA	NA
Aroclor 1248	12672-29-6	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	NA	NA
Aroclor 1254	11097-69-1	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	NA	NA
Aroclor 1260	11096-82-5	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	NA	NA
Herbicides (ug/L)																					
2,4-D	94-75-7	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	NA	NA
2,4-DB	94-82-6	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0 U	<1.0 U	**1.4**	<1.0 U	<1.0 U	<1.0 U	NA	NA
Silvex	93-72-1	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	**R**	NA	NA
2,4,5-T	93-76-5	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	<0.10 U	NA	NA

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UJ = The analyte was not detected at or above the PQL. However, the reported PQL is approximate and may be inaccurate or imprecise.
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Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Restricted Use Soil Cleanup Objective Commercial value.
[1] Guidance or Standard Values - NYSDEC, Division of Water, TOGS (1.1.1) - 6 NYCRR 703.5 [NYSDEC, 1998].

Table 5-5 continued
Summary of Groundwater Analytical Results
Metropolitan Former MGP Site, Brooklyn, New York

Sample Location Sample Date Sample ID Laboratory Identification Sample Type	CAS Number	NYSDEC Groundwater Guidance or Standard Value[1]	MW-08S 10/5/2010 MW-8S(100510) J1946 Sample	MW-08I 10/5/2010 MW-8I(100510) J1946 Sample	MW-09S 10/6/2010 MW-9S (100610) J1926 Sample	MW-09I 10/6/2010 MW-9I (100610) J1926 Sample	MW-09D 10/6/2010 MW-9D (100610) J1926 Sample	MW-19S 3/18/2012 MW-19S-031812 460380891 Sample	MW-19I 3/18/2012 MW-19I-031812 460380891 Sample	MW-19I 3/18/2012 DUP-3-031812 460380891 Duplicate	MW-20S 3/18/2012 MW-20S-031812 460380891 Sample	MW-20I 3/18/2012 MW-20I-031812 460380891 Sample	MW-21D 3/15/2012 MW-21D-031512 460380031 Sample	MW-22I 3/15/2012 MW-22I-031512 460380031 Sample	MW-22D 3/15/2012 MW-22D-031512 460380031 Sample	MW-22D 3/15/2012 DUP 1 GM-3/17/2012 460380031 Duplicate	MW-23D 3/14/2012 MW-23D-031412 460380031 Sample	MW-25S 3/14/2012 MW-25S-031412 460380031 Sample	MW-25I 3/14/2012 MW-25I-031412 460380031 Sample
BTEX (ug/L)																			
Benzene	71-43-2	1	**160**	**9900**	<5.0 U	**890**	**700**	**0.11 J**	**900**	**880**	**0.46 J**	**4.0**	**1.5**	**53**	**1.8**	**1.9**	**1.3**	**2.7**	**21**
Ethylbenzene	100-41-4	5	**130**	**570 J**	**1.4 J**	**1600**	**540**	<1.0 U	**460**	**450**	**0.16 J**	<1.0 U	**0.32 J**	**1.8**	<1.0 U	<1.0 U	<1.0 U	**0.11 J**	**0.16 J**
m+p-Xylene	1330-20-7-M,P	NL	**26**	**160 J**	<5.0 U	**850**	**200**	<2.0 U	**190**	**180**	**0.84 J**	<2.0 U	<2.0 U	**6.0**	<2.0 U	<2.0 U	<2.0 U	**0.45 J**	**0.58 J**
o-Xylene	95-47-6	NL	**29**	**79 J**	<5.0 U	**550**	**180**	<1.0 U	**170**	**160**	**0.28 J**	<1.0 U	**0.14 J**	**5.8**	**0.21 J**	**0.19 J**	<1.0 U	**0.20 J**	**0.30 J**
Toluene	108-88-3	5	**5.1**	**5.8 J**	<5.0 U	**36 J**	**33**	<1.0 U	**16**	**15**	**0.76 J**	<1.0 U	**0.77 J**	**0.93 J**	<1.0 U	<1.0 U	**0.87 J**	**0.31 J**	**0.36 J**
Xylenes (total)	1330-20-7	5	**55**	**240 J**	<5.0 U	**1400**	**380**	ND	**360**	**340**	**1.12**	ND	**0.14**	**11.8**	0.21	0.19	**0**	**0.65**	**0.88**
Total BTEX		NL	**350.1**	**10715.8**	**1.4**	**3926**	**1653**	**0.11**	**1736**	**1685**	**2.5**	**4.0**	**2.73**	**67.53**	**2.01**	**2.09**	**2.17**	**3.77**	**22.4**
Volatile Organic Compounds (VOCs) (ug/L)																			
1,1,1-Trichloroethane	71-55-6	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,1,2,2-Tetrachloroethane	79-34-5	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,1,2-Trichloroethane	79-00-5	1	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	**0.25 J**	<1.0 U	<1.0 U
1,1-Dichloroethane	75-34-3	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,1-Dichloroethene	75-35-4	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	**0.13 J**	**0.14 J**	**1.9**	<1.0 U	<1.0 U
1,2,3-Trichlorobenzene	87-61-6	NL	NA	NA	NA	NA	NA	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,2,4-Trichlorobenzene	120-82-1	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,2-Dibromo-3-chloropropane	96-12-8	0.04	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,2-Dibromoethane	106-93-4	NL	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,2-Dichlorobenzene	95-50-1	3	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,2-Dichloroethane	107-06-2	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,2-Dichloropropane	78-87-5	1	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,3-Dichlorobenzene	541-73-1	3	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	**0.15 J**	**0.14 J**	<1.0 U
1,4-Dichlorobenzene	106-46-7	3	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,4-Dioxane	123-91-1	NL	NA	NA	NA	NA	NA	<50 UJ	<500 UJ	<500 UJ	<50 UJ	<50 UJ	<50 UJ	<50 UJ	<50 UJ	<50 UJ	<50 UJ	<50 UJ	<50 UJ
2-Butanone	78-93-3	50	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
2-Hexanone	591-78-6	50	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<5.0 U	<50 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U
4-Methyl-2-pentanone	108-10-1	NL	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<5.0 U	<50 U	<50 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U
Acetone	67-64-1	50	R	R	R	R	R	<5.0 U	<50 U	<50 U	**19**	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U
Bromochloromethane	74-97-5	NL	NA	NA	NA	NA	NA	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Bromodichloromethane	75-27-4	50	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Bromoform	75-25-2	50	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Bromomethane	74-83-9	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	R	R	R	R	R	R	R
Carbon disulfide	75-15-0	60	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	**1.5**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	**0.62 J**	<1.0 U	<1.0 U
Carbon tetrachloride	56-23-5	5	<5.0 UJ	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Chlorobenzene	108-90-7	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Chloroethane	75-00-3	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 UJ	<10 UJ	<10 UJ	<1.0 UJ	<1.0 UJ	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Chloroform	67-66-3	7	<5.0 U	<5.0 UJ	<5.0 U	<100 U	**5.5**	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	**0.41 J**	<1.0 U	**0.28 J**	**0.25 J**	**0.67 J**	<1.0 U	<1.0 U
Chloromethane	74-87-3	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
cis-1,2-Dichloroethene	156-59-2	5	<5.0 U	<5.0 UJ	<5.0 U	**26 J**	**35**	<1.0 U	<10 U	<10 U	<1.0 U	**2.1**	**4.2**	<1.0 U	**1.6**	**1.5**	**180**	<1.0 U	**1.7**
cis-1,3-Dichloropropene	10061-01-5	0.4	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Cyclohexane	110-82-7	NL	<5.0 U	<5.0 UJ	NA	NA	NA	**0.51 J**	<10 U	<10 U	**4.7**	<1.0 U	<1.0 U	**0.19 J**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Dibromochloromethane	124-48-1	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Dichlorodifluoromethane	75-71-8	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Isopropylbenzene	98-82-8	5	**14**	**39 J**	<5.0 U	**53 J**	**39**	**0.27 J**	**18**	**19**	**1.5**	<1.0 U	<1.0 U	**0.92 J**	<1.0 U	<1.0 U	**0.13 J**	<1.0 U	**0.30 J**
Methyl acetate	79-20-9	NL	<5.0 U	<5.0 UJ	NA	NA	NA	<2.0 U	<20 U	<20 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U
Methyl tert-butyl ether	1634-04-4	10	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	**0.53 J**	**51**	**0.27 J**	**1.7**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	**0.84 J**
Methylcyclohexane	108-87-2	NL	<5.0 U	<5.0 UJ	NA	NA	NA	<1.0 U	<10 U	<10 U	**4.0**	<1.0 U	<1.0 U	**0.21 J**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Methylene chloride	75-09-2	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	**1.0 J**	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Styrene	100-42-5	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	**9.5 J**	**8.2 J**	<1.0 U	<1.0 U	<1.0 U	**0.18 J**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Tetrachloroethene	127-18-4	5	<5.0 UJ	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
trans-1,2-Dichloroethene	156-60-5	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	**0.93 J**	<1.0 U	**0.21 J**
trans-1,3-Dichloropropene	10061-02-6	0.4	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Trichloroethene	79-01-6	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	**3.8 J**	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	**0.25 J**	<1.0 U	**19**	**19**	**2.4**	<1.0 U	<1.0 U
Trichlorofluoromethane	75-69-4	5	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Vinyl chloride	75-01-4	2	<5.0 U	<5.0 UJ	<5.0 U	<100 U	<5.0 U	<1.0 U	<10 U	<10 U	<1.0 U	**3.0**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	**1.0**	<1.0 U	**0.36 J**
Total VOCs		NL	**563.4**	**2053.5**	**19.7**	**5964**	**2306.1**	**0.89**	**1763.5**	**1712.2**	**33.73**	**60.1**	**7.86**	**70.73**	**23.02**	**22.98**	**190.22**	**3.91**	**25.81**

Notes:

mg/Kg - milligrams per kilogram
µg/L - micrograms per liter
J = The associated data is an estimated quantity.
R = The associated data is rejected.

NA = Not Analyzed
ND = Not Detected
NL = Not Listed

U = The analyte was analyzed for but not detected at, or above, the Method Detection Limit (MDL). The associated numerical value is the Practical Quantitation Limit (PQL).
UJ = The analyte was not detected at or above the PQL. However, the reported PQL is approximate and may be inaccurate or imprecise.
Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Restricted Use Soil Cleanup Objective Commercial value.
[1] Guidance or Standard Values - NYSDEC, Division of Water, TOGS (1.1.1) - 6 NYCRR 703.5 [NYSDEC, 1998].

Table 5-5 continued
Summary of Groundwater Analytical Results
Metropolitan Former MGP Site, Brooklyn, New York

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Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)																			
2-Methylnaphthalene	91-57-6	NL	**49**	**150**	<10 U	**390 J**	**66**	<10 U	**350**	**300**	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Acenaphthene	83-32-9	20	**19**	**59**	**11**	**140**	**61**	<10 U	**110 J**	**80 J**	<10 U	<10 U	<10 U	**51**	<10 U	<10 U	<10 U	<10 U	<10 U
Acenaphthylene	208-96-8	NL	<10 U	<10 U	**1.7 J**	**24**	**50**	<10 U	**66 J**	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Anthracene	120-12-7	50	<10 U	<10 U	**1.4 J**	**12**	**3.8 J**	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Benzo(a)anthracene	56-55-3	0.002	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<20 U	<20 U	**0.53 J**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Benzo(a)pyrene	50-32-8	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<20 U	<20 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 UJ	<1.0 UJ	<1.0 U	<1.0 U	<1.0 U
Benzo(b)fluoranthene	205-99-2	0.002	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 UJ	<20 U	<20 U	<1.0 UJ	<1.0 U	<1.0 U	<1.0 U	<1.0 UJ	<1.0 UJ	<1.0 U	<1.0 U	<1.0 U
Benzo(g,h,i)perylene	191-24-2	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Benzo(k)fluoranthene	207-08-9	0.002	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<20 U	<20 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 UJ	<1.0 UJ	<1.0 U	<1.0 U	<1.0 U
Chrysene	218-01-9	0.002	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Dibenz(a,h)anthracene	53-70-3	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 UJ	<20 U	<20 U	<1.0 UJ	<1.0 U	<1.0 U	<1.0 U	<1.0 UJ	<1.0 UJ	<1.0 U	<1.0 U	<1.0 U
Fluoranthene	206-44-0	50	<10 U	<10 U	**1.0 J**	**3.5 J**	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Fluorene	86-73-7	50	**6.2 J**	**5.5 J**	<10 U	**58 J**	**22 J**	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	**18**	<10 U	<10 U	<10 U	<10 U	<10 U
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 UJ	<20 U	<20 U	<1.0 UJ	<1.0 U	<1.0 U	<1.0 U	<1.0 UJ	<1.0 UJ	<1.0 U	<1.0 U	<1.0 U
Naphthalene	91-20-3	10	**470**	**1800**	**3.5 J**	**5200**	**2000**	<10 U	**3100**	**2500**	<10 U	<10 U	<10 U	**3.8 J**	<10 U	<10 U	<10 U	<10 U	<10 U
Phenanthrene	85-01-8	50	**5.2 J**	<10 U	<10 U	**54**	**19**	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	**10**	<10 U	<10 U	<10 U	<10 U	<10 U
Pyrene	129-00-0	50	<10 U	<10 U	**1.1 J**	**3.5 J**	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Total PAHs		NL	**549.4**	**2014.5**	**19.7**	**5885**	**2221.8**	ND	**3626**	**2880**	**0.53**	ND	ND	**82.8**	ND	ND	ND	ND	ND
Other Semivolatile Organic Compounds (SVOCs) (ug/L)																			
1,1'-Biphenyl	92-52-4	5	**4.4 J**	**3.8 J**	NA	NA	NA	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
1,2,4,5-Tetrachlorobenzene	95-94-3	NL	NA	NA	NA	NA	NA	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 UJ	<10 UJ	<10 U	<10 U	<10 U
2,2'-oxybis(1-Chloropropane)	108-60-1	NL	NA	NA	NA	NA	NA	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2,3,4,6-Tetrachlorophenol	58-90-2	NL	NA	NA	NA	NA	NA	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2,4,5-Trichlorophenol	95-95-4	NL	<20 U	<20 U	<20 U	<20 U	<20 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2,4,6-Trichlorophenol	88-06-2	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2,4-Dichlorophenol	120-83-2	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2,4-Dimethylphenol	105-67-9	50	<10 U	**11**	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 UJ	<10 UJ	<10 U	<10 U	<10 U
2,4-Dinitrophenol	51-28-5	10	<20 U	<20 U	<20 U	<20 U	<20 U	<31 UJ	<610 U	<610 U	<31 UJ	<30 UJ	<31 U	<31 U	<30 U	<30 U	<30 U	<30 U	<30 U
2,4-Dinitrotoluene	121-14-2	5	<10 U	<10 U	<10 U	<10 U	<10 U	<2.0 U	<40 U	<40 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U
2,6-Dinitrotoluene	606-20-2	5	<10 U	<10 U	<10 U	<10 U	<10 U	<2.0 U	<40 U	<40 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U
2-Chloronaphthalene	91-58-7	10	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2-Chlorophenol	95-57-8	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2-Methylphenol	95-48-7	NL	<10 U	<10 U	<10 U	**4.6 J**	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
2-Nitroaniline	88-74-4	5	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<400 U	<400 U	<20 U	<20 U	<20 U	<20 U	<20 UJ	<20 UJ	<20 U	<20 U	<20 U
2-Nitrophenol	88-75-5	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
3,3'-Dichlorobenzidine	91-94-1	5	<10 U	<10 U	<10 U	<10 U	<10 U	<20 U	<400 U	<400 U	<20 U	<20 U	<20 U	<20 U	R	R	<20 U	<20 U	<20 U
3-Nitroaniline	99-09-2	5	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<400 U	<400 U	<20 U	<20 U	<20 U	<20 U	<20 UJ	<20 UJ	<20 U	<20 U	<20 U
4,6-Dinitro-2-methylphenol	534-52-1	NL	<20 U	<20 U	<20 U	<20 U	<20 U	<31 U	<610 U	<610 U	<31 U	<30 U	<31 U	<31 U	<30 U	<30 U	<30 U	<30 U	<30 U
4-Bromophenyl phenyl ether	101-55-3	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
4-Chloro-3-methylphenol	59-50-7	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
4-Chloroaniline	106-47-8	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
4-Chlorophenyl phenyl ether	7005-72-3	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
4-Methylphenol	106-44-5	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	**1.9 J**	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
4-Nitroaniline	100-01-6	5	<20 U	<20 U	<20 U	<20 U	<20 U	<20 U	<400 U	<400 U	<20 U	<20 U	<20 U	<20 U	<20 UJ	<20 UJ	<20 U	<20 U	<20 U
4-Nitrophenol	100-02-7	NL	<20 U	<20 U	<20 U	<20 U	<20 U	<31 U	<610 U	<610 U	<31 U	<30 U	<31 U	<31 U	<30 U	<30 U	<30 U	<30 U	<30 U
Acetophenone	98-86-2	NL	**1.6 J**	**2.6 J**	NA	NA	NA	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Atrazine	1912-24-9	7.5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 UJ	<200 UJ	<10 U	<10 UJ	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Benzaldehyde	100-52-7	NL	<10 UJ	<10 UJ	NA	NA	NA	<10 UJ	<200 UJ	<200 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ	<10 UJ
bis(2-Chloroethoxy)methane	111-91-1	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
bis(2-Chloroethyl) ether	111-44-4	1	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<20 U	<20 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
bis(2-Ethylhexyl) phthalate	117-81-7	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Butyl benzyl phthalate	85-68-7	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Caprolactam	105-60-2	NL	<10 UJ	<10 UJ	NA	NA	NA	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Carbazole	86-74-8	NL	**6.7 J**	**5.9 J**	<10 U	**52**	**14**	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	**11**	<10 U	<10 U	<10 U	<10 U	<10 U
Dibenzofuran	132-64-9	NL	**1.7 J**	**1.9 J**	<10 U	**16**	**4.5 J**	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Diethyl phthalate	131-11-3	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Dimethyl phthalate	84-66-2	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Di-n-butyl phthalate	84-74-2	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Di-n-octyl phthalate	117-84-0	NL	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Hexachlorobenzene	118-74-1	0.4	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<20 U	<20 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Hexachlorobutadiene	87-68-3	0.5	<10 U	<10 U	<10 U	<10 U	<10 U	<2.0 U	<40 U	<40 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U
Hexachlorocyclopentadiene	77-47-4	5	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Hexachloroethane	67-72-1	5	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<20 U	<20 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
Isophorone	78-59-1	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Nitrobenzene	98-95-3	0.4	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<20 U	<20 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
N-Nitrosodi-n-propylamine	621-64-7	50	<10 U	<10 U	<10 U	<10 U	<10 U	<1.0 U	<20 U	<20 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
N-Nitrosodiphenylamine	86-30-6	50	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<200 U	<200 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Pentachlorophenol	87-86-5	1	<20 U	<20 U	<20 U	<20 U	<20 U	<31 U	<610 U	<610 U	<31 U	<30 U	<31 U	<31 U	<30 U	<30 U	<30 U	<30 U	<30 U
Phenol	108-95-2	1	**2.4 J**	**86**	<10 U	**5.7 J**	<10 U	<10 U	<200 U	<200 U	**2.6 J**	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Total Other SVOCs		NL	**16.8**	**111.2**	ND	**78.3**	**18.5**	ND	**3626**	**2880**	**5.03**	ND	ND	**93.8**	ND	ND	ND	ND	ND

Notes:

mg/Kg - milligrams per kilogram
µg/L - micrograms per liter
J = The associated data is an estimated quantity.
R = The associated data is rejected.

NA = Not Analyzed
ND = Not Detected
NL = Not Listed

U = The analyte was analyzed for but not detected at, or above, the Method Detection Limit (MDL). The associated numerical value is the Practical Quantitation Limit (PQL).
UJ = The analyte was not detected at or above the PQL. However, the reported PQL is approximate and may be inaccurate or imprecise.
Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Restricted Use Soil Cleanup Objective Commercial value.
[1] Guidance or Standard Values - NYSDEC, Division of Water, TOGS (1.1.1) - 6 NYCRR 703.5 [NYSDEC, 1998].

Table 5-5 continued
Summary of Groundwater Analytical Results
Metropolitan Former MGP Site, Brooklyn, New York

Sample Location Sample Date Sample ID Laboratory Identification Sample Type	CAS Number	NYSDEC Groundwater Guidance or Standard Value[1]	MW-08S 10/5/2010 MW-8S(100510) J1946 Sample	MW-08I 10/5/2010 MW-8I(100510) J1946 Sample	MW-09S 10/6/2010 MW-9S (100610) J1926 Sample	MW-09I 10/6/2010 MW-9I (100610) J1926 Sample	MW-09D 10/6/2010 MW-9D (100610) J1926 Sample	MW-19S 3/18/2012 MW-19S-031812 460380891 Sample	MW-19I 3/18/2012 MW-19I-031812 460380891 Sample	MW-19I 3/18/2012 DUP-3-031812 460380891 Duplicate	MW-20S 3/18/2012 MW-20S-031812 460380891 Sample	MW-20I 3/18/2012 MW-20I-031812 460380891 Sample	MW-21D 3/15/2012 MW-21D-031512 460380031 Sample	MW-22I 3/15/2012 MW-22I-031512 460380031 Sample	MW-22D 3/15/2012 MW-22D-031512 460380031 Sample	MW-22D 3/15/2012 DUP 1 GM-3/17/2012 460380031 Duplicate	MW-23D 3/14/2012 MW-23D-031412 460380031 Sample	MW-25S 3/14/2012 MW-25S-031412 460380031 Sample	MW-25I 3/14/2012 MW-25I-031412 460380031 Sample
Inorganic Compounds (ug/L)																			
Aluminum	7429-90-5	NL	<200 U	<200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	7440-36-0	3	**24.3**	**12.2 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	7440-38-2	25	**5.1 J**	**8.3 J**	<20 U	**26.7**	<20 U	**11.3**	<5.0 U	**3.9 J**	**12.6**	**34.9**	<5.0 U	**55.6**	**5.2**	<5.0 U	**9.6**	**124**	**110**
Barium	7440-39-3	1000	**739**	**883**	**100 J**	**2510**	**507**	**84.4 J**	**861**	**876**	**144 J**	**108 J**	**176 J**	**800**	**116 J**	**120 J**	**326**	**608**	**568**
Beryllium	7440-41-7	3	<5.0 U	<5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0 U
Calcium	7440-70-2	NL	**593000**	**216000**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	50	<20 U	<20 U	<20 U	<20 U	<20 U	<10.0 U	**36.6**	**34.9**	**12.9**	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U
Cobalt	7440-48-4	NL	<50 U	<50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	7440-50-8	200	<30 U	<30 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	300	**5220**	**21200**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	25	<10 U	<10 U	**6.9 J**	<10 U	<10 U	<5.0 U	<10.0 U	<10.0 U	**39.6**	<5.0 U	<5.0 U	**4.9 J**	<5.0 U	<5.0 U	<5.0 U	**8.2**	**9.2**
Magnesium	7439-95-4	35000	**48300**	**95500**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	300	**491**	**1720**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	0.7	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U
Nickel	7440-02-0	100	<50 U	<50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	7440-09-7	NL	**87800**	**35700**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	10	<30.0 U	<30.0 U	**13.8 J**	<30.0 U	<30.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U
Silver	7440-22-4	50	<30 U	<30 U	<30 U	<30 U	<30 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0 U
Sodium	7440-23-5	20000	**2510000**	**711000**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	7440-28-0	0.5	**10.2 J**	<20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	7440-62-2	NL	<50 U	<50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	7440-66-6	2000	<50 U	<50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide (ug/L)																			
Total Cyanide	57-12-5	200	**26.7**	**120**	**72.3**	<20 U	**15.8 J**	**14**	<10 U	<10 U	**24**	**12**	<10 U	**130**	**7.8 J**	**7.2 J**	**29**	**12**	**9.9 J**
Pesticides (ug/L)																			
Aldrin	309-00-2	NL	<0.050 U	<0.050 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	319-84-6	NL	<0.050 U	**R**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	319-85-7	NL	<0.050 U	**R**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane, alpha	5103-71-9	NL	<0.050 U	<0.050 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane, trans-	5103-74-2	NL	<0.050 U	<0.050 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD,4,4-	72-54-8	NL	<0.10 U	<0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE,4,4-	72-55-9	NL	<0.10 U	<0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT,4,4-	50-29-3	NL	<0.10 U	<0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	319-86-8	NL	<0.050 U	<0.050 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	NL	<0.10 U	<0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NL	<0.050 U	<0.050 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NL	<0.10 U	<0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	1031-07-8	NL	<0.10 U	<0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	NL	<0.10 U	<0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	7421-93-4	NL	<0.10 U	<0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NL	<0.10 U	<0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma BHC (Lindane)	58-89-9	NL	<0.050 U	<0.050 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	NL	<0.050 U	<0.050 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	1024-57-3	NL	<0.050 U	<0.050 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	NL	<0.50 U	<0.50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	NL	<5.0 U	<5.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls (ug/L)																			
Aroclor 1016	12674-11-2	NL	<1.0 U	<1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	11104-28-2	NL	<1.0 U	<1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	11141-16-5	NL	<1.0 U	<1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	53469-21-9	NL	<1.0 U	<1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	12672-29-6	NL	<1.0 U	<1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	11097-69-1	NL	<1.0 U	<1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	11096-82-5	NL	<1.0 U	<1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides (ug/L)																			
2,4-D	94-75-7	NL	<1.0 U	<1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DB	94-82-6	NL	<1.0 U	<1.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silvex	93-72-1	NL	<0.10 U	<0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	93-76-5	NL	<0.10 U	<0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

mg/Kg - milligrams per kilogram
µg/L - micrograms per liter
J = The associated data is an estimated quantity.
R = The associated data is rejected.

NA = Not Analyzed
ND = Not Detected
NL = Not Listed

U = The analyte was analyzed for but not detected at, or above, the Method Detection Limit (MDL). The associated numerical value is the Practical Quantitation Limit (PQL).
UJ = The analyte was not detected at or above the PQL. However, the reported PQL is approximate and may be inaccurate or imprecise.
Bold indicates the analyte detected at a concentration greater than the MDL.
Yellow highlight indicates result is above the NYSDEC Part 375-6.8(b) Restricted Use Soil Cleanup Objective Commercial value.
[1] Guidance or Standard Values - NYSDEC, Division of Water, TOGS (1.1.1) - 6 NYCRR 703.5 [NYSDEC, 1998].

Table 5-6
Soil Vapor Intrusion Evaluation Results
Metropolitan Former MGP Site, Brooklyn, New York

Type of Sample	CAS No.	Typical Background Indoor Air Concentrations (Non-Residential)[3]	Ambient	Indoor Air	Sub-Slab Soil Vapor	Indoor Air	Indoor Air	Sub-Slab Soil Vapor	Ambient	Indoor Air	Sub-Slab Soil Vapor	Ambient	Indoor Air	Sub-Slab Soil Vapor
Sample ID			AMB-1	IA-1	SV-1	IA-2	IA-2 Dup	SV-2	AMB-3	IA-3	SV-3	AMB-2	IA-4	SV-4
Sampling Date			3/31/2010	3/31/2010	3/31/2010	3/31/2010	3/31/2010	3/31/2010	4/2/2011	4/2/2011	4/2/2011	3/19/2011	3/19/2011	3/19/2011
Compound (µg/m³)														
Possibly MGP Related or Other Sources [1]														
1,2,4-Trimethylbenzene	95-63-6	9.5	0.75 U	**0.88**	0.76 U	**0.82**	**1.0**	0.79 U	0.787 U	**2.85**	**1.43**	0.787 U	**2.16**	**2.90**
1,3,5-Trimethylbenzene	108-67-8	3.7	0.75 U	0.78 U	0.76 U	0.79 U	0.78 U	0.79 U	0.787 U	**0.885**	0.787 U	0.787 U	0.787 U	**0.787**
2,2,4-Trimethylpentane	540-84-1	NL	3.6 U	3.7 U	3.6 U	3.8 U	3.7 U	3.8 U	3.74 U	**5.56**	3.74 U	3.74 U	3.74 U	3.74 U
2,3-Dimethylpentane	565-59-3	NL	3.1 U	3.2 U	3.2 U	3.3 U	3.2 U	3.3 U	3.28 U	**0.820 J**	3.28 U	3.28 U	3.28 U	3.28 U
2-Methylpentane	107-83-5	NL	2.7 U	2.8 U	2.7 U	2.8 U	2.8 U	2.8 U	**0.634 J**	**3.52**	2.82 U	2.82 U	**0.881 J**	2.82 U
4-Ethyltoluene	622-96-8	3.6	0.75 U	0.78 U	0.76 U	0.79 U	**0.88**	0.79 U	3.93 U	**0.787 J**	3.93 U	3.93 U	**0.836 J**	**1.18 J**
Benzene	71-43-2	9.4	**0.57**	**1.0**	**3.9**	**0.88**	**0.84**	**0.60**	**0.671**	**4.82**	0.511 U	**0.543**	**0.703**	0.511 U
Carbon Disulfide	75-15-0	4.2	2.4 U	2.5 U	**6.3**	2.5 U	2.5 U	2.5 U	2.49 U	2.49 U	2.49 U	2.49 U	2.49 U	**0.934 J**
Cyclohexane	110-82-7	NL	0.52 U	0.54 U	1.2	0.55 U	0.54 U	**0.75**	2.75 U	**0.688**	2.75 U	2.75 U	2.75 U	2.75 U
Ethylbenzene	100-41-4	5.7	0.66 U	0.69 U	0.67 U	0.70 U	0.69 U	0.70 U	0.695 U	**6.56**	**0.956**	0.695 U	**0.782**	0.695 U
Heptane	142-82-5	NL	0.62 U	**0.80**	0.64 U	0.66 U	**0.67**	**1.0**	3.28 U	**1.48 J**	3.28 U	3.28 U	**0.820 J**	3.28 U
Hexane	110-54-3	10.2	0.54 U	**0.66**	0.55 U	**1.0**	**0.88**	**1.6**	**0.634 J**	**2.26 J**	2.82 U	2.82 U	**0.811 J**	2.82 U
Indan	496-11-7	NL	3.7 U	3.8 U	3.7 U	3.9 U	3.8 U	3.9 U	3.87 U	3.87 U	3.87 U	3.87 U	3.87 U	3.87 U
Indene	95-13-6	NL	3.6 U	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Isopentane	78-784	NL	2.2 U	**40**	2.3 U	**45**	**54**	2.4 U	**12.1**	**31.8**	**1.56 J**	**4.07**	**10.1**	**1.83 J**
Naphthalene	91-20-3	5.1	4.0 U	4.1 U	4.1 U	4.2 U	4.1 U	4.2 U	4.19 U	4.19 U	4.19 U	4.19 U	4.19 U	**1.42 J**
Styrene	100-42-5	1.9	0.65 U	0.67 U	0.66 U	0.68 U	0.67 U	0.68 U	0.682 U	**1.32**	0.682 U	0.682 U	0.682 U	0.682 U
Thiophene	110-02-1	NL	2.6 U	2.7 U	2.7 U	2.8 U	2.7 U	2.8 U	2.75 U	2.75 U	2.75 U	2.75 U	2.75 U	2.75 U
Toluene	108-88-3	43	**1.9**	**3.0**	**1.8**	**3.7**	**3.2**	**4.0**	**1.09**	**16.1**	**4.18**	**0.64**	**10.6**	**5.24**
m/p-Xylenes	136777-61-2	22.2	**0.94**	**1.4**	0.67 U	**2.0**	**1.7**	0.70 U	0.695 U	**12.2**	**3.87**	0.695 U	**2.08**	**2.48**
o-Xylene	95-47-6	7.9	0.66 U	0.69 U	0.67 U	0.70 U	0.69 U	0.70 U	0.695 U	**5.52**	0.912	1.912	**0.869**	**0.869**
1,2,3-Trimethylbenzene	526-73-8	NL	3.7 U	3.9 U	3.8 U	4.0 U	3.9 U	4.0 U	3.93 U	3.93 U	3.93 U	3.93 U	3.93 U	3.93 U
1,2,4,5-Tetramethylbenzene	95-93-2	NL	(TIC) U	(TIC) U	(TIC) U	(TIC) U	(TIC) U	U	4.39 U	4.39 U	4.39 U	4.39 U	4.39 U	4.39 U
1-Methylnaphthalene	90-12-0	NL	(TIC) U	(TIC) U	(TIC) U	(TIC) U	(TIC) U	U	11.6 UJ	11.6 UJ	11.6 UJ	11.6 UJ	11.6 UJ	11.6 UJ
2-Chlorotoluene	95-49-8	NL	(TIC) U	(TIC) U	(TIC) U	(TIC) U	(TIC) U	U	NS	NS	NS	NS	NS	NS
2-Methylnaphthalene	91-57-6	NL	(TIC) U	(TIC) U	(TIC) U	(TIC) U	(TIC) U	U	11.6 UJ	11.6 UJ	11.6 UJ	11.6 UJ	11.6 UJ	11.6 UJ
Not MGP Related [2]														
1,1,1-Trichloroethane (1,1,1-TCA)	71-55-6	20.6	0.83 U	0.86 U	**3.6**	0.88 U	0.86 U	**4.4**	0.873 U	0.873 U	**1.75**	0.873 U	0.873 U	0.873 U
1,1,2,2-Tetrachloroethane	79-34-5	NL	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U
1,1,2-Trichloroethane	79-00-5	<1.5	0.83 U	0.86 U	0.84 U	0.88 U	0.86 U	0.88 U	0.873 U	0.873 U	0.873 U	0.873 U	0.873 U	0.873 U
1,1-Dichloroethane	75-34-3	<0.7	0.62 U	0.64 U	0.63 U	0.65 U	0.64 U	0.65 U	0.648 U	0.648 U	**0.648**	0.648 U	0.648 U	0.648 U
1,1-Dichloroethene	75-35-4	<1.4	0.60 U	0.63 U	0.61 U	0.64 U	0.63 U	0.64 U	0.634 U	0.634 U	**1.18**	0.634 U	0.634 U	0.634 U
1,2,4-Trichlorobenzene	120-82-1	<6.8	5.6 U	5.9 U	5.8 U	6.0 U	5.9 U	6.0 U	5.94 U	5.94 U	5.94 U	5.94 U	5.94 U	5.94 U
1,2-Dibromoethane (EDB)	106-93-4	<1.5	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.23 U	1.23 U	1.23 U	1.23 U	1.23 U	1.23 U
1,2-Dichlorobenzene	95-50-1	<1.2	0.91 U	0.95 U	0.93 U	0.97 U	0.95 U	**2.1**	0.962 U	0.962 U	0.962 U	0.962 U	0.962 U	0.962 U
1,2-Dichloroethane	107-06-2	<0.9	0.62 U	0.64 U	0.63 U	0.65 U	0.64 U	0.65 U	0.648 U	**0.809**	0.648 U	0.648 U	0.648 U	0.648 U
1,2-Dichloropropane	78-87-5	<1.6	0.70 U	0.73 U	0.72 U	0.74 U	0.73 U	0.74 U	0.739 U	**4.76**	0.739 U	0.739 U	0.739 U	0.739 U
1,3-Butadiene	106-99-0	<3.0	0.34 U	0.35 U	0.34 U	0.36 U	0.35 U	0.36 U	1.77 U	1.77 U	1.77 U	1.77 U	1.77 U	1.77 U
1.3-Dichlorobenzene	541-73-1	<2.4	0.91 U	0.95 U	0.93 U	0.97 U	0.95 U	0.97 U	0.962 U	0.962 U	0.962 U	0.962 U	0.962 U	0.962 U
1,4-Dichlorobenzene	106-46-7	5.5	0.91 U	**5.8**	0.93 U	**2.5**	**2.6**	0.97 U	0.962 U	0.962 U	0.962 U	0.962 U	0.962 U	0.962 U
1,4-Dioxane	123-91-1	NL	0.55 U	0.57 U	0.56 U	0.58 U	0.57 U	0.58 U	2.88 U	2.88 U	2.88 U	2.88 U	2.88 U	2.88 U

Notes:

µg/Kg - micrograms per kilogram

[1] These compounds may be related to either MGP sources or non-MGP sources, or both. MGP sources include MGP tars and petroleum feedstocks used in MGP processes, such as the carburetted water gas process. Non-MGP sources include cleaning products, floor wax and polish, vehicle exhaust, construction materials, and cigarette smoke.

[2] These compounds are not related to MGP sources and are present due to non-MGP sources, such as vehicle exhaust, heating and air conditioning systems, cleaning agents, art supplies, paints, etc.

[3] Typical non-residential background indoor air concentrations are equal to the 90th percentile values observed by the USEPA in a 2001 study which are the values recommended for comparison in the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (NYSDOH, October

ND = Not Detected

NL = Not Listed

NS = Analyte was not measured because it was not part of the QAPP target compound list.

J = The associated numerical value is an estimated quantity.

TIC - Compound was analyzed using a GC/MS library search.

U = The analyte was analyzed for but not detected at, or above, the Method Detection Limit (MDL). The associated numerical value is the Practical Quantitation Limit (PQL).

UJ = The analyte was not detected at or above the PQL. However, the reported PQL is approximate and may be inaccurate or imprecise.

Bold indicates the analyte detected at a concentration greater than the MDL.

Bold and Green Highlighting indicate that the ambient air and/or indoor air result is above the NYSDOH Background Indoor Air Concentrations. Soil Vapor results are not highlighted based on a comparison to these background concentrations.

Table 5-6 continued
Soil Vapor Intrusion Evaluation Results
Metropolitan Former MGP Site, Brooklyn, New York

Type of Sample	CAS No.	Typical Background Indoor Air Concentrations (Non-Residential)[3]	Ambient	Indoor Air	Sub-Slab Soil Vapor	Indoor Air	Indoor Air	Sub-Slab Soil Vapor	Ambient	Indoor Air	Sub-Slab Soil Vapor	Ambient	Indoor Air	Sub-Slab Soil Vapor
Sample ID			AMB-1	IA-1	SV-1	IA-2	IA-2 Dup	SV-2	AMB-3	IA-3	SV-3	AMB-2	IA-4	SV-4
Sampling Date			3/31/2010	3/31/2010	3/31/2010	3/31/2010	3/31/2010	3/31/2010	4/2/2011	4/2/2011	4/2/2011	3/19/2011	3/19/2011	3/19/2011
Compound (µg/m³)														
2-Butanone (MEK)	78-93-3	12	**1.3**	**0.97**	**2.3**	**2.3**	**1.0**	**3.4**	**0.649 J**	**3.98**	**1.30 J**	**0.531 J**	**1.33 J**	**2.27 J**
2-Hexanone	591-78-6	NL	3.1 U	3.2 U	3.2 U	3.3 U	3.2 U	3.3 U	3.28 U	3.28 U	3.28 U	3.28 U	3.28 U	3.28 U
4-Methyl-2-pentanone (MIBK)	108-10-1	6	0.62 U	0.65 U	0.63 U	0.66 U	0.65 U	0.66 U	3.28 U	3.28 U	3.28 U	3.28 U	3.28 U	3.28 U
Acetone	67-64-1	98.9	**6.4**	**16**	**18**	**20**	**15**	**120**	**6.37**	**73.0**	**3.68**	**4.66**	**31.5**	**6.89**
Benzyl chloride	100-44-7	NL	0.79 U	0.82 U	0.80 U	0.83 U	0.82 U	0.83 U	0.828 U	0.828 U	0.828 U	0.828 U	0.828 U	0.828 U
Bromodichloromethane	75-27-4	NL	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	**1.3**	5.36 U	5.36 U	5.36 U	5.36 U	5.36 U	5.36 U
Bromoform	75-25-2	NL	1.6 U	1.6 U	1.6 U	1.7 U	1.6 U	1.7 U	8.27 U	8.27 U	8.27 U	8.27 U	8.27 U	8.27 U
Bromomethane	74-83-9	<1.7	0.59 U	0.61 U	0.60 U	0.62 U	0.61 U	0.62 U	0.622 U	0.622 U	0.622 U	0.622 U	0.622 U	0.622 U
Carbon Tetrachloride	56-23-5	<1.3	0.96 U	0.99 U	0.98 U	1.0 U	0.99 U	1.0 U	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U
Chlorobenzene	108-90-7	<0.9	0.70 U	0.73 U	0.71 U	0.74 U	0.73 U	0.74 U	0.737 U	0.737 U	0.737 U	0.737 U	0.737 U	0.737 U
Chloroethane	75-00-3	<1.1	0.40 U	0.42 U	0.41 U	0.42 U	0.42 U	0.42 U	0.422 U	0.422 U	0.422 U	0.422 U	0.422 U	0.422 U
Chloroform	67-66-3	1.1	0.74 U	**2.0**	**6.8**	**1.1**	**1.1**	**36**	0.781 U	**0.830**	**1.12**	0.781 U	**0.826**	**1.42**
Chloromethane	74-87-3	3.7	**1.2**	0.33 U	0.32 U	**1.3**	**1.5**	0.33 U	**0.929**	**0.909**	0.330 U	**0.950**	0.330 U	0.330 U
cis-1,2-Dichloroethene	156-59-2	<1.9	0.60 U	0.63 U	0.61 U	0.64 U	0.63 U	0.64 U	0.634 U	0.634 U	0.634 U	0.634 U	0.634 U	0.634 U
cis-1,3-Dichloropropene	10061-01-5	<2.3	0.69 U	0.72 U	0.70 U	0.73 U	0.72 U	0.73 U	0.726 U	0.726 U	0.726 U	0.726 U	0.726 U	0.726 U
Dibromochloromethane	124-48-1	NL	1.3 U	1.3 U	1.3 U	1.4 U	1.3 U	1.4 U	6.81 U	6.81 U	6.81 U	6.81 U	6.81 U	6.81 U
Ethanol	64-17-5	NL	**13 J**	**330 J**	**4.4 J**	**230 J**	**260 J**	**5.4 J**	**4.88**	**60.2**	**1.66**	**5.99**	**48.1**	**10.6**
Trichlorofluoromethane (Freon 11)	75-69-4	18.1	**7.3**	**16**	**7.5**	**19**	**21**	**20**	**1.57**	**5.23**	**3.88**	**1.63**	**2.3**	**41.5**
1,1,2-Trichlorotrifluoroethane (Freon 113)	76-13-1	NL	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.23 U	1.23 U	1.23 U	1.23 U	1.23 U	1.23 U
1,2-Dichlorotetrafluoroethane	76-14-2	NL	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.12 U	1.12 U	1.12 U	1.12 U	1.12 U	1.12 U
Dichlorodifluoromethane (Freon 12)	75-71-8	16.5	**6.2**	**5.1**	**18**	**7.4**	**8.2**	**43**	**2.52**	**2.27**	**2.67**	**2.52**	**2.08**	**2.13**
Hexachlorobutadiene (C-46)	87-68-3	<6.8	8.1 U	8.4 U	8.3 U	8.6 U	8.4 U	8.6 U	8.53 U	8.53 U	8.53 U	8.53 U	8.53 U	8.53 U
Methyl tert-Butyl Ether (MTBE)	1634-04-4	11.5	0.55 U	0.57 U	0.56 U	0.58 U	0.57 U	0.58 U	2.88 U	2.88 U	2.88 U	2.88 U	2.88 U	2.88 U
Methylene Chloride (Dichloromethane)	75-09-2	10	**1.0**	1.1 U	1.1 U	**1.7**	**1.6**	1.1 U	6.95 U	9.98 U	6.95 U	6.95 U	6.95 U	6.95 U
2-Propanol	67-63-0	NL	**2.8**	**40**	1.9 U	**26**	**29**	**14**	**2.46**	**3.96**	**1.30 J**	**4.01**	**4.25**	**2.16**
Propene	115-07-1	NL	1.3 U	1.4 U	1.3 U	1.4 U	1.4 U	1.4 U	1.38 U	**3.53**	1.38 U	1.38 U	1.38 U	1.38 U
Tetrachloroethene (PCE)	127-18-4	15.9	1.0 U	1.1 U	**3.5**	1.1 U	1.1 U	**21**	1.09 U	**1.22**	**12.3**	1.09 U	1.09 U	**11.5**
Tetrahydrofuran	109-99-9	NL	2.2 U	2.3 U	2.3 U	2.4 U	2.3 U	2.4 U	2.36 U	2.36 U	2.36 U	2.36 U	2.36 U	2.36 U
trans-1,2-Dichloroethene	156-60-5	NL	0.60 U	0.63 U	0.61 U	0.64 U	0.63 U	0.64 U	3.17 U	3.17 U	3.17 U	3.17 U	3.17 U	3.17 U
trans-1,3-Dichloropropene	10061-02-6	<1.3	0.69 U	0.72 U	0.70 U	0.73 U	0.72 U	0.73 U	0.726 U	0.726 U	0.726 U	0.726 U	0.726 U	0.726 U
Trichloroethene (TCE)	79-01-6	4.2	0.82 U	0.85 U	**0.84**	0.86 U	0.85 U	0.86 U	0.860 U	0.860 U	0.860 U	0.860 U	0.860 U	0.860 U
Vinyl Chloride	75-01-4	<1.9	0.39 U	0.40 U	0.40 U	0.41 U	0.40 U	0.41 U	0.409 U	0.409 U	0.409 U	0.409 U	0.409 U	0.409 U
Helium (percent)	7440-59-7	NA			0.078 U			0.080 U			0.12			0.15

Notes:
µg/Kg - micrograms per kilogram
[1] These compounds may be related to either MGP sources or non-MGP sources, or both. MGP sources include MGP tars and petroleum feedstocks used in MGP processes, such as the carburetted water gas process. Non-MGP sources include cleaning products, floor wax and polish, vehicle exhaust, construction materials, and cigarette smoke.
[2] These compounds are not related to MGP sources and are present due to non-MGP sources, such as vehicle exhaust, heating and air conditioning systems, cleaning agents, art supplies, paints, etc.
[3] Typical non-residential background indoor air concentrations are equal to the 90th percentile values observed by the USEPA in a 2001 study which are the values recommended for comparison in the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (NYSDOH, October
ND = Not Detected
NL = Not Listed
NS = Analyte was not measured because it was not part of the QAPP target compound list.
J = The associated numerical value is an estimated quantity.
TIC - Compound was analyzed using a GC/MS library search.
U = The analyte was analyzed for but not detected at, or above, the Method Detection Limit (MDL). The associated numerical value is the Practical Quantitation Limit (PQL).
UJ = The analyte was not detected at or above the PQL. However, the reported PQL is approximate and may be inaccurate or imprecise.
Bold indicates the analyte detected at a concentration greater than the MDL.
Bold and Green Highlighting indicate that the ambient air and/or indoor air result is above the NYSDOH Background Indoor Air Concentrations. Soil Vapor results are not highlighted based on a comparison to these background concentrations.

Figures

AECOM

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Location Map

DATE: 11/7/2013	DRWN: HKM	60277889	FIGURE 1-1

Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI_2013_06\Figure_1-1_Site_Locus.mxd

AECOM

1 inch = 100 feet

0 50 100 200 Feet

Source: Bing Maps Aerial 2010 Microsoft

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Aerial Site Location Map

DATE: 11/7/2013 | DRWN: HKM | FIGURE 2-1

Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI_2013_06\Figure_2-1_Aerial_Site_Locus.mxd

Path: J:\Rem Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2013 06\Figure 2-2 Historic and Current Site Features Map.mxd

AECOM

Notes/Information Sources:
Dates represent first and subsequent appearances on Sanborn maps dated 1886, 1904, 1915, 1938, 1950, 1969 and are summarized for the feature if shown on multiple Sanborn maps.
BUG Drawing #1G120 Metropolian Works Small Property Plan dated June 25, 1909.
BUG Drawing #2G126 Metropolian Works Small Property Plan dated June 29, 1921.

1 inch = 80 feet

0 40 80 160 Feet

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Historical and Current Site Features Map

DATE: 11/7/2013	DRWN: HKM		FIGURE 2-2

Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI_2013_06\Figure_2-3_Parcel_Map.mxd

AECOM

Data Source: NYC OASIS 2011

1 inch = 100 feet

0 50 100 200 Feet

National Grid Former Metropolitan Works MGP Site Brooklyn, NY	Parcel Location Map
DATE: 11/7/2013 DRWN: HKM	FIGURE 2-3

Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI_2013_06\Figure_2-4_Historical Gowanus Creek and Marsh Boundary and Current Gowanus Canal

AECOM

Source:
Gowanus Creek and Marsh Boundary: 1766 Historical Survey Map, 1886 Sanborn Map, and 1904 Sanborn Map.
Current Building Footprint/Gowanus Canal: NYC DOITT 2009.

1 inch = 150 feet

0 75 150 300 Feet

National Grid Former Metropolitan Works MGP Site Brooklyn, NY	Historical Gowanus Creek and Marsh Boundary and Current Gowanus Canal Boundary
DATE: 11/7/2013 DRWN: HKM	FIGURE 2-4

AECOM

1 inch = 100 feet

0 50 100 200 Feet

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Historic Investigation and Remediation Locations

DATE: 11/7/2013 | DRWN: HKM | FIGURE 2-5

Path: J:\Rem Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2013 06\Figure 2-5 Previous Investigation Locations Prior to RI.mxd

Legend
RI Monitoring Wells
RI Soil Borings
Indoor Air/Soil Vapor Sample
Surface Sample
Current Building Footprint (NYC DOITT 2009)
Historic MGP Boundary
Current Site Boundary
MW-25I/MW-25S/SB-25
MW-23D/SB-23
SB-24
Lowes Parking Lot
Lowes 118 2nd Avenue
MW-22I/MW-22D/SB-22
MW-21D/SB-21
10 ST
2 AV
11 ST
11th STREET BASIN
Pathmark 1-37 12th Street
Former 11th Street Right-of-Way
GOWANUS CANAL
SS-3
SS-2
IA/SV-2
IA/SV-1
SS-1
MW-9S/MW-9I/MW-9D/SB-9
Greco Brothers Ready Mix 381 Hamilton Avenue
SMITH ST
BUSH ST
MW-1D/MW1-I/SB-1
MW-1S
NYC Department of Sanitation 127 2nd Avenue
MW-20S/MW-20I/SB-20
SB-17
SB-16
MW-8S/MW-8I/SB-8
12 ST
MW-4D2
MW-4D1
MW-4S/MW-4I/SB-4
MW-19S/MW-19I/SB-19
MW-2D/SB-2
SB-14
SB-15
SB-18
SB-13
MW-3S/MW-3I/SB-3
TP-2
TP-1
IA/SV-4
IA/SV-3
12-60 12th Street
SB-10
SB-11
SB-12
HAMILTON PL
Pathmark Parking Lot
MW-6S/MW-6I/SB-6
MW7-S/MW-7I/SB-7
GOWANUS EXWY (ELEVATED)
SB-26
MW-5S/MW-5I/MW-5D/SB-5
13 ST
Former 13th Street Right-of-Way
1 inch = 100 feet
0 50 100 200 Feet
AECOM
National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY
Remedial Investigation
Sample Locations
DATE: 11/7/2013
DRWN: HKM
FIGURE 3-1
Path: J:\Rem Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2013 06\Figure 3-1 Remedial Locations.mxd

Legend
RI Monitoring Wells
RI Soil Borings
Existing Monitoring Well
Existing Soil Boring
Existing Sediment Sample
Current Building Footprint (NYC DOITT 2009)
Geologic Cross Section Location
Historic MGP Boundary
Current Site Boundary
Inset
See Inset
11th STREET BASIN
GOWANUS CANAL
GARNET ST
CENTRE ST
SMITH ST
BUSH ST
GOWANUS EXWY (ELEVATED)
HAMILTON AV
HAMILTON PL
12 ST
13 ST
11 ST
2 AV
A
A'
B
B'
C
C'
D
D'
CGSB-146
CGSB-147
PB-1
PB-2
PB-3
PB-4
PB-5
PB-6
PB-7
GCMW-47
GCMW-45
GCMW-46
GCMW-44
GC-SED-58C
GC-SED-59
GC-SED-60B
MW-25I/SB-25
MW-23D/SB-23
MW-7/DP-13
SB-24
MW-5/DP-11
GC-GP-29
GS-SED-63
GC-SED-62C
MW-6/DP-12
MW-22D/SB-22
MW-21D/SB-21
MW-9D/SB-9
GC-SED-64D
MW-20I/SB-20
GC-SED-65
GC-SED-66C
MW-19S/SB-19
MW-4D2
MW-4I/SB-4
MW-4D1
SB-17
SB-16
SB-10
SB-11
SB-12
SB-13
SB-14
SB-15
SB-18
SB-26
MW-5D/SB-5
MW-6I/SB-6
MW-7I/SB-7
MW-3I/SB-3
MW-8I/SB-8
MW-1D/SB-1
MW-2D/SB-2
MW-2/DP-1
MW-3/DP-9
RB-1
RB-2
RB-3
RB-4
RB-5
RB-6
RB-7
RB-8
RB-9
DP-10
DP-2
LB-1
LB-2
LB-3
LB-4
LB-5
LB-6
LB-7
LB-8
LB-9
GP-6
GP-17
GP-18
GP-19
GP-20
GP-21
GP-22
GP-25
GP-27
GP-28
GP-30
GP-32
GP-33
GP-41
GP-42
GP-44
GP-45
GP-46
GP-47
GP-48
GP-49
GP-50
GP-51
GP-53
GP-54
RW-1
RW-1S
RW-2
RW-2S
RW-3
RW-4
RW-5
RW-6
RW-7
RW-8
RW-9
RW-10
RW-11
RW-12
RW-13
RW-14
RW-15
RW-16
RW-17
RW-18
RW-19
RW-20
RW-21
RW-22
RW-23
RW-25
RW-27
RW-29
RW-30
RW-31
RW-32
RW-33
RW-34
RW-35
RW-36
RW-37
RW-38
RW-39
RW-40
RW-41
RW-42
RW-43
RW-44
B-21
PB-8
AECOM
1 inch = 100 feet
0 50 100 200 Feet
National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY
Geologic Cross-Section Locations
DATE: 11/7/2013
DRWN: HKM
FIGURE 4-1
Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI_2013_06\Figure_4-1_Geologic_Crossections_Locations.mxd

LEGEND

- FILL
- MEADOW MAT
- WELL GRADED SAND
- GARDINERS CLAY
- ORGANIC SILT
- SAND/GRAVEL
- SAND/SILT
- SILT/SAND
- INTERBEDDED SAND SILT AND CLAY
- GRAVEL (JAMECO)
- TAR SATURATED
- LENSES WITH TAR SATURATION AND TAR/NAPHTHALENE ODORS
- BLEBS, GLOBS, LENSES, COATINGS AND TAR/NAPHTHALENE ODORS
- TAR STAINING, SHEEN AND TAR/NAPHTHALENE ODORS
- TAR/ NAPHTHALENE-LIKE ODORS
- SHEEN/STAINING PETROLEUM ODORS
- PETROLEUM ODORS
- CANAL SURFACE WATER ELEVATION
- HT AVERAGE HIGH TIDE
- LT AVERAGE LOW TIDE
- GROUNDWATER TABLE ELEVATION (3-14-12)
- I, D, D1, D2 PIEZOMETRIC SURFACE MEASURED IN INTERMEDIATE, DEEP, AND DEEP 1, AND DEEP 2 WELLS

NOTES:

1. THIS FIGURE PROVIDES A COMPREHENSIVE VISUAL SUMMARY OF THE VISIBLE IMPACTS OBSERVED IN THE SITE SUBSURFACE BY AECOM DURING THE REMIDIAL INVESTIGATION AND BY OTHERS PERFORMING GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATIONS WITHIN AND OUTSIDE OF THE SITE BOUNDARY. THE ONLY IMPACTS OBSERVED DIRECTLY BY AECOM INCLUDE THE BORINGS ADVANCED DURING THE RI. LOGS FOR ALL THE BORINGS PRESENTED ON THIS FIGURE ARE INCLUDED IN APPENDIX C OF THE RI REPORT.
2. SEDIMENT BORINGS AND GOWANUS CANAL DETAIL WERE INCLUDED BASED ON CROSS SECTION V-V' PRESENTED IN THE APRIL 2007 GEI REMEDIAL INVESTIGATION TECHNICAL REPORT, GOWANUS CANAL, BROOKLYN, NY. CROSS SECTION V-V' IS INCLUDED IN APPENDIX C OF THE RI REPORT.
3. ELEVATIONS IN FEET NAVD 88.

AECOM

NATIONAL GRID
METROPOLITAN FORMER MGP SITE

GEOLOGIC CROSS SECTION A-A'

DATE: 07/21/14 | DRWN: RCW

FIGURE 4-2

File: \\USNTF1FP001\Jobs\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\CADD\60137361-X01.dwg Layout: A-A User: warrenr Plotted: Jul 21, 2014 - 12:18pm

LEGEND

- TAR SATURATED
- LENSES WITH TAR SATURATION AND TAR/NAPHTHALENE ODORS
- BLEBS, GLOBS, LENSES, COATINGS AND TAR/NAPHTHALENE ODORS
- TAR STAINING, SHEEN AND TAR/NAPHTHALENE ODORS
- TAR/ NAPHTHALENE-LIKE ODORS
- SHEEN/STAINING PETROLEUM ODORS
- PETROLEUM ODORS
- MEADOW MAT
- SAND/SILT
- SILT/SAND
- FILL
- ORGANIC SILT
- GRAVEL (JAMECO)
- SAND/GRAVEL
- GARDINERS CLAY
- CANAL SURFACE WATER ELEVATION
- HT — AVERAGE HIGH TIDE
- LT — AVERAGE LOW TIDE
- GROUNDWATER TABLE ELEVATION (3-14-12)
- I, D, D1, D2 — PIEZOMETRIC SURFACE MEASURED IN INTERMEDIATE, DEEP, AND DEEP 1, AND DEEP 2 WELLS

NOTES:

1. THIS FIGURE PROVIDES A COMPREHENSIVE VISUAL SUMMARY OF THE VISIBLE IMPACTS OBSERVED IN THE SITE SUBSURFACE BY AECOM DURING THE REMIDIAL INVESTIGATION AND BY OTHERS PERFORMING GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATIONS WITHIN AND OUTSIDE OF THE SITE BOUNDARY. THE ONLY IMPACTS OBSERVED DIRECTLY BY AECOM INCLUDE THE BORINGS ADVANCED DURING THE RI. LOGS FOR ALL THE BORINGS PRESENTED ON THIS FIGURE ARE INCLUDED IN APPENDIX C OF THE RI REPORT.
2. ELEVATIONS IN FEET NAVD 88.

AECOM

NATIONAL GRID
METROPOLITAN FORMER MGP SITE

GEOLOGIC CROSS SECTION B-B'

DATE: 07/21/14 | DRWN: RCW

FIGURE 4-3

File: \\USWTF1FP001\Jobs\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\CADD\60137361-X01.dwg Layout: B-B User: warrenr Plotted: Jul 21, 2014 - 2:36pm

LEGEND

- TAR SATURATED
- LENSES WITH TAR SATURATION AND TAR/NAPHTHALENE ODORS
- BLEBS, GLOBS, LENSES, COATINGS AND TAR/NAPHTHALENE ODORS
- TAR STAINING, SHEEN AND TAR/NAPHTHALENE ODORS
- TAR/ NAPHTHALENE-LIKE ODORS
- SHEEN/STAINING PETROLEUM ODORS
- PETROLEUM ODORS
- FILL
- MEADOW MAT
- SAND/GRAVEL
- SAND/SILT
- ORGANIC SILT
- SAND
- INTERBEDDED SAND, SILT AND CLAY
- CANAL SURFACE WATER ELEVATION
- HT AVERAGE HIGH TIDE
- LT AVERAGE LOW TIDE
- GROUNDWATER TABLE ELEVATION (3-14-12)
- I, D PIEZOMETRIC SURFACE MEASURED IN INTERMEDIATE, AND DEEP WELLS

NOTES:

1. THIS FIGURE PROVIDES A COMPREHENSIVE VISUAL SUMMARY OF THE VISIBLE IMPACTS OBSERVED IN THE SITE SUBSURFACE BY AECOM DURING THE REMIDIAL INVESTIGATION AND BY OTHERS PERFORMING GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATIONS WITHIN AND OUTSIDE OF THE SITE BOUNDARY. THE ONLY IMPACTS OBSERVED DIRECTLY BY AECOM INCLUDE THE BORINGS ADVANCED DURING THE RI. LOGS FOR ALL THE BORINGS PRESENTED ON THIS FIGURE ARE INCLUDED IN APPENDIX C OF THE RI REPORT.
2. GOWANUS CANAL DETAIL WAS APPROXIMATED BASED ON CROSS SECTIONS U-U' AND V-V' PRESENTED IN THE APRIL 2007 GEI REMEDIAL INVESTIGATION TECHNICAL REPORT, GOWANUS CANAL, BROOKLYN, NY. CROSS SECTIONS U-U' AND V-V' ARE INCLUDED IN APPENDIX C OF THE RI REPORT.
3. ELEVATIONS IN FEET NAVD 88.

AECOM

NATIONAL GRID METROPOLITAN FORMER MGP SITE			GEOLOGIC CROSS SECTION C-C'
DATE: 07/21/14	DRWN: RCW		FIGURE 4-4

File: \\USWT1FP001\Jobs\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\CADD\60137361-X01.dwg Layout: C-C User: warrenr Plotted: Jul 21, 2014 - 1:29pm

LEGEND

- TAR SATURATED
- LENSES WITH TAR SATURATION AND TAR/NAPHTHALENE ODORS
- BLEBS, GLOBS, LENSES, COATINGS AND TAR/NAPHTHALENE ODORS
- TAR STAINING, SHEEN AND TAR/NAPHTHALENE ODORS
- TAR/ NAPHTHALENE-LIKE ODORS
- SHEEN/STAINING PETROLEUM ODORS
- PETROLEUM ODORS
- FILL
- MEADOW MAT
- SAND/SILT
- SAND/GRAVEL
- SILT/CLAY
- SAND
- INTERBEDDED SAND, SILT AND CLAY
- ORGANIC SILT
- HT AVERAGE HIGH TIDE
- LT AVERAGE LOW TIDE
- CANAL SURFACE WATER ELEVATION
- GROUNDWATER TABLE ELEVATION (3-14-12)
- I, D PIEZOMETRIC SURFACE MEASURED IN INTERMEDIATE, AND DEEP WELLS

NOTES:

1. THIS FIGURE PROVIDES A COMPREHENSIVE VISUAL SUMMARY OF THE VISIBLE IMPACTS OBSERVED IN THE SITE SUBSURFACE BY AECOM DURING THE REMIDIAL INVESTIGATION AND BY OTHERS PERFORMING GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATIONS WITHIN AND OUTSIDE OF THE SITE BOUNDARY. THE ONLY IMPACTS OBSERVED DIRECTLY BY AECOM INCLUDE THE BORINGS ADVANCED DURING THE RI. LOGS FOR ALL THE BORINGS PRESENTED ON THIS FIGURE ARE INCLUDED IN APPENDIX C OF THE RI REPORT.
2. SEDIMENT BORINGS AND GOWANUS CANAL DETAIL WERE INCLUDED BASED ON CROSS SECTION U-U' PRESENTED IN THE APRIL 2007 GEI REMEDIAL INVESTIGATION TECHNICAL REPORT, GOWANUS CANAL, BROOKLYN, NY. CROSS SECTION U-U' IS INCLUDED IN APPENDIX C OF THE RI REPORT.
3. ELEVATIONS IN FEET NAVD 88.

AECOM

NATIONAL GRID
METROPOLITAN FORMER MGP SITE

GEOLOGIC CROSS SECTION D-D'

DATE: 07/21/14 | DRWN: RCW

FIGURE 4-5

File: \\USWT1FP001\Jobs\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\CADD\60137361-X01.dwg Layout: D-D User: warrenr Plotted: Jul 21, 2014 - 2:37pm

AECOM

1 inch = 100 feet

0 50 100 200 Feet

Note:Groundwater elevations are relative to NAVD88.
(Ground surface elevation is approximately 10 ft NAVD88 at the Site)

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

March 14, 2012 Low Tide
Groundwater Contours Shallow Wells

DATE: 6/11/2014 | DRWN: HKM | FIGURE 4-6

Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2014 06\Figure 4-6 Low Tide Shallow.mxd

AECOM

1 inch = 100 feet

0 50 100 200 Feet

Note:Groundwater elevations are relative to NAVD88.
(Ground surface elevation is approximately 10 ft NAVD88 at the Site)

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

March 14, 2012 Low Tide
Groundwater Contours
Intermediate Wells

DATE: 6/11/2014 | DRWN: HKM | FIGURE 4-7

Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI_2014_06\Figure_4-7_Low_Tide_Intermediate.mxd

AECOM

1 inch = 80 feet

0 40 80 160 Feet

Note:Groundwater elevations are relative to NAVD88.
(Ground surface elevation is approximately 10 ft NAVD88 at the Site)

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

March 14, 2012 Low Tide
Groundwater Contours Deep Wells

DATE: 6/11/2014 | DRWN: HKM | FIGURE 4-8

Path: J:\Rem Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2014 06\Figure 4-8 Low Tide Deep.mxd

AECOM

1 inch = 80 feet

0 40 80 160 Feet

Note:Groundwater elevations are relative to NAVD88.
(Ground surface elevation is approximately 10 ft NAVD88 at the Site)

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Septermber 29, 2010 High Tide
Groundwater Contours Shallow Wells

DATE: 6/11/2014 | DRWN: HKM | FIGURE 4-9

Path: J:\Rem Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2014 06\Figure 4-9 High Tide Shallow.mxd

AECOM

1 inch = 80 feet

0 40 80 160 Feet

Note:Groundwater elevations are relative to NAVD88.
(Ground surface elevation is approximately 10 ft NAVD88 at the Site)

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

September 29, 2010 High Tide
Groundwater Contours
Intermediate Wells

DATE: 6/11/2014 | DRWN: HKM | FIGURE 4-10

Path: J:\Rem Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2014 06\Figure 4-10 High Tide Intermediate.mxd

1 inch = 80 feet

0 40 80 160 Feet

Note:Groundwater elevations are relative to NAVD88.
(Ground surface elevation is approximately 10 ft NAVD88 at the Site)

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

September, 29 2010 High Tide
Groundwater Contours Deep Wells

DATE: 6/11/2014 | DRWN: HKM | FIGURE 4-11

Path: J:\Rem Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2014 06\Figure 4-11 High Tide Deep.mxd

Figure 4-12
October 8 and 9, 2010 Groundwater Elevation Tidal Cycle Monitoring Results Shallow Wells

Notes:

1.) Tidal Influence
MW-3S: NO
MW-4S: YES
MW-5S: YES
MW-6S: NO
MW-7S: NO
MW-8S: NO

2.) Tide elevations from the Gowanus Bay, New York, NY MHV

3.) Groundwater elevations from October 8, 2010

4.) Groundwater elvations in feet NAVD88

5.) Tidal monitoring between Octobe 8, 2010 and October 9, 2010

Figure 4-13
October 8 and 9, 2010 Groundwater Elevation Tidal Cycle Monitoring Results Intermediate Wells

Notes:

1.)Tidal Infuence
MW-3I: NO
MW-4I: YES
MW-5I: YES
MW-6I: YES
MW-8I: YES

2.) Tide elevations from the Gowanus Bay, New York, NY MHV

3.) Groundwater elevations from October 8, 2010

4.) Groundwater elevations in feet NAVD88

5.) Tidal monitoring

Figure 4-14
October 8 and 9, 2010 Groundwater Elevation Tidal Cycle Monitoring Results Deep Wells

Notes:
1.) Tidal influence
MW-2D: YES
MW-5D: YES

2.) Tide elevations from the Gowanus Bay, New York, NY

3.) Groundwater elevations from October 8, 2010

4.) Groundwater elevations in feet NAVD88

5.) Tidal monitoring between October 8, 2010 and October 9, 2010

MW - 2D 725 ft from canal
MW - 5D 110 ft from canal
Surface Point 0 ft from canal

Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2014 06\Figure 5-1 RI Impacts 15to0.mxd

AECOM

Notes:
1. In general, only tar saturated impacts are illustrated for historic investigation locations.
2. Ground surface elevation is approximately 10 ft NAVD88 at the Site.

1 inch = 100 feet

0 50 100 200 Feet

National Grid Former Metropolitan Works MGP Site Brooklyn, NY	Visible Impacts Observed Between Ground Surface and 0 ft NAVD88
DATE: 9/4/2014 DRWN: HKM	FIGURE 5-1

Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI_2014_06\Figure_5-2_RI_Impacts_0to-15.mxd

AECOM

Notes:
1. In general, only tar saturated impacts are illustrated for historic investigation locations.
2. Ground surface elevation is approximately 10 ft NAVD88 at the Site.

1 inch = 100 feet

0 50 100 200 Feet

National Grid Former Metropolitan Works MGP Site Brooklyn, NY	Visible Impacts Observed Between Elevation 0 and -15 ft NAVD88
DATE: 9/4/2014 DRWN: HKM	FIGURE 5-2

Notes:
1. In general, only tar saturated impacts are illustrated for historic investigation locations.
2. Ground surface elevation is approximately 10 ft NAVD88 at the Site.

1 inch = 100 feet

0 50 100 200 Feet

AECOM

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Visible Impacts Observed Between Elevation -15 and -30 ft NAVD88

DATE: 9/4/2014 | DRWN: HKM | FIGURE 5-3

Path: J:\Rem Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2014 06\Figure 5-3 RI Impacts -15to-30.mxd

AECOM

Notes:
1. In general, only tar saturated impacts are illustrated for historic investigation locations.
2. Ground surface elevation is approximately 10 ft NAVD88 at the Site.

1 inch = 100 feet

0 50 100 200 Feet

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Visible Impacts Observed Between Elevation -30 to -45 ft NAVD88

DATE: 9/4/2014 | DRWN: HKM | FIGURE 5-4

Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2014 06\Figure 5-4 RI Impacts -30to-45.mxd

Path: J:\Rem Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2014 06\Figure 5-5 RI Impacts greaterthan-45.mxd

AECOM

Notes:
1. In general, only tar saturated impacts are illustrated for historic investigation locations.
2. Ground surface elevation is approximately 10 ft NAVD88 at the Site.
3. Deepest visible impact noted in PB-5 at 80' BGS.
Assumes PB-5 surface elevation of 8ft NAVD88.

1 inch = 100 feet

0 50 100 200 Feet

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Visible Impacts Observed
Between -45 and -72 ft NAVD88

DATE: 9/4/2014	DRWN: HKM		FIGURE 5-5

Notes:
mg/Kg - milligrams per kilogram

ND = Not Detected

J = The associated numerical value is an estimated quantity.

U = The material was analyzed for but not detected at, or above, the reporting limit. The associated numerical value is the sample quantitation limit.

Bold indicates compound detected at a concentration greater than the reporting limit.
Yellow highlight indicates above the NYSDEC Part 375-6.8(b) Restricted Use Soil Cleanup Objective Commercial value.
Green highlight indicates above the NYSDEC CP-51 Alternate Criteria of 500 mg/Kg for Total PAHs.

Monitoring well logs are provided in Appendices A and C of the RI Report.

SAMPLE	NYSDEC Part 375-6 Commercial
BTEX (mg/Kg)	
Benzene	44
Toluene	500
Ethyl Benzene	390
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)	
Acenaphthene	500
Acenaphthylene	50
Benzo(a)anthracene	5.6
Benzo(a)pyrene	1
Benzo(b)fluoranthene	5.6
Benzo(k)fluoranthene	56
Chrysene	56
Dibenz(a,h)anthracene	0.56
Fluoranthene	500
Fluorene	500
Indeno(1,2,3-cd)pyrene	5.6
Naphthalene	500
Phenanthrene	500
Pyrene	500
Total PAHs	500[A]
Inorganic Compounds (mg/Kg)	
Arsenic	16
Barium	400
Lead	1000

Sample Location	SB-18	SB-18	SB-18
Sample Date	4/20/2010	4/20/2010	4/20/2010
Sample ID	SB-18(1-2)042010	SB-18(28-30)042010	SB-18(69-70)042010
Sample Interval (feet)	1-2	28-30	69-70
BTEX (mg/Kg)			
Benzene	1.34	245	0.0070 U
Ethyl Benzene	27.2	437	0.0070 U
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)			
Acenaphthene	7.56 J	523 J	0.198 U
Acenaphthylene	5.99 J	555 J	0.0219 J
Benzo(a)anthracene	25.1	235 J	0.198 U
Benzo(a)pyrene	20.6 J	158 J	0.198 U
Benzo(b)fluoranthene	10.8 J	364 UJ	0.198 U
Benzo(k)fluoranthene	14.3 J	120 J	0.198 U
Chrysene	29.5	248 J	0.198 U
Fluorene	14.6 J	516 J	0.198 U
Indeno(1,2,3-cd)pyrene	6.43 J	41.2 J	0.198 U
Naphthalene	244	3940 J	0.301
Phenanthrene	45.5	1420 J	0.0279 J
Pyrene	62.4	614 J	0.198 U
Total PAHs	567.58	11235.1	0.4438

Sample Location	SB-17	SB-17	SB-17
Sample Date	5/3/2010	5/4/2010	5/4/2010
Sample ID	SB-17(4-5)050310	SB-17(30-32)050410	SB-17(48-50)050410
Sample Interval (feet)	4-5	30-32	48-50
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)			
Benzo(a)anthracene	14.5 J	0.0333 U	0.0273 U
Benzo(a)pyrene	11.3 J	0.0177 U	0.0145 U
Total PAHs	883.59	0.3269	ND

Sample Location	SB-16	SB-16	SB-16
Sample Date	5/5/2010	5/6/2010	5/6/2010
Sample ID	SB-16(4-5)050510	SB-16(10-13)050610	SB-16(68-70)050610
Sample Interval (feet)	4-5	10-13	68-70
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)			
Benzo(a)anthracene	1.09	11.1 J	0.0259 U
Benzo(a)pyrene	1.16	8.72 J	0.0137 U
Total PAHs	12.8595	564.07	ND

Sample Location	SB-13	SB-13	SB-13
Sample Date	4/14/2010	4/14/2010	4/15/2010
Sample ID	SB-13(4-5)041410	SB-13(35-40)041410	SB-13(69-70)041510
Sample Interval (feet)	4-5	35-40	69-70
BTEX (mg/Kg)			
Benzene	6.93 J	311	0.0045 U
Toluene	10.8	601	0.0045 U
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)			
Acenaphthylene	13.1 U	1050	0.185 U
Benzo(a)anthracene	13.1 U	233 J	0.185 U
Benzo(a)pyrene	13.1 U	192 J	0.185 U
Benzo(k)fluoranthene	13.1 U	91.2 J	0.185 U
Chrysene	1.35 J	235 J	0.185 U
Fluoranthene	2.55 J	532	0.185 U
Fluorene	13.1 U	715	0.185 U
Naphthalene	112	5730	0.0872 J
Phenanthrene	3.4 J	1700	0.0243 J
Pyrene	2.36 J	708	0.185 U
Total PAHs	140.26	14106.2	0.137
Inorganic Compounds (mg/Kg)			
Barium	424	15.6	33.5
Lead	1230	4.19	3.19

Sample Location	SB-15	SB-15 DUP	SB-15	SB-15
Sample Date	4/14/2010	4/14/2010	4/14/2010	4/14/2010
Sample ID	SB-15(4-5)041410	DUPE-1-041410	SB-15(37-39)041410	SB-15(69-70)041410
Sample Interval (feet)	4-5	37-39	37-39	69-70
BTEX (mg/Kg)				
Benzene	7.26 U	108 J	195 J	0.0760 U
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)				
Benzo(a)anthracene	62.5 U	112 J	111 J	0.208 U
Benzo(a)pyrene	62.5 U	88.2 J	86.8 J	0.208 U
Chrysene	62.5 U	108 J	109 J	0.208 U
Naphthalene	525	2630 J	2560	0.385
Phenanthrene	62.5 U	779 J	775	0.208 U
Total PAHs	564.9	6515.8	6323.9	0.4404

Sample Location	SB-09	SB-09	SB-09	SB-09
Sample Date	9/14/2010	9/15/2010	9/15/2010	9/16/2010
Sample ID	SB-9(4.5-5.0)091410	SB-9(40-45)091510	SB-9(55-60)091510	SB-9(75-80)091610
Sample Interval (feet)	4.5-5.0	40-50	55-60	75-80
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)				
Benzo(a)anthracene	5.5	20	0.081 J	<0.19 U
Benzo(a)pyrene	9.6	16	0.063 J	<0.19 U
Benzo(b)fluoranthene	8	12 J	0.049 J	<0.19 U
Dibenz(a,h)anthracene	4.1	2.3	<0.19 U	<0.19 U
Indeno(1,2,3-cd)pyrene	8.7	5.2 J	0.023 J	<0.19 U
Total PAHs	119.5	718	2.279	ND

Sample Location	SB-19	SB-19
Sample Date	10/2/2011	10/2/2011
Sample ID	SB-19 (37-37.5)	SB-19 (72.5-75)
Sample Interval (feet)	37-37.5	72.5-75
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)		
Benzo(a)anthracene	23	<0.036 U
Benzo(a)pyrene	20	<0.036 U
Benzo(b)fluoranthene	14	<0.036 U
Dibenz(a,h)anthracene	1.8	<0.036 U
Indeno(1,2,3-cd)pyrene	8.2	<0.036 U
Total PAHs	506.8	0.093

Sample Location	SB-08	SB-08	SB-08
Sample Date	5/5/2010	5/5/2010	5/5/2010
Sample ID	SB-8(3-4)050510	SB-8(34-35)050510	SB-8(48-50)050510
Sample Interval	3-4	34-35	48-50
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)			
Benzo(a)anthracene	22.6	0.0350 U	0.0332 U
Benzo(a)pyrene	21.4	0.0186 U	0.0176 U
Benzo(b)fluoranthene	13.4	0.0723 U	0.0686 U
Dibenz(a,h)anthracene	1.72 J	0.00871 U	0.00827 U
Indeno(1,2,3-cd)pyrene	6.51	0.0251 U	0.0239 U
Inorganic Compounds (mg/Kg)			
Arsenic	10.2	16.9	1.28 J

Sample Location	SB-11	SB-11	SB-11
Sample Date	4/19/2010	4/19/2010	4/19/2010
Sample ID	SB-11(4-5)041910	SB-11(30-33)041910	SB-11(59-60)041910
Sample Interval (feet)	4-5	30-33	59-60
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)			
Benzo(a)anthracene	6.41	0.202 U	0.204 U
Benzo(a)pyrene	6.11	0.202 U	0.204 U
Dibenz(a,h)anthracene	0.835 J	0.202 U	0.204 U

Sample Location	TP-01	TP-01
Sample Date	5/19/2010	5/19/2010
Sample ID	TP-1(1.5)051910	TP-1(3.8)051910
Sample Interval (feet)	1.5-1.5	3.8-3.8
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)		
Benzo(a)pyrene	2.92	0.829

Sample Location	SB-03	SB-03	SB-03
Sample Date	4/13/2010	4/13/2010	4/13/2010
Sample ID	SB-3(4-5)041310	SB-3(30-35)041310	SB-3(59-60)041310
Sample Interval (feet)	4-5	30-35	59-60
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)			
Benzo(a)anthracene	0.733 J	100 J	0.26 U
Benzo(a)pyrene	0.661 J	74.1 J	0.26 U
Benzo(b)fluoranthene	2.95 U	38.3 J	0.26 U
Chrysene	0.762 J	97.5 J	0.26 U
Indeno(1,2,3-cd)pyrene	0.381 J	22.3 J	0.26 U
Naphthalene	30.1	1720	0.0951 J
Phenanthrene	2.18 J	690	0.26 U
Total PAHs	47.755	5142.8	0.1224
Inorganic Compounds (mg/Kg)			
Arsenic	1.62 J	2.82 J	66.8

Sample Location	SB-04	SB-04	SB-04 DUP	SB-04
Sample Date	4/27/2010	4/27/2010	4/27/2010	4/27/2010
Sample ID	SB-4(4-5)042710	SB-4(32-34)042710	DUPE-2-042710	SB-4(58-60)042710
Sample Interval (feet)	4-5	32-34	32-34	58-60
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)				
Benzo(a)anthracene	0.192 J	6.67 J	5.56 J	0.18 U

Sample Location	SB-05	SB-05	SB-05
Sample Date	4/21/2010	4/22/2010	4/22/2010
Sample ID	SB-5(4-5)042110	SB-5(39-40)042210	SB-5(70-72)042210
Sample Interval (feet)	4-5	39-40	70-72
Laboratory Identification	SB11001	SB11001	SB11001
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)			
Benzo(a)pyrene	3.7 J	0.205 U	0.192 U

Sample Location	SB-06	SB-06	SB-06
Sample Date	4/20/2010	4/20/2010	4/21/2010
Sample ID	SB-6(4-5)042010	SB-6(26-28)042010	SB-6(49-50)042110
Sample Interval (feet)	4-5	26-28	49-50
Laboratory Identification	SB11001	SB11001	SB11001
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)			
Benzo(a)anthracene	37.4 J	0.202 U	0.193 U
Benzo(a)pyrene	49.1 J	0.202 U	0.193 U
Benzo(b)fluoranthene	27.3 J	0.202 U	0.193 U
Dibenz(a,h)anthracene	3.33 J	0.202 U	0.193 U
Indeno(1,2,3-cd)pyrene	16.4 J	0.202 U	0.193 U
Total PAHs	610.43	1.3939	0.0877

Sample Location	SB-07	SB-07	SB-07	SB-07
Sample Date	4/28/2010	4/28/2010	4/29/2010	4/29/2010
Sample ID	SB-7(4-5)042810	SB-7(10-12)042810	SB-7(37-40)042910	SB-7(48-50)042910
Sample Interval (feet)	4-5	10-12	37-40	48-50
Laboratory Identification	SB11817	SB11817	SB11817	SB11817
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/Kg)				
Benzo(a)anthracene	22.5	96.7	0.0329 U	0.0285 U
Benzo(a)pyrene	22.3	81.2	0.0174 U	0.0151 U
Benzo(b)fluoranthene	10.8 J	35.6 J	0.0679 U	0.0588 U
Chrysene	20.1	96.5	0.00726 U	0.00629 U
Indeno(1,2,3-cd)pyrene	7.77 J	24.1 J	0.0236 U	0.0205 U
Naphthalene	1.23 U	949	0.0196 U	0.0170 U
Phenanthrene	4.09 J	518	0.0236 U	0.0432 J
Total PAHs	326.84	3621.3	ND	0.0766

AECOM

1 inch = 50 feet

0 25 50 100 Feet

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Analytical Detections Summary
Subsurface Soil Samples

DATE: 7/21/2014 | DRWN: HKM | FIGURE 5-6

Path: J:\Rem_Eng\Project Files\National Grid\47606-078 Metropolitan Former MGP\Y 2 CADD & GIS\GIS\MAXD\01_2014_10\Figure_5-6_Soil.mxd

1 - Guidance or Standard Values - NYSDEC, Division of Water, TOGS (1.1.1) - 6 NYCRR 703.5 [NYSDEC, 1998].
ug/L - micrograms per liter
J = The associated numerical value is an estimated quantity.

Yellow highlight indicates above the NYSDEC Groundwater Guidance or Standard Value.

Monitoring well logs are provided in Appendices A and C of the RI Report.

	NYSDEC Groundwater Guidance or Standard Value[1]
BTEX (ug/L)	
Benzene	1
Ethylbenzene	5
Toluene	5
Xylenes (total)	5
Volatile Organic Compounds (VOCs) (ug/L)	
Isopropylbenzene	5
Methyl tert-butyl ether	10
Styrene	5
1,4-Dichlorobenzene	3
Chlorobenzene	5
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Naphthalene	10
Acenaphthene	20
Benzo(a)anthracene	0.002
Naphthalene	10
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
Phenol	1
Inorganic Compounds (ug/L)	
Antimony	3
Arsenic	25
Barium	1000
Iron	300
Lead	25
Magnesium	35000
Manganese	300
Sodium	20000
Thallium	0.5
Selenium	10
Cyanide (ug/L)	
Total Cyanide	200

Sample Location	MW-25S
Sample Date	10/4/2010
Sample ID	MW-25S (100410)
BTEX (ug/L)	
Benzene	2.7
Inorganic Compounds (ug/L)	
Arsenic	124

Sample Location	MW-03S
Sample Date	10/5/2010
Sample ID	MW-3S(100510)
BTEX (ug/L)	
Benzene	710
Ethylbenzene	3400
Toluene	1500
Xylenes (total)	3500
Volatile Organic Compounds (VOCs) (ug/L)	
Isopropylbenzene	210
Styrene	120 J
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Acenaphthene	21
Naphthalene	2100
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
Phenol	2.4 J

Sample Location	MW-01S
Sample Date	10/4/2010
Sample ID	MW-1S (100410)
BTEX (ug/L)	
Benzene	690
Ethylbenzene	120
Toluene	71
Xylenes (total)	320
Volatile Organic Compounds (VOCs) (ug/L)	
Isopropylbenzene	18 J
Methyl tert-butyl ether	51
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Naphthalene	40
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
Phenol	6.8 J
Inorganic Compounds (ug/L)	
Arsenic	37.7
Barium	1060

Sample Location	MW-09S
Sample Date	10/6/2010
Sample ID	MW-9S (100610)
Inorganic Compounds (ug/L)	
Selenium	13.8 J

Sample Location	MW-20S
Sample Date	3/18/2012
Sample ID	MW-20S-031812
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Benzo(a)anthracene	0.53 J
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
Phenol	2.6 J
Inorganic Compounds (ug/L)	
Lead	39.6

Sample Location	MW-04S
Sample Date	10/5/2010
Sample ID	MW-4S (100510)
Inorganic Compounds (ug/L)	
Barium	1140
Cyanide (ug/L)	
Total Cyanide	279

Sample Location	MW-08S
Sample Date	10/5/2010
Sample ID	MW-8S(100510)
BTEX (ug/L)	
Benzene	160
Ethylbenzene	130
Toluene	5.1
Xylenes (total)	55
Volatile Organic Compounds (VOCs) (ug/L)	
Isopropylbenzene	14
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Naphthalene	470
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
Phenol	2.4 J
Inorganic Compounds (ug/L)	
Antimony	24.3
Iron	5220
Magnesium	48300
Manganese	491
Sodium	2510000
Thallium	10.2 J

Sample Location	MW-06S
Sample Date	10/5/2010
Sample ID	MW-6S(100510)
BTEX (ug/L)	
Benzene	6100
Ethylbenzene	640
Toluene	5.2
Xylenes (total)	35
Volatile Organic Compounds (VOCs) (ug/L)	
Isopropylbenzene	100
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Naphthalene	600
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
Phenol	69
Inorganic Compounds (ug/L)	
Antimony	11.4 J
Iron	23000
Manganese	1430
Sodium	262000

Sample Location	MW-05S	MW-05S
Sample Date	10/6/2010	10/6/2010
Sample ID	MW-5S (100610)	MW-5S (100610) DUP
BTEX (ug/L)		
Benzene	3.7 J	<5.0 U
Inorganic Compounds (ug/L)		
Iron	685	617
Magnesium	47500	47100
Manganese	2950	2900
Sodium	1220000	1180000

Sample Location	MW-07S
Sample Date	10/4/2010
Sample ID	MW-7S(100410)
BTEX (ug/L)	
Benzene	40
Ethylbenzene	340
Toluene	14 J
Xylenes (total)	78
Volatile Organic Compounds (VOCs) (ug/L)	
1,4-Dichlorobenzene	11 J
Chlorobenzene	84
Isopropylbenzene	33
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Acenaphthene	26
Naphthalene	480
Cyanide (ug/L)	
Total Cyanide	252

AECOM

1 inch = 100 feet

0 50 100 200 Feet

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Groundwater Analytical Detections
Summary Shallow Wells

DATE: 7/21/2014 | DRWN: HKM | FIGURE 5-7

Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI_2014_06\Figure_5-7_Shallow_Groundwater.mxd

Sample Location	MW-09I
Sample Date	10/6/2010
Sample ID	MW-9I (100610)
BTEX (ug/L)	
Benzene	890
Ethylbenzene	1600
Toluene	36 J
Xylenes (total)	1400
Volatile Organic Compounds (VOCs) (ug/L)	
cis-1,2-Dichloroethene	26 J
Isopropylbenzene	53 J
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Acenaphthene	140
Fluorene	58 J
Naphthalene	5200
Phenanthrene	54
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
Phenol	5.7 J
Inorganic Compounds (ug/L)	
Arsenic	26.7
Barium	2510

Sample Location	MW-25I
Sample Date	3/14/2012
Sample ID	MW-25I-031412
BTEX (ug/L)	
Benzene	21
Inorganic Compounds (ug/L)	
Arsenic	110

Sample Location	MW-08I
Sample Date	10/5/2010
Sample ID	MW-8I(100510)
BTEX (ug/L)	
Benzene	9900
Ethylbenzene	570 J
Toluene	5.8 J
Xylenes (total)	240 J
Volatile Organic Compounds (VOCs) (ug/L)	
Isopropylbenzene	39 J
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Acenaphthene	59
Naphthalene	1800
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
Phenol	86
Inorganic Compounds (ug/L)	
Antimony	12.2 J
Iron	21200
Magnesium	95500
Manganese	1720
Sodium	711000

	NYSDEC Groundwater Guidance or Standard Value[1]
BTEX (ug/L)	
Benzene	1
Ethylbenzene	5
Toluene	5
Xylenes (total)	5
Volatile Organic Compounds (VOCs) (ug/L)	
Vinyl chloride	2
Isopropylbenzene	5
cis-1,2-Dichloroethene	5
Methyl tert-butyl ether	10
Styrene	5
trans-1,2-Dichloroethene	5
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Naphthalene	10
Acenaphthene	20
Phenanthrene	50
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
Phenol	1
1,1'-Biphenyl	5
Inorganic Compounds (ug/L)	
Antimony	3
Arsenic	25
Barium	1000
Iron	300
Magnesium	35000
Manganese	300
Sodium	20000

1 - Guidance or Standard Values - NYSDEC, Division of Water, TOGS (1.1.1) - 6 NYCRR 703.5 [NYSDEC, 1998].
ug/L - micrograms per liter
J = The associated numerical value is an estimated quantity.

Yellow highlight indicates above the NYSDEC Groundwater Guidance or Standard Value.

Monitoring well logs are provided in Appendices A and C of the RI Report.

Sample Location	MW-19I	MW-19I
Sample Date	3/18/2012	3/18/2012
Sample ID	MW-19I-031812	DUP-3-031812
BTEX (ug/L)		
Benzene	900	880
Ethylbenzene	460	450
Toluene	16	15
Xylenes, Total	360	340
Volatile Organic Compounds (VOCs) (ug/L)		
Isopropylbenzene	18	19
Methyl tert-butyl ether	9.5 J	8.2 J
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)		
Acenaphthene	110 J	80 J
Naphthalene	3100	2500

Sample Location	MW-22I
Sample Date	3/15/2012
Sample ID	MW-22I-031512
BTEX (ug/L)	
Benzene	53
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Acenaphthene	51
Inorganic Compounds (ug/L)	
Arsenic	55.6

Sample Location	MW-20I
Sample Date	3/18/2012
Sample ID	MW-20I-031812
BTEX (ug/L)	
Benzene	4.0
Volatile Organic Compounds (VOCs) (ug/L)	
Methyl tert-butyl ether	51
Vinyl chloride	3.0
Inorganic Compounds (ug/L)	
Arsenic	34.9

Sample Location	MW-03I
Sample Date	10/5/2010
Sample ID	MW-3I(100510)
BTEX (ug/L)	
Benzene	1200
Ethylbenzene	6500
Toluene	1600
Xylenes (total)	5800
Volatile Organic Compounds (VOCs) (ug/L)	
Isopropylbenzene	340
Styrene	410
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Acenaphthene	32
Naphthalene	4300
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
Phenol	7.6 J

Sample Location	MW-04I
Sample Date	10/5/2010
Sample ID	MW-4I (100510)
BTEX (ug/L)	
Benzene	1100
Ethylbenzene	630
Toluene	12
Xylenes (total)	290
Volatile Organic Compounds (VOCs) (ug/L)	
Isopropylbenzene	65
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Acenaphthene	130
Naphthalene	4000
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
Phenol	9.5 J

Sample Location	MW-05I
Sample Date	10/6/2010
Sample ID	MW-5I (100610)
BTEX (ug/L)	
Benzene	1600
Ethylbenzene	200
Xylenes (total)	60
Volatile Organic Compounds (VOCs) (ug/L)	
cis-1,2-Dichloroethene	14 J
Isopropylbenzene	13 J
Vinyl chloride	12 J
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Acenaphthene	26
Naphthalene	270
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
Phenol	21
Inorganic Compounds (ug/L)	
Iron	17000
Magnesium	55300
Manganese	2300
Sodium	150000

Sample Location	MW-07I
Sample Date	10/4/2010
Sample ID	MW-7I(100410)
BTEX (ug/L)	
Benzene	25
Ethylbenzene	18
Xylenes (total)	14
Volatile Organic Compounds (VOCs) (ug/L)	
Vinyl chloride	2.2 J

Sample Location	MW-06I
Sample Date	10/5/2010
Sample ID	MW-6I(100510)
BTEX (ug/L)	
Benzene	1400
Ethylbenzene	930
Toluene	30
Xylenes (total)	500
Volatile Organic Compounds (VOCs) (ug/L)	
Isopropylbenzene	60
trans-1,2-Dichloroethene	9.7
Vinyl chloride	12 J
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Acenaphthene	59
Naphthalene	1500
Other Semivolatile Organic Compounds (SVOCs) (ug/L)	
1,1'-Biphenyl	14
Phenol	20
Inorganic Compounds (ug/L)	
Antimony	14.6 J
Arsenic	39.7
Iron	64400
Magnesium	133000
Manganese	836
Sodium	1000000

AECOM

1 inch = 100 feet

0 50 100 200 Feet

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Groundwater Analytical Detections
Summary Intermediate Wells

DATE: 7/21/2014 | DRWN: HKM | FIGURE 5-8

Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI_2014_06\Figure_5-8_Intermediate_Groundwater.mxd

Sample Location	MW-09D
Sample Date	10/6/2010
Sample ID	MW-9D (100610)
BTEX (ug/L)	
Benzene	700
Ethylbenzene	540
Toluene	33
Xylenes (total)	380
Volatile Organic Compounds (VOCs) (ug/L)	
cis-1,2-Dichloroethene	35
Isopropylbenzene	39
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Acenaphthene	61
Naphthalene	2000

Sample Location	MW-23D
Sample Date	3/14/2012
Sample ID	MW-23D-031412
BTEX (ug/L)	
Benzene	1.3
Volatile Organic Compounds (VOCs) (ug/L)	
cis-1,2-Dichloroethene	180

Sample Location	MW-22D	MW-22D
Sample Date	3/15/2012	3/15/2012
Sample ID	MW-22D-031512	DUP 1 GM-3/17/2012
BTEX (ug/L)		
Benzene	1.8	1.9
Volatile Organic Compounds (VOCs) (ug/L)		
Trichloroethene	19	19

Sample Location	MW-21D
Sample Date	3/15/2012
Sample ID	MW-21D-031512
BTEX (ug/L)	
Benzene	1.5

	NYSDEC Groundwater Guidance or Standard Value[1]
BTEX (ug/L)	
Benzene	1
Ethylbenzene	5
Toluene	5
Xylenes (total)	5
Volatile Organic Compounds (VOCs) (ug/L)	
Vinyl chloride	2
Isopropylbenzene	5
cis-1,2-Dichloroethene	5
Tetrachloroethene	5
Trichloroethene	5
Polynuclear Aromatic Hydrocarbons (PAHs) (ug/L)	
Naphthalene	10
Acenaphthene	20
Inorganic Compounds (ug/L)	
Iron	300
Magnesium	35000
Manganese	300
Sodium	20000

Current Building Footprint (NYC DOITT 2009)
Gowanus Canal
Historic Structure
Historic MGP Boundary
Current Site Boundary
Deep Monitoring Well Groundwater Sample Location
Historic MGP and Current Site Boundary Coincide

1 - Guidance or Standard Values - NYSDEC, Division of Water, TOGS (1.1.1) - 6 NYCRR 703.5 [NYSDEC, 1998].
ug/L - micrograms per liter
J = The associated numerical value is an estimated quantity.

Yellow highlight indicates above the NYSDEC Groundwater Guidance or Standard Value.

Monitoring well logs are provided in Appendices A and C of the RI Report.

Sample Location	MW-01D
Sample Date	10/4/2010
Sample ID	MW-1D (100410)
Volatile Organic Compounds (VOCs) (ug/L)	
Vinyl chloride	21

Sample Location	MW-02D
Sample Date	10/5/2010
Sample ID	MW-2D(100510)
Volatile Organic Compounds (VOCs) (ug/L)	
cis-1,2-Dichloroethene	84
Tetrachloroethene	11
Trichloroethene	18
Vinyl chloride	31

Sample Location	MW-05D
Sample Date	10/6/2010
Sample ID	MW-5D (100610)
Volatile Organic Compounds (VOCs) (ug/L)	
cis-1,2-Dichloroethene	5.1
Inorganic Compounds (ug/L)	
Iron	2460
Magnesium	64100
Manganese	3560
Sodium	226000

AECOM

1 inch = 100 feet

0 50 100 200 Feet

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Groundwater Analytical Detections
Summary Deep wells

DATE: 7/21/2014 | DRWN: HKM | FIGURE 5-9

Path: J:\Rem_Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2014 06\Figure 5-9 Deep Groundwater.mxd

Sample Location	Ambient	Indoor Air	Indoor Air	Sub-Slab Soil Vapor
Sample ID	AMB-1	IA-2	IA-2 Dup	SV-2
Sampling date	3/31/2010	3/31/2010	3/31/2010	3/31/2010
Compound (µg/m³)				
Non-MGP Related[2]				
Trichlorofluoromethane (Freon 11)	**7.3**	**19**	**21**	**20**

Sample Location	Ambient	Indoor Air	Sub-Slab Soil Vapor
Sample ID	AMB-1	IA-1	SV-1
Sampling date	3/31/2010	3/31/2010	3/31/2010
Non-MGP Related[2]			
1,4-Dichlorobenzene	0.91 U	**5.8**	0.93 U
Chloroform	0.74 U	**2**	**6.8**

	Typical Indoor Air Concentrations (Non-Residential)[3]
Compound (µg/m³)	
Possibly MGP Related or Other Sources[1]	
Carbon Disulfide	4.2
Non-MGP Related[2]	
1,2-Dichloropropane	<1.6
1,4-Dichlorobenzene	5.5
Chloroform	1.1
Trichlorofluoromethane (Freon 11)	18.1

Sample Location	Ambient	Indoor Air	Sub-Slab Soil Vapor
Sample ID	AMB-3	IA-3	SV-3
Sampling date	4/2/2011	4/2/2011	4/2/2011
Compound (µg/m³)			
Non-MGP Related[2]			
1,2-Dichloropropane	0.739 U	**4.76**	0.739 U

Dup - As suffix on Sample ID indicates that the sample is a field duplicate.
U - The compound was analyzed for, but was not detected above the method reporting limit.
Bold - Compound detected in a concentration greater than the method detection limit.
Above NYSDOH Background Indoor Air Concentrations

1 - These compounds may be related to either MGP sources or non-MGP sources, or both. MGP sources include MGP tars and petroleum feedstocks used in MGP processes, such as the carburetted water gas process. Non-MGP sources include cleaning products, floor wax and polish, vehicle exhaust, construction materials, and cigarette smoke.
2 - These compounds are not relateld to MGP sources and are present due to non-MGP sources, such as vehicle exhaust, heating and air conditioning systems, cleaning agents, art supplies, paints, etc.
3 - Typical non-residential background indoor air concentrations are equal to the 90th percentile values observed by the USEPA in a 2001 study which are the values recommended for comparison in the NYSDOH "Guidance the State of New York' (NYSDOH, October 2006), Table C2

AECOM

1 inch = 100 feet
0 50 100 200 Feet

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Analytical Detections Summary for Ambient Air, Indoor Air, and Sub Slab Soil Vapor

DATE: 7/21/2014 | DRWN: HKM | FIGURE 5-10

Path: J:\Rem Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2014 06\Figure 5-10 SV.mxd

AECOM

Potential Exposure Route	Potential On-Site Receptors: Indoor Commercial/Maintenance Workers	Outdoor Commercial/Maintenance Worker	Construction Worker	Site Visitor/ Trespassers	Potential Off-Site Receptors: Current and Potential Future Residents	Current and Potential Future Indoor Commercial Workers	Current and Potential Future Outdoor Commercial Workers	Construction Workers
Inhalation (Outdoor Air)	○	○	●	○	○	○	○	○
Inhalation (Indoor Air)	○	○	○	○	○	○	○	○
Incidental Ingestion (Surface Soil)	○	○	○	○	○	○	○	○
Dermal Contact (Surface Soil)	○	○	○	○	○	○	○	○
Incidental Ingestion (Subsurface Soil)	○	○	●	○	○	○	○	○
Dermal Contact (Subsurface Soil)	○	○	●	○	○	○	○	○
Inhalation (Surface Water)					○			
Incidental Ingestion (Surface Water)					(a)			
Dermal Contact (Sediment)					(a)			
Ingestion (Fish Tissue)					(a)			
Inhalation (Groundwater)	○	○	○	○	○	○	○	○
Incidental Ingestion (Groundwater)	○	○	●	○	○	○	○	●
Potable Ingestion (Groundwater)	○	○	○	○	○	○	○	○
Dermal Contact (Groundwater)	○	○	●	○	○	○	○	●

Key

●	Pathway considered to be complete
○	Pathway considered to be incomplete or insignificant
	Exposure pathway not applicable for the associated receptor
(a)	Investigation has been performed by USEPA

QHHEA CONCEPTUAL SITE MODEL NATIONAL GRID METROPOLITAN WORKS FORMER MGP SITE			Figure 7-1
DATE	DRAWN BY	CHECKED BY	PROJECT NO
9/14/2012	GW	JK	60137361

Appendix A

Summary of Historical Data

Summary of Historical Documents

Table A-1
Summary of Documents
Former Metropolitan MGP
124 - 136 Second Avenue, Brooklyn, New York

Report Name	Report Date	Consultant	File Name
NYSDEC Spill Investigation Report 136 2nd Avenue Brooklyn, New York	4/23/1997	Nelson, Pope and Voorhis	NYSDEC Spill Inv Rpt Apr 1997.pdf
Phase I Environmental Site Assessment 124/136 Second Avenue Brooklyn, New York	5/15/1997	Nelson, Pope and Voorhis	124-126SecondAvenue Ph I ESA_May15-1997.pdf
Phase II Environmental Site Assessment (Limited Subsurface Investigation) 124/136 Second Avenue Brooklyn, New York	6/2/1997	Nelson, Pope and Voorhis	Ph II ESA June2-1997.pdf
Remedation Plan for Spill Nos. 9214380 VMF Site, 9704147 DMU Site 124/136 Second Avenue Brooklyn, New York	9/30/1997	Nelson, Pope and Voorhis	124_136 Second Ave Rem Plan 1997.pdf
Closure Report Brooklyn Commons 124/136 2nd Avenue	6/7/1999	Nelson, Pope and Voorhis	Closure Rpt Brooklyn Commons 1999.pdf
Supplemental Phase II Environmental Site Assessment Brooklyn Commons DMU Building Gowanus, New York	7/2/1999	Nelson, Pope and Voorhis	Supplemental Ph II ESA 1999.pdf
Voluntary Cleanup Program Site Assessment Report and Conceptual Remedial Work Plan 124-136 Second Avenue Brooklyn, New York Site #V00405-2	Jan-01	AKRF Engineering	Site Assessment Rpt Concept Work Plan Jan 2001.pdf
Remedial Investigation Results 124-136 Second Avenue Brooklyn, New York Site #V00405-2	7/10/2001	AKRF Engineering	Remedial Inv Rpt July 2001.pdf
Voluntary Cleanup Program Remedial Workplan Supplement Hot Spot Removal 124-136 Second Avenue Brooklyn, New York Site #V00405-2	10/1/2001	AKRF Engineering	Vol Clnup Prgm Hot Spot Oct 2001.pdf
Revised Remedial Work Plan 124-139 Second Avenue Brooklyn, New York Site #V00405-2	12/5/2001	AKRF Engineering	Revised Remedial Work Plan Dec 2001.pdf
Geotechnical Investigation Lowe's Home Center Brooklyn, New York	1/14/2002	Mueser Rutledge Consulting Engineers	Geotech Inv Rpt Jan 2002.pdf
Hot Spot Delineation and Gasholder Characterization Results 2nd Avenue Former MGP Site Brooklyn, New York	4/26/2002	Roux Associates	Roux Hot Spot Delin Apr 2002.pdf
Installation of Product Recovery Wells and Completion of Well Monitoring and Product Recovery Activities during May 2002 124-136 Second Avenue Brooklyn, New York Site No. V00405-2	6/11/2002	Roux Associates	Install of Product Rec Wells June 2002.pdf
Detached Mail Unit (DMU) Subsurface Investigation Results and Recommendations Former Manufactured Gas Plant (MGP) 124-136 Second Avenue, Brooklyn, New York	11/27/2002	Roux Associates	DMU Subsurface Inv November27-2002.pdf
Addendum to Geotechnical Report, Supplemental Borings Lowe's Home Center	12/24/2002	Mueser Rutledge Consulting Engineers	Addendum to Geotech Rpt Dec 2002.pdf
Detached Mail Unit (DMU) Subsurface Remediation Results and Evaluation Former Manufactured Gas Plant (MGP) 124-136 Second Avenue, Brooklyn, New York	2/24/2003	Roux Associates	DMU Subsurface Remediation Results February24-2003.pdf

Table A-1
Summary of Documents
Former Metropolitan MGP
124 - 136 Second Avenue, Brooklyn, New York

Report Name	Report Date	Consultant	File Name
Final Completion Report 124-136 Second Avenue Brooklyn, New York Site No. V00405-2	5/23/2003	Remedial Engineering and Roux Associates	124-136SecondAvenue Final Completion_May23-2003.pdf
DRAFT Gowanus Canal Investigation Executive Summary Report AOC Index No. A2-0523-0705	Apr-07	GEI Consultants, Inc.	Draft Gowanus Invest Executive Summ Report 4-12-07.pdf
DRAFT Remedial Investigation Technical Report Gowanus Canal Brooklyn, New York AOC Index No. A2-0523-0705	Apr-07	GEI Consultants, Inc.	DraftGowanusCanalInvestigation Report-April2007.pdf
Phase II Environmental Site Investigation Former Department of Education Garage 60 12th Street, Brooklyn, NY 11215	12/7/2007	ATC Associates Inc.	ATC_60-12thStreetPhase_II_July2007.pdf

Brooklyn Union Gas Summary

Brooklyn Union Gas

Address:
195 Montague St.
Brooklyn, New York 11201-3631
U.S.A.
Telephone: (718) 403-2000
Fax: (718) 852-8221

Statistics:
Public Company Incorporated: 1895
Employees: 3,651
Sales: $990 million
Stock Exchanges: New York Midwest Philadelphia

Company History:

Brooklyn Union Gas supplies natural gas to the New York City boroughs of Brooklyn and Staten Island and to a portion of the borough of Queens. Through its subsidiaries, the company also sells gas appliances and energy-related equipment, explores for and develops natural gas reserves, recovers methane from landfill sites, and distributes liquefied petroleum gas.

Incorporated in 1895 as the successor to a group of competing gas lighting companies, the utility traces its roots to 1824 when enterprising Brooklynites launched the idea of lighting their village's streets with methane. In 1825 these entrepreneurs sought and gained approval from the New York State legislature for the establishment of the Brooklyn Gas Light Company. The fledgling company soon formed a board of directors and sold stock. Unfortunately for investors, the young village felt it was not ready for street lighting and would not sign a contract. With no business, the company bought back its stock and folded.

Not long for the mothballs, Brooklyn Gas Light was revived in the mid-1840s and in 1847 signed a contract to light the streets of Brooklyn. Since natural gas from underground deposits was not then available, the company built a gas manufacturing plant on the East River by the Brooklyn Navy Yard. In that plant, it heated coal until it became coke and captured the methane that was released in the process. This was known as the coke-oven-gas method. By 1849 methane was coursing through six-and-a-half miles of mains and lighting the village's most prosperous areas.

In 1850 a similar operation was launched in the neighboring town of Williamsburg, and by the 1890s there were at least 15 gas lighting companies operating in Brooklyn and Queens. Brooklyn Gas Light's first major head-to-head competitor, Citizen Gas Light, began serving the Brooklyn public in 1858. Other utilities followed and Brooklyn soon became the scene of intense and sometimes violent competition. Most often a new company would buy an unserved territory from an older competitor. Then, once established, the new company would begin battling with the older company for customers in the more prosperous areas--often laying parallel gas lines and competing on a door-to-door basis. In a speech before the Newcomen Society, former chairman Elwin S. Larson described the late 1800s as an 'age of territory claiming and customer seizing carried out by street crews who introduced the

term 'gas-house gang' to our American lexicon. [It] was a little like ... the wild West of the same period.'

In 1879 the Fulton Municipal Gas Company entered the Brooklyn gas lighting market. Unlike the small companies that had preceded it, Fulton did not buy a small territory for itself before competing with the more established companies. Instead, it brashly began by laying long mains in the most prosperous, most populated areas of the borough. In Brooklyn Gas Light's territory alone, it laid 34 miles of mains. Fulton's strategy was to put the heat on smaller companies and then offer to sell them gas wholesale. According to Larson, 'Quite legally, if not quite congenially, Fulton had most of Brooklyn at its mercy.' Pressed like the others, Brooklyn Gas Light fought back and by the mid-1880s the two companies were engaged in a debilitating price war.

In the face of low profits because of price wars and stiff competition from electric light, Brooklyn, Fulton, and five other gas companies combined to form the Brooklyn Union Gas Company. Incorporated in 1895, the new company, which served 106,650 customers in Brooklyn and 1,400 in Queens, also included Citizens Gas Light Co., Metropolitan Gas Light Co., Nassau Gas Light Co., Peoples Gas Light Co., and Williamsburg Gas Light Co.

The first president of Brooklyn Union Gas, Brooklyn Gas Light veteran George W. Young, began with $30 million in capital, eight gas manufacturing plants, and a capacity of 26 million cubic feet per day. But Young served just one year before the board of directors--which included William Rockefeller of Standard Oil--replaced him with former Civil War general and former Fulton president James Jourdan, who consolidated Brooklyn Union Gas's various predecessor companies and moved the company's focus from light to heat. Before retiring in 1910 he tripled manufacturing capacity and quadrupled storage. Customer accounts, which had been 108,000 in 1896, grew to 387,000 in his final year. Between 1895 and 1897 General Jourdan led the company through the purchase of six small gas lighting companies, four of which were in Queens. Operated as subsidiaries, the Flatbush Gas Co., the Newtown Gas Co., the Jamaica Gas Light Co., the Woodhaven Gas Light Co., and the Richmon Hill & Queens County Gas Light Companies were finally integrated into Brooklyn Union Gas in 1927.

In the early 1900s the New York State legislature created the New York Public Service Commission, which began regulating rates. In 1906 the Public Service Commission established the '80-Cent Gas Law' which reduced the price of gas by 20 percent. Brooklyn Union Gas fought the law all the way to the Supreme Court but lost--regulation was there to stay. The 80-Cent Gas Law was followed by the Dollar Gas Law in 1923 and by other regulated rates in subsequent years.

Upon General Jourdan's retirement in 1910, his son James H. Jourdan was elected president and presided over an era when the old lighting business was hastily disappearing and the company was advancing in new markets of water heating and industrial processes.

During the teens and twenties the use of methane for heating and cooking grew rapidly in Brooklyn. Once perceived as a luxury, gas stoves were becoming a necessity to many. In 1914 the company built and moved into new corporate headquarters on Remsen Street in downtown Brooklyn. In 1925 it sold the electric distribution system and electric franchises of the Flatbush Gas Co. to Brooklyn Edison. And in 1926 a new Public Service Commission ruling set the price of methane at $1.15 per 100,000 cubic feet but allowed price adjustments for volume users, which enabled the company to pursue large accounts who had previously found gas uneconomical.

Between 1910 and 1926 business virtually doubled. To meet the demand, Brooklyn Union Gas constructed a vast new coal-gasification plant at Greenpoint. Opened in 1928, the new Greenpoint

Works replaced five older plants at 60 percent of the cost. Built on 115 acres of land on Newtown Creek, the Greenpoint Works used both the coke-oven method and the water-gas method to produce new supplies.

Although the future looked rosy, the Depression affected Brooklyn Union Gas deeply. Customers who months previously saw gas stoves as a necessity now saw them once again as a luxury. Revenues--which had climbed steadily, reaching an all-time high of $25 million in 1929--fell to $19 million in 1935, James H. Jourdan's last year as president. In 1935 the board of directors named a new president, Clifford Paige, who wooed customers back to gas by offering promotional rates to industrial users and giving deals to customers who used gas for water heating. Under Paige, Brooklyn Union Gas also developed and promoted new industrial uses for its product and sold refrigerators and other gas appliances. The company also made inroads in the home heating market, moving from 726 gas-heated homes in 1935 to more than 20,000 by the end of World War II.

Paige's efforts were largely successful. By 1941, the company had more than regained the sales it had lost during the first half of the Depression. It had come back from the brink, seasoned by the crisis. In his Newcomen speech Larson said, 'It was during this period from 1935 to 1941 that Brooklyn Union matured as a company and solidified its standing as a creative and aggressive marketing operation.'

In the inflationary era of the late 1940s the company sought and received three significant rate increases in two years. But while rate increases kept Brooklyn Union Gas profitable, the company's main problem was supply. Brooklyn was going through a period of expansion, and the company did not have enough gas to satisfy what it foresaw as upcoming demand. To supplement what it could manufacture at Greenpoint and other plants, Brooklyn Union and other area utilities helped finance the Transcontinental Pipeline, which began in Texas in 1948 and ended 1,840 miles and two years later in Brooklyn. Brooklyn Union Gas, with Consolidated Edison and the Long Island Lighting Company, also established the New York Facilities system, a common high-pressure gas-transportation system that receives pipeline gas and delivers it across various waterways in the area.

The original plan was to mix the so called 'natural' gas with what Brooklyn Union Gas was making in its plants. But natural gas was so cheap that by 1952 the company ended manufacturing and switched over to natural gas completely. By 1952, ten percent rate reductions were already in effect. Cheap and readily available, the low price of natural gas allowed the utility to reduce rates 27 times between 1952 and 1969.

In 1953, John Heyke succeeded Clifford Paige as chief executive officer. Heyke expanded the company in two ways. First, he dove headlong into the home-heating market--doubling Brooklyn Union Gas's share to more than 34 percent of all houses by the early 1960s. Second, he made a series of acquisitions that added 260,000 customers to the more than 800,000 already on the company rolls. In 1957, Heyke made two acquisitions: the New York and Richmond Gas Company, which covered the entire Borough of Staten Island, and the Kings County Lighting Company, which served the Bay Ridge section of Brooklyn. In 1959, Heyke acquired the Coney Island-based Brooklyn Borough Gas Company. With this last acquisition, the company reached its present service area of 187 square miles, including the entire borough of Brooklyn, all of Staten Island, and about two-thirds of Queens.

Brown's Directory Summary

Brown's Directory Summary - Brooklyn, New York
Brooklyn Union Gas Company

Year	Company Name	Process	Annual Gas Production (cf)	Gas Holder Capacity (cf)	Byproducts Made/Sold	Service Area Population	Operating Information	Holding and Operating Companies	Other Brown's Information	Reference Page(s)
1887	No Listing									
1888	Not available in AECOM's library									
1889	Brooklyn Gas Light Co.	Coal				700,000				45
1890	Brooklyn Gas Light Co.	Coal				800,000				73
1891	Brooklyn Gas Light Co.	Coal	458,000,000							66
1892	Brooklyn Gas Light Co.	Coal	458,000,000							73
1893	Brooklyn Gas Light Co.	Coal & Tessie du Motay	475,000,000			168,000			Proportion sold for fuel: 10%	75
1894	Brooklyn Gas Light Co.	Coal & Tessie du Motay	490,000,000			168,000				79
1895-1898	Not available in AECOM's library									
1899	Brooklyn Union Gas Co.		4,000,000,000			1,198,000	Consolidation of: Brooklyn Gas Light Co., Citizens Gas Co., Fulton Municipal Gas Co., Metropolitan Gas Light Co., Nassau Gas Light Co., Peoples Gas Light Co., and Williamsburg Gas Light Co.			76
1900	Brooklyn Union Gas Co.	Coal & Wilkinson	4,000,000,000			2,000,000				85
1901	Brooklyn Union Gas Co.	Coal & Wilkinson	5,000,000,000			2,000,000				87
1902	Brooklyn Union Gas Co.	Coal & Wilkinson	5,500,000,000			2,000,000				91
1903	Brooklyn Union Gas Co.	Coal, Wilkinson & Tessie du Motay	6,000,000,000			1,200,000				97
1904	Brooklyn Union Gas Co.	Mayer, Wilkinson & Tessie du Motay	6,700,000,000			1,500,600				102
1905	Brooklyn Union Gas Co.	Mayer, Wilkinson, Tessie du Motay & Loomis	7,300,000,000							106
1906	Brooklyn Union Gas Co.	Mayer, Wilkinson, Tessie du Motay & Loomis	8,500,000,000							112
1907	Brooklyn Union Gas Co.	Mayer, Wilkinson, Williamson, Tessie du Motay & Loomis	8,300,000,000							113
1908	Brooklyn Union Gas Co.	Mayer, Wilkinson, Williamson, Tessie du Motay & Loomis	9,500,000,000							119
1909	Brooklyn Union Gas Co.	Mayer, Wilkinson, Williamson	10,300,000,000 (sales)	31,700,000						131
1910	Brooklyn Union Gas Co.	Lowe (Williamson)	10,903,435,000 (sales)	36,000,000		315,932				145
1911	Brooklyn Union Gas Co.	Lowe (Williamson)	12,436,000,000 (sales)	36,000,000		1,634,351				172
1912	Brooklyn Union Gas Co.	Lowe (Williamson)	11,900,000,000 (sales)	36,000,000		1,634,351			Supplies Borough of Brooklyn	179
1913	Brooklyn Union Gas Co.	Lowe (Williamson)	13,064,000,000 (sales)	31,723,000		1,634,351			Supplies Borough of Brooklyn	182
1914	Brooklyn Union Gas Co.	Lowe (Williamson)	13,443,000,000 (sales)	31,417,000		1,634,351	Gas unaccounted for: 5.6%		Supplies Borough of Brooklyn	190

Brown's Directory Summary - Brooklyn, New York
Brooklyn Union Gas Company

Year	Company Name	Process	Annual Gas Production (cf)	Gas Holder Capacity (cf)	Byproducts Made/Sold	Service Area Population	Operating Information	Holding and Operating Companies	Other Brown's Information	Reference Page(s)
1915	Brooklyn Union Gas Co.	Lowe (Williamson)	14,102,703,000 (sales)	31,057,000		1,634,351	Gas unaccounted for: 5.99%		Supplies Borough of Brooklyn	203
1916	Brooklyn Union Gas Co.	Lowe (Williamson)	14,087,779,000 (sales)	31,057,000		1,634,351	Gas unaccounted for: 6.32%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	205
1917	Brooklyn Union Gas Co.	Lowe (Williamson)	14,904,503,000 (sales)	31,057,000		1,634,351	Gas unaccounted for: 7.08%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	210
1918	Brooklyn Union Gas Co.	Lowe (Williamson)	17,617,817,000	31,057,000		1,634,351	Gas unaccounted for: 7.75%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	210
1919	Brooklyn Union Gas Co.	Lowe (Williamson)	18,791,981,000	31,057,000		1,634,351	Gas unaccounted for: 8.12%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	308
1920	Brooklyn Union Gas Co.	Lowe (Williamson)	18,791,981,000	31,057,000		1,634,351	Gas unaccounted for: 8.12%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	567-568
1921	Brooklyn Union Gas Co.	Lowe (Williamson)	22,105,470,000	31,057,000	MADE: tar: 10,132,348 gals. SOLD: tar: 5,344 gals.	1,454,577	Gas unaccounted for: 10.44%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	606
1922	Brooklyn Union Gas Co.	Lowe (Williamson)	19,223,443,000	31,057,000	MADE: tar: 11,091,992 gals. SOLD: tar: 24,762 gals.	1,454,577	Gas unaccounted for: 10.44%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	578
1923	Brooklyn Union Gas Co.	Lowe (Williamson)	19,885,148,000	30,957,000	MADE: tar: 13,047,121 gals. SOLD: tar: 335,853 gals.	1,454,577	Gas unaccounted for: 11.14%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	579
1924	Brooklyn Union Gas Co.	Lowe (Williamson)	21,984,891,000	35,957,000	MADE: tar: 13,914,704 gals. SOLD: tar: 158,914 gals.	1,454,577	Gas unaccounted for: 11.14%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	583
1925	Brooklyn Union Gas Co.	Lowe (Williamson)	22,041,739,000	35,957,000	MADE: tar: 12,204,971 gals. SOLD: tar: 86,094 gals.	1,454,577	Gas unaccounted for: 9.28%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	585
1926	Brooklyn Union Gas Co.	Lowe (Williamson)	22,354,433,000	35,957,000	MADE: tar: 12,343,882 gals. SOLD: tar: 199,874 gals.	1,454,577	Gas unaccounted for: 7.43%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	570
1927	Brooklyn Union Gas Co.	Lowe (Williamson)	26,538,051,000	35,957,000		1,454,577	Gas unaccounted for: 8.2%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	576
1928	Brooklyn Union Gas Co.	Lowe (Williamson)	23,719,781,000	35,957,000		2,203,991	Gas unaccounted for:7.04%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	574
1929	Brooklyn Union Gas Co.	Lowe (Williamson)	could not read	81,656		2,203,991	Gas unaccounted for: 6.49%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	110
1930	Brooklyn Union Gas Co.	Lowe (Williamson)	24,144,359,000	79,700		2,203,991	Gas unaccounted for: 6.5%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	103
1931	Brooklyn Union Gas Co.	Lowe (Williamson)	23,669,749,000	75,800		2,203,991	Gas unaccounted for:5.49%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	213
1932	Brooklyn Union Gas Co.	Lowe (Williamson)	could not read	could not read		Consumers - 714,954	Gas unaccounted for: 4.57%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	230
1933	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 13,920,926,000, coke oven gas: 8,409,583,000	Storage: 73,958,000; relief: 2,081,000	MADE: coke: 557,830 tons, tar: 12,212,653 gals., sulphate: 517,440 lbs. SOLD: coke: 261,173 tons	Consumers - 682,416	Coal carbonized: 707,979 tons. Refinery gas used: 13,203,469 therms. Gas oil used: 30,801,401 gals. Bituminous coal used: 315 tons. Anthracite coal used as water gas generator fuel: 1,050 tons, boiler: 494 tons. Coke used as water gas generator fuel: 176,763 tons; boilers: 24,380 tons. Gas unaccounted for: 3.98%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	191

Brown's Directory Summary - Brooklyn, New York
Brooklyn Union Gas Company

Year	Company Name	Process	Annual Gas Production (cf)	Gas Holder Capacity (cf)	Byproducts Made/Sold	Service Area Population	Operating Information	Holding and Operating Companies	Other Brown's Information	Reference Page(s)
1934	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 13,155,804,000, coke oven gas: 8,283,172,000	Storage: 73,958,000; relief: 2,681,000	MADE: coke: 552,262 tons, tar: 10,194,814 gals., sulphate:15,599 lbs. SOLD: coke: 284,472 tons	Consumers - 683,779	Coal carbonized:718,633 tons. Refinery gas used: 22,115,938 therms. Gas oil used: 25,150,406 gals. Bituminous coal used:143 tons. Anthracite coal used for boilers: 21 tons. Gas unaccounted for: 3.88%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	168-169
1935	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 12,859,278,000, coke oven gas: 8,659,534,000	Storage: 73,958,000; relief: 2,681,000	MADE: coke: 585,358 tons, tar: 12,436,487 gals., sulphate:17,174 lbs. SOLD: coke:324,268 tons	Consumers - 683,779	Coal carbonized: 756,848 tons. Refinery gas used: 17,901,515 therms. Gas oil used: 30,150,234 gals. Bituminous coal used for boilers: 1,839 tons. Anthracite coal used for boilers: 5,651 tons. Coke used as water gas generator fuel: 115,008 tons, boilers: 30,890 tons. Gas unaccounted for: 4.39%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	167-168
1936	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 11,936,765,000, coke oven gas: 8,745,609,000	Storage: 73,958,000; relief: 2,681,000	MADE: coke: 591,088 tons, tar: 11,291,423 gals., sulphate:17,659,720 lbs. SOLD: coke: 355,164 tons	Consumers - 707,302	Coal carbonized: 764,951 tons. Refinery gas used: 19,063,3315 therms. Gas oil used: 23,776,441 gals. Bituminous coal used for boilers: 1,063 tons. Anthracite coal used for boilers: 4,439 tons. Coke used as water gas generator fuel: 106,950 tons, boilers: 27,346 tons. Gas unaccounted for: 3.82%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	298-299
1937	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 12,382,532, coke oven gas: 8,669,477	Storage: 73,484,300; relief: 2,121,408	MADE: coke: 591,617 tons, tar: 12,248,053 gals., sulphate:18,306,520 lbs., naphthalene: 131,350 lbs.	Consumers - 676,093	Coal carbonized: 771,043 tons. Refinery gas used: 17,094,491 therms. Gas oil used: 27,218,736 gals. Bituminous coal used for boilers: 4,426 tons. Anthracite coal used for boilers: 4,439 tons. Coke used as water gas generator fuel: 114,719 tons, boilers: 17,758 tons. Gas unaccounted for: 3.79%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards)	301-302
1938	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 12,774,946, coke oven gas: 8,524,377	Storage: 73,484,300; relief: 2,121,408	MADE: coke: 585,250 tons, water gas tar: 694,020 gals., oven gas tar: 5,990,946 gals., sulphate:18,100,600 lbs., naphthalene: 476,360 lbs. SOLD: coke: 380,879 tons	Consumers - 734,069	Coal carbonized: 748,193 tons. Refinery gas used: 17,459,351 therms. Gas oil used: 27,848,566 gals. Anthracite coal used for boilers: 7,509.29 tons. Coke used as water gas generator fuel: 119,995 tons, boilers: 24,783 tons. Gas unaccounted for: 2.63%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens	306-307
1939	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 13,297,873, coke oven gas:8,755,842	Storage: 70,778,300; relief: 1,806,408	MADE: coke: 592,383 tons, water gas tar: 7,815,003 gals., oven gas tar: 6,664,516 gals., sulphate:19,158,520 lbs., naphthalene: 419,187 lbs. SOLD: coke: 326,778 tons	Consumers - 744,431	Coal carbonized: 775,755 tons. Refinery gas used: 17,081,154 therms. Gas oil used: 31,150,465 gals. Anthracite coal used for boilers: 12,916.61tons. Coke used as water gas generator fuel: 126,938 tons, boilers: 23,481 tons. Gas unaccounted for: 1.75%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens	346-347
1940	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 14,554,441,000, coke oven gas:8,816,713,000	Storage: 70,778,300; relief: 1,806,408	MADE: coke: 590,581 tons, water gas tar: 10,149,714 gals., oven gas tar: 6,972,020 gals., sulphate:18,638,480 lbs., naphthalene: 462,353 lbs. SOLD: coke: 333,486tons	Consumers - 753,595	Coal carbonized: 776,077 tons. Refinery gas used: 21,534,236 therms. Gas oil used: 33,750,973 gals. Anthracite coal used for boilers: 706.61tons. Coke used as water gas generator fuel: 134,407 tons, boilers: 18,469 tons. Gas unaccounted for: 1.33%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens 2nd and 4th wards	353-354
1941	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 15,999,522,000, coke oven gas:8,976,542,000	Storage: 70,778,300; relief: 1,806,408	MADE: coke: 607,599 tons, water gas tar: 11,621,089 gals., oven gas tar: 6,968,146 gals., sulphate:18,637,420 lbs., naphthalene: 411,537 lbs. SOLD: coke: 333,486 tons. SOLD: Coke: 344,136 tons	Consumers - 762,919	Coal carbonized: 802,277 tons. Refinery gas used: 20,312,996 therms. Gas oil used: 40,060,385 gals. Anthracite coal used for boilers: 257.37 tons. Coke used as water gas generator fuel: 153,344 tons, boilers: 16,301 tons. Gas unaccounted for: 1.34%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens 2nd and 4th wards	349-350

Brown's Directory Summary - Brooklyn, New York
Brooklyn Union Gas Company

Year	Company Name	Process	Annual Gas Production (cf)	Gas Holder Capacity (cf)	Byproducts Made/Sold	Service Area Population	Operating Information	Holding and Operating Companies	Other Brown's Information	Reference Page(s)
1942	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 16,383,794,000, coke oven gas: 9,244,793,000	Storage: 70,778,300; relief: 1,806,408	MADE: coke:615,527 tons, water gas tar: 11,497,695 gals., oven gas tar: 7,756,159 gals., sulphate:19,929,300 lbs., naphthalene: 595,0957 lbs. Drip and tar oil: 1,013,470 gals., crude oil of coal tar: 5,839 gals., motor fuel: 852,795 gals., residual distillate: 351,071 gals., crude heavy solvent: 151,911 gals. SOLD: Coke: 372,542 tons	Consumers - 775,856	Coal carbonized: 821,102 tons. Refinery gas used: 24,743,706 therms. Gas oil used: 36,149,289 gals. Anthracite coal used for boilers: 16,631.16 tons. Coke used as water gas generator fuel: 151,719 tons, boilers: 22,162 tons. Gas unaccounted for: 1.34%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens 2nd and 4th wards	342-343
1943-1944	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 17,191,409,000, coke oven gas: 9,479,949,000	Storage: 70,778,300; relief: 1,806,408	MADE: coke: 635,537 tons, water gas tar: 11,066,897 gals., oven gas tar: 8,157,249 gals., sulphate:19,599,400 lbs., naphthalene: 840,749 lbs. Drip and tar oil: 1,231,302 gals., crude oil of coal tar: 3,708 gals., motor fuel: 1,873,319 gals., residual distillate: 718,835 gals., crude heavy solvent: 421,345 gals. SOLD: Coke: 337,984 tons	Consumers - 778,057	Coal carbonized: 846,707 tons. Refinery gas used: 22,491,919 therms. Gas oil used: 38,232,178 gals. Anthracite coal used for boilers: 29,948.62 tons. Coke used as water gas generator fuel: 172,901 tons, boilers: 22,162 tons. Gas unaccounted for: 3.92%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens 2nd and 4th wards	299-300
1944-1945	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 18,125,926,000, coke oven gas: 9,418,943,000	Storage: 70,778,300; relief: 1,806,408	MADE: coke: 636,725 tons, water gas tar: 9,708,751 gals., oven gas tar: 7,632,944 gals., sulphate:18,871,980 lbs., naphthalene: 836,365 lbs. Drip and tar oil: 1,169,836 gals., crude oil of coal tar: 6,264 gals., motor fuel: 1,777,010 gals., residual distillate: 734,277 gals., crude heavy solvent: 460,784 gals. SOLD: Coke: 307,801 tons	Consumers - 777,454	Coal carbonized: 855,092 tons. Refinery gas used: 20,800,639 therms. Gas oil used: 38,912,738 gals. Anthracite coal used for boilers: 27,709.10 tons. Coke used as water gas generator fuel: 194,682 tons, boilers: 24,574 tons. Gas unaccounted for: 3.92%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens 2nd and 4th wards	296-297
1945-1946	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 19,429,511,000, coke oven gas: 9,073,120,000	Storage: 70,778,300; relief: 1,806,408	MADE: coke: 636,091 tons, water gas tar: 10,516,126 gals., oven gas tar: 7,515,276 gals., sulphate:16,821,580 lbs., naphthalene: 804,426 lbs. Drip and tar oil: 1,222,702 gals., crude oil of coal tar: 4,032 gals., motor fuel: 1,860,738 gals., residual distillate: 596,056 gals., crude heavy solvent: 512,220 gals. SOLD: Coke: 295,186 tons	Consumers - 787,052	Coal carbonized: 839,420 tons. Refinery gas used: 23,988,806 therms. Gas oil used: 43,035,026 gals. Anthracite coal used for boilers: 14,592.69 tons. Coke used as water gas generator fuel: 194,964 tons, boilers: 19,638 tons. Gas unaccounted for: 4.06%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens 2nd and 4th wards	300

Brown's Directory Summary - Brooklyn, New York
Brooklyn Union Gas Company

Year	Company Name	Process	Annual Gas Production (cf)	Gas Holder Capacity (cf)	Byproducts Made/Sold	Service Area Population	Operating Information	Holding and Operating Companies	Other Brown's Information	Reference Page(s)
1946-1947	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 21,225,979, coke oven gas: 8,320,994	Storage: 70,778,300; relief: 1,806,408	MADE: coke: 601,120 tons, water gas tar: 13,955,042 gals., oven gas tar: 6,652,620 gals., sulphate:14,847,120 lbs., naphthalene:778,960 lbs. Drip and tar oil: 1,182,551 gals., motor fuel: 1,611,352 gals., residual distillate: 605,671 gals., crude heavy solvent: 600,490 gals. SOLD: Coke: 258,945 tons	Consumers - 801,397	Coal carbonized: 782,395 tons. Refinery gas used: 23,757,600 therms. Gas oil used: 54,953,448 gals. Anthracite coal used for boilers: 9,709.89 tons. Coke used as water gas generator fuel: 208,404 tons, boilers: 30,403 tons. Gas unaccounted for: 4.46%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens 2nd and 4th wards	304-305
1947-1948	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven	carbureted water gas: 24,433,046, coke oven gas: 6,622,269	Storage: 70,778,300; relief: 1,806,408	MADE: coke: 483,958 tons, water gas tar: 16,888,892 gals., oven gas tar: 4,871,879 gals., sulphate:11,177,260 lbs., naphthalene: 590,168 lbs. Drip and tar oil: 1,216,089 gals., motor fuel: 773,458 gals., residual distillate: 574,816 gals., crude heavy solvent: 701,238 gals. SOLD: Coke: 120,111 tons	Consumers - 816,983	Coal carbonized: 619,259 tons. Refinery gas used: 23,672,266 therms. Gas oil used: 69,564,194 gals. Anthracite coal used for boilers: 8,891.279 tons. Coke used as water gas generator fuel: 257,819 tons, boilers: 32,702 tons. Gas unaccounted for: 3.49%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens 2nd and 4th wards	303-304
1948-1949	Brooklyn Union Gas Co.	Carbureted water gas & by-product coke oven and LP-gas	water gas: 27,206,898,000, coke oven gas: 7,133,017,000, LP gas: 36,423,000	Storage: 70,778,300; relief: 1,806,408 LP-gas standby plant, 25,000 gals each	MADE: coke: 515,074 tons, water gas tar: 21,006,919 gals., oven gas tar: 5,563,056 gals., sulphate: 12,128,700 lbs., naphthalene: 657,500 lbs. Drip and tar oil: 1,305,005 gals., motor fuel: 1,363,546 gals., residual distillate: 527,950 gals., crude heavy solvent: 973,354 gals. SOLD: Coke: 95,413 tons	Consumers - 824,281	Coal carbonized:632,164.89 tons. Refinery gas used: 29,926,177 therms. Gas oil used: 81,298,414 gals. Generator fuel used: Coke: 260,109 tons, Boiler fuel used: anth. Coal: 14,248.95 tons, coke: 31,978 tons. Gas unaccounted for: 3.12%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens 2nd and 4th wards	253-254
1949-1950	Brooklyn Union Gas Co.	water gas & by-product coke oven and LP-gas	water gas: 27,851,895,000, coke oven gas: 8,051,879,000, LP gas: 51,438,000	Storage: 80,375,000; relief: 1,847,000 LP-gas standby plant: 30,000 gals each	SOLD: Coke: 192,812.71 tons	Consumers - 830,130	Coal carbonized:755,853 tons. Refinery gas used: 21,356,238 therms. Gas oil used:91,242,016 gals. Generator fuel used: Coke: 257,616.17 tons, Boiler fuel used: anth. Coal: 25,554.16 tons, coke: 38,807.64 tons. Gas unaccounted for: 2.68%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens 2nd and 4th wards	250-251
1950-1951	Brooklyn Union Gas Co.	water gas & by-product coke oven and LP-gas	water gas: 26,264,047,000, coke oven gas: 8,002,111,000, LP gas: 320,000,000	Storage: 97,375,000; relief: 1,847,000 LP-gas standby plant: 30,000 gals each	SOLD: Coke: 188,756.70 tons	Consumers - 836,943	Coal carbonized: 735,317.70 tons. Refinery gas used: 28,214,407 therms. Gas oil used: 81,514,774 gals. Generator fuel used: Coke: 224,290.61 tons, Boiler fuel used: anth. Coal: 15,446.42 tons, coke: 24,719.59 tons. Gas unaccounted for: 2.68%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens 2nd and 4th wards	245
1951-1952	Brooklyn Union Gas Co.	water gas & by-product coke oven and LP-gas	water gas: 28,138,360,000, coke oven gas: 8,817.970,000, LP gas: 44,174,000	Storage: 95,876,000; relief: 1,847,000 LP-gas standby plant: 30,000 gals each	SOLD: Coke: 242,252.47 tons	Consumers - 844,319	Coal carbonized: 800,064.50 tons. Refinery gas used: 21,707,572 therms. Gas oil used: 95,707,656 gals. Generator fuel used: Coke: 254,736.74 tons, Boiler fuel used: anth. Coal: 1,019.96 tons, coke: 24,192.75 tons. Gas unaccounted for: 3.1%		Supplies Borough of Brooklyn (except 29th, 30th, and 31st Wards) and Borough of Queens 2nd and 4th wards	239-240
1952-1953	Not available in AECOM's library									
1953-1954	Brooklyn Union Gas Co.	Natural gas								250
1954-1955	Brooklyn Union Gas Co.	Natural gas								246
1955-1956	Brooklyn Union Gas Co.	Natural gas								

Brown's Directory Summary - Brooklyn, New York
Brooklyn Union Gas Company

Year	Company Name	Process	Annual Gas Production (cf)	Gas Holder Capacity (cf)	Byproducts Made/Sold	Service Area Population	Operating Information	Holding and Operating Companies	Other Brown's Information	Reference Page(s)
1956-1957	Brooklyn Union Gas Co.	Natural gas								

Brown's Directory Summary - Brooklyn, New York
Metropolitan Gas Light Co. (absorbed by Brooklyn Union Gas - 1899)

Year	Company Name	Process	Annual Gas Production (cf)	Gas Holder Capacity (cf)	Byproducts Made/Sold	Service Area Population	Operating Information	Holding and Operating Companies	Other Brown's Information	Reference Page(s)
1887	No Listing									
1888	Not available in AECOM's library									
1889	Metropolitan Gas Light Co.	Tessie du Motay							King's County	46
1890	Metropolitan Gas Light Co.	Tessie du Motay	165,000,000							73
1891	Metropolitan Gas Light Co.	Tessie du Motay	240,000,000							67
1892	Metropolitan Gas Light Co.	Tessie du Motay	240,000,000							73
1893	Metropolitan Gas Light Co.	Wilkinson	325,000,000							75
1894	Metropolitan Gas Light Co.	Wilkinson	325,000,000							80
1895-1898	Not available in AECOM's library									
1899	No Listing									
1900	No Listing									
1901	No Listing									
1902	No Listing									
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1939	No Listing									
1940	No Listing									
1941	No Listing									
1942	No Listing									
1943-1944	No Listing									
1944-1945	No Listing									
1945-1946	No Listing									
1946-1947	No Listing									
1947-1948	No Listing									
1948-1949	No Listing									
1949-1950	No Listing									
1950-1951	No Listing									

Brown's Directory Summary - Brooklyn, New York
Metropolitan Gas Light Co. (absorbed by Brooklyn Union Gas - 1899)

Year	Company Name	Process	Annual Gas Production (cf)	Gas Holder Capacity (cf)	Byproducts Made/Sold	Service Area Population	Operating Information	Holding and Operating Companies	Other Brown's Information	Reference Page(s)
1951-1952	No Listing									
1952-1953	Not available in AECOM's library									
1953-1954	No Listing									
1954-1955	No Listing									
1955-1956	No Listing									
1956-1957	No Listing									

Brooklyn Union Newspaper Articles

TELEGRAMS.

A Battalion of the Guards Sent to Ireland.

The Herzegovinians Gain a Strategic Point—Comments on the Guiteau Verdict Here and Elsewhere—Light Penalty for Wife Murder at Boston—Serious Coasting Accident—Fatal Boiler Explosion—Death from Trichina in Minnesota Hams.

LONDON, January 26.

It is stated that a battalion of the guards will leave Windsor for Ireland to-day.

M. Rossand Insane.

LONDON, January 26.

The Paris correspondent of the *Daily Telegraph* states that M. Rossand, the husband of Christine Nilsson, has become insane owing to the financial excitement.

Herzegovina and Austria.

LONDON, January 26.

The *Manchester Guardian's* Trieste correspondent, who has special relations with the insurgents, telegraphs as follows: "The Herzegovinians are concentrating in the mountainous angle included by the upper course of the Narenta River. Their position is absolutely unassailable. It threatens Colnitza, which commands the communication between Mostar and Serajivo and dominates the principal mountain pass. The attempts to gag the press have redoubled the fear that a panic may arise in Vienna. A high Austrian official stated on Monday that the situation could not well be worse."

Business Failures.

LONDON, January 26.

Egmont Ehrlich, stock broker, has failed. His difference are considerable, principally in foreign securities. More failures are expected.

Canadian Press on the Verdict.

TORONTO, Ont., January 26.

Of the Guiteau verdict the Toronto *World* says: "Humanity will breathe more freely when the hangman performs his already too long delayed task."

The *Mail* says: "The world will be all the better for the verdict of guilty, which has been given by the jury."

The *Globe* says: "It is to be hoped that the question of jurisdiction, if it is seriously raised, will be speedily disposed of, and that the fate of the assassin will be allowed to serve as a warning to all who are prompted by a diseased vanity or any other motive to take the lives of their fellow men."

Amsterdam Trade Exhibit.

WASHINGTON, January 26.

The Secretary of State has forwarded to the Treasury Department a programme of the trade exhibit to be held in the interest of trade at Amsterdam in 1883. The Secretary has also addressed the Congressional Committees on Commerce on the subject.

The Tennessee Repaired.

WASHINGTON, January 26.

The Navy Department is informed that the repairs of the United States steamship Alliance, at the Boston Navy Yard, will be finished during the first week of February, and that the Tennessee is now ready to go out of the dry dock at the Brooklyn Navy Yard.

Fire Near Thomaston, Me.

ROCKLAND, Me., January 26.

The house of Elizabeth Ackworth, at South Thomaston, was burned last night. Loss $6,000; insured for $4,000.

The Burglary in Illinois.

DAVENPORT, Iowa, January 26.

Only $2,900 in money and $15 in postage stamps were secured by the burglars who blew open the safe in the postal store of Hartshorn & Co., at Reynolds, Rock Island County, Illinois, yesterday morning.

Marine Disasters.

PORTLAND, Me., January 26.

The British brig Henry Colpoi, Bowlatt, Yarmouth, N. S., for Boston, with wood in the hold and a deck load of piles, parted her chains at 2 o'clock this morning and drifted ashore on Bangs Island Point. She is full of water and rolling heavily.

The Verdict in the Guiteau Case.

PORTSMOUTH, N. H., January 26.

The verdict in the Guiteau case is freely commented upon and heartily approved on all sides. Many apprehended a disagreement of the jury.

Slight Penalty for Murder.

BOSTON, Mass., January 26.

The case of William Kelly for the murder of his wife Anna Kelly, at their house in Roxbury district, on the 11th of last December, came up for trial yesterday. The prisoner pleaded guilty to manslaughter, and was sentenced by the House of Correction for two years.

The Missing Steamer Adam.

NEWPORT, R. I., January 26.

The revenue cutter Salmon, lately stationed here, left her anchorage at 10 o'clock this morning, by order of Secretary Folger, for the purpose of searching for the missing steamer Adam.

The Union Pacific Railroad.

CHICAGO, Ill., January 26.

Thomas L. Kimball, assistant general superintendent of the Union Pacific Railroad, was in this city yesterday, on his way to New York, to attend a conference of the heads of the Union Pacific and subsidiary lines, regarding extensions eastward and westward from Ogden. Mr. Kimball stated that 500 miles of new road would be built this year. The chief undertaking of the company is the Oregon Short Line, will be completed and equipped during the year as far as the Wood River mines in Idaho.

Serious Coasting Accident.

BOSTON, Mass., January 26.

A serious coasting accident occurred in West Quincy, Mass., last evening. A large coasting sledge, upon which were a number of young men and boys, was descending Knox Hill, Stoughton street, became unmanageable and ran with great violence into a rail fence. Its occupants were hurled in all directions.

James Hinson, who was sleeping, was rendered insensible and sustained several injuries, one being a head fracture. John Hinson received injuries of a serious nature. Fred. Shepland had his left thigh fractured and was removed to the Massachusetts General Hospital.

A Boston boy named Willie Boyd, received serious internal injuries. John Jones was slightly injured in the left leg, and nearly all the remaining occupants of the sleigh were more or less bruised.

Fatal Boiler Explosion.

DOVER, Del., January 26.

A special from Canonchet to the Republican says: "A boiler exploded at a shaft of the Delaware Iron Company, located two miles from here, at 7 this morning, killing a blacksmith so badly that he has since died. The engineer had his leg broken and was badly scalded. The boiler was thrown a distance of 300 yards."

Purchase of a Railway.

GALVESTON, Tex., January 26.

Yesterday the Gulf, Colorado and Santa Fe Railroad purchased the Montgomery Central Road, running from Navasota on the Texas Central, 26 miles north-west toward Montgomery. The Gulf, Colorado and Santa Fe will build a branch from Brenham on their main line to Navasota, and from Montgomery ultimately to some point in the southeastern portion of the State, through the pine lumber district.

Burglary in Jersey City.

HOOKERS, N. J., January 26.

The house left by the men who attempted to carry off the safe from Black's food store, on Tuesday last, was broken into, ransacked by R. C. Marsh, a twenty stable keeper on East Fourth street, New York City. Mr. Marsh said he was in the habit of hiring out horses; and that an unknown man came to him and obtained the horse ostensibly for one of his customers. No trace of the burglars has as yet been made.

Dreadfully Scalded by Steam.

WASHINGTON, January 26.

John Warrick (colored), aged 50 years, employed as night fireman in the boiler room of the Corcoran building, in this city, was terribly scalded at an early hour this morning, while attempting to remove some obstructions from the boiler. It appears that he had placed a board in the soot box and was lying upon it at work on the obstructions, when a sudden escape of cold water into the hot sub box generated an enormous volume of steam completely parboiling the unfortunate fireman. He was sent to the Freedman's Hospital at once. His injuries will probably result fatally.

Poisonous Ham.

MARSHALL, Minn., January 26.

Great excitement has been caused in Minnesota by trichina poisoning from eating raw ham. Fifteen prominent citizens of Minnesota were afflicted and three have died. An entire family, consisting of Mr. and Mrs. Chalmar, three sons—William, aged 12, Nicholas, aged 14, Jacob, aged 16, and a daughter, Amelia, aged 18—were poisoned. Mr. Chalmar died early during on Tuesday. Fritz Prugger and Joseph Wilfort have died from the same cause.

O. Gilbertson, D. Seldenis and Dr. Sanderson are quite ill; while Peter Peckles, Oscar Thompson, Andrey Winkers and a German living near the village, whose name is unknown, are in a precarious situation. The matter will be brought, for investigation, to the attention of the State Board of Health.

An Incendiary Fire.

ROCK ISLAND, Ill., January 26.

Yesterday morning, fire originating on the roof of the jail and county building, destroyed part of that structure. The loss by fire and water is from $6,000 to $8,000, uninsured. A crank prisoner in the jail named J. J. Scandal, set fire to the building.

Fight Between Mexicans and Apaches.

SAN FRANCISCO, Cal., January 26.

A dispatch from Guaymas says that authentic reports have been received of an engagement of the Matatzopis with Apaches who raided Lompatejo, resulting in the killing of twenty Indians. At last accounts the troops were in hot pursuit.

AN $80,000 FIRE.

The magnificent residence of George H. Bendix, a wealthy grocer of New York, situate on Riverside avenue, one mile from King's Bridge, was totally destroyed by fire last night. The loss will aggregate over $80,000, upon which there was an insurance of only $10,000. The fire is supposed to have been occasioned by a defective flue. Besides the fire there was the casualty of the house being burned to the ground before the arrival of the fire engines. Nothing was saved beyond some articles of jewelry and a few household papers.

ARRESTED FOR PERJURY.

The Ups and Downs of the Improved Ship Berth Company.

BOSTON, Mass., January 26.

On March 6, 1879, an Improved Ship Berth Company was organized in this city, several officers of the company making affidavit that a capital of $100,000 was paid in, and that by a vote of the directors, it was decided that a portion of that capital was to be devoted to the purchase of certain patent rights. Among the officers of the company were Edward P. Cassell, Robert M. Voss, F. W. Fulton and Harry McLellan, all well known in monayed circles.

On January 4, 1880, the company reorganized, under the title of the Hoeston Ship Berth Company, Cassell and McLellan being in the second company. During the boom in stocks the shares of this company reached high figures, and were extensively sought for Jerseymen; the value of the shares sold being stated at nearly $200,000. The price of this stock soon began to fall, however, until it was worth very little. This caused much discouragement to the stockholders, and at a recent meeting a majority of the new holders obtained control of the company. Suspicion having been excited by the previous transaction of the management, a committee of prominent gentlemen was appointed to thoroughly investigate the books of the concern. This investigation has been proceeding for some weeks, and yesterday resulted in the swearing out of warrants against Messrs. Cassell, Fulton and McLellan for perjury, it being alleged that they falsely made affidavit that the capital stock had been paid in. Fulton, McLellan and Cassell were arrested yesterday afternoon, but all three obtained bail in the sum of $3,000, and were released. Voss is out of town. There are two counts each against Cassell and McLellan, they having been members of both companies.

WASHINGTON.

Various Bills of Interest Framed in Committee.

One to Exclude Chinese Laborers for Twenty Years to Come—The Apportionment Bill Fixing the Number of Congressmen at 319—A Suggestion that Guiteau Should be Hanged July 2—Talk with the Foreman of the Jury.

[Special to the Eagle.]

WASHINGTON, January 26.

The Senate Foreign Relations Committee to-day agreed on a bill relating to Chinese emigration. Chinese laborers are limited and are not to be admitted for twenty years. Penalties and fines are provided in case of violation. The treaty with China allows this Government to pass such a law.

The House Census Committee at its meeting to-day agreed to the Apportionment bill. Under it there will be 319 Congressmen, and the States of Maine, Vermont, Rhode Island, Florida and California will each lose one member, and, therefore, the whole delegation from those States will have to be elected at large. Mr. Cox tried to get the number down to 307. The majority were disposed to fix the number at even more than that agreed on, but finally accepted the compromise bill, which will be reported to-morrow, and as early day fixed for its consideration.

It is authoritatively stated at the Department of State to-day that there is no truth in the report brought by the last mail from South America that the instructions of this Government to Minister Trescot authorized him to demand of the Chilian Government the restoration of Caldcron to Peru. He was simply directed to report the condition of affairs and to use his good offices to bring about a peaceful adjustment of pending difficulties. Latest advices have been received from him.

Several delegations from New England are here to appear before the Commerce Committee to urge increased appropriations for leading harbors in those States. Chairman Page informed them that the committee had decided not to hear any delegations on matters connected with the River and Harbor bill, but that any information connected with the subject would gladly be received. The committee proposes to confine its action generally to reports of engineers who have been detailed to study scientifically the necessities of each case.

The Committee on Shipping Interests appointed by the New York and Chicago National Tariff conventions appeared before the House Committee on Post Offices to-day. Speeches were made by ex-Congressman Coklin, chairman of the committee, and John Roach, giving the committee an outline of what was done by the National Tariff conventions at their recent meetings, and what legislation the shipping interest desires of Congress.

Counsel for Guiteau are preparing to raise several points, the intent of which is to defer his execution. Neither of them have any idea of accomplishing more than this. It has been suggested by several to the Government counsel, and to the judge, that in case there is much delay, it would be well for the court to arrange for the hanging on the 2d day of July between nine and ten, the day and the hour of the assassination of President Garfield.

The Postmaster General has completely defeated the bill to make postage stamps good in cash. Some of the committee that in one year the department would probably be more than self sustaining and the Government would then urge a reduction to two cents, but that one cent would be too low. COX.

A Talk with the Foreman of the Jury.

The *New York Evening Post* of to-day has the following among other things in its Washington dispatch concerning the Guiteau case:

Foreman Hamilton, of the jury, said there was very little preliminary talking among the jurors at first. The indictment was read and they had a ballot, upon which their unanimity of sentiment became apparent. He thought it took them about half an hour to convict Guiteau on all the first together.

Dr. Young is the physician at the jail who testified as to the insanity of Guiteau's father. He said he regarded him as a perfectly sane man. The forenoon said that on opening the letter, which had been accompanied by the poisonous vomit, he felt certain the jury would death if Guiteau escaped the gallows. They had received, however, it appeared, but few letters of the character.

An estimate has been made of the expenses of this trial. It is thought that they will be about $10,000. Of this Judge Porter, Judge Bridges and Mr. Porter, is the chief, will receive about $5,000 each. Witnesses have been paid in fees over $6,000. The board with the jury will reach $3,500. The expense of printing the testimony will be about $3,000, and the fees for jurors will amount to about $1,500.

Guiteau himself says the verdict startled him, but was not a surprise. He thought Judge Cox's charge in the main fair. He attributes the result in no small degree to Judge Porter's speech. When asked if he had any fears as to his death, he said: "I am in the hands of the Lord, and have no fear whatever." He was asked to say to the American people that he had not yet given up hope, however. He would go to the court in hacks and by a back door, if they would give him a fair show for his life. He will now be more carefully guarded, and allowed less liberties.

MONEY MARKET.

WALL STREET, January 26—3 P. M.

Among the sales this afternoon were: Omaha consol, 99½; Denver Mountain Extension, 97; Toledo, Delphos and Burlington income, 24; Canada Southern 1st, 92½; Erie 2nd consol, 99½@99¾; Burlington, Cedar Rapids and Northern 1st, 109½; Northwest S. F. 5s, 100½; West Tennessee income, 86½@86½; District of Columbia bonds, 103¾; Texas Pacific land grants, 17¼; ditto Rio Grande, 1st, 78; Richmond and Danville deb, 105; Chattanoga, 1st, 115½; Atlantic and Pacific, 1st, 97; ditto income, 37½; Central Pacific, 1st, 114½; Wabash convertible, 106; Boston, Hartford and Erie, 1st, 65; International 5s, 71; L. S. 4s, 108½; Missouri, Kansas and Texas, general 1st, 31; ditto consol, 109½; Union Pacific, 1st, 119½@119¾; ditto 6s, 122.

Money loaned at 4 to 5 per cent, and there is little disposition to make time loans, as bankers look for active money in the immediate future.

The grain movement at Chicago and Milwaukee to-day was as follows:

	Chicago barrels	Milwaukee barrels
Receipts wheat	34,000	67,750
Shipments wheat	14,000	3,250
Receipts flour	19,000	1,000
Shipments corn	171,000	15,000

The Bank of England statement shows an increase of £1,000 in the proportion of reserve to liabilities. The fact that the gold withdrawn during the week went to Paris, whence it may be expected soon to return, and the gain in reserve are probably the reasons why the bank rate of discount was not advanced. There was a further shipment of £181,000 sterling to Paris to-day, and the market for specie appears to be heavy; for rates are down to 82 francs, 12½c, against 82 francs, 30c, yesterday.

Stocks were quiet and a little irregular between calls, but at the board there was a recovery, and a strong market for the close. Western Union was the most active and weak. Toward the close of the call the market became dull and irregular again.

The following shows the course of the Chicago grain and provision market for this day:

	9.30—Opening			1 P. M.—Closing		
	Feb'y	March.	April.	Feb'y	March.	April.
Wheat	$1.06½	$1.08½	$1.09¾	$1.05¾	$1.08¼	$1.09¾
Corn	47½	48¾		47½	48¾	
Oats	34¾	35¾		34¾	35¾	
Pork	16.55	16.65	16.77	16.52½	16.47½	
Lard	11.05	11.15	11.27½	11.02½	11.12½	
S. Ribs	9.10	9.30		9.10	9.27½	
				315 P. M.		

Stocks were irregular at the close.

The following table shows the course of the stock market for this day:

	2:45 P. M.			Closing.	
	Opening.	Highest.	Lowest.	3 P. M.	Sat'y.
Wabash Pacific	26	26½	26	26¼	26¼
Wabash preferred	64	65	64	65	
Central and Hudson	131½	132	131½	132	131½
Lake Shore	53¾	54	53¾	53¾	53¾
Illinois Central	81¾	82	81¾	81¾	82
Erie preferred				44	44
Union Pacific	118¾	118¾	117¾	117¾	118
Lake Shore	118¾	118¾	118¾	118¾	118¾
Morris and Essex	121½	122	121½	122	122
Del., Lack. & West.	137½	137½	137½	137½	137½
New York Central	128½	129	128½	129	129
Northwestern	139¾	140	139¾	139¾	139¾
Northwestern preferred				140	140
Rock Island	128½	128½	128½	128½	127¾
St. Paul	108½	108½	107¾	108	107¾
St. Paul preferred				127	127
Ohio and Mississippi	36	36¼	34¾	34¾	34¾
Pacific Mail	36¾	36¾	36¾	36¾	36¾
Hannibal and St. Joe	36¾	36¾	36¾	36¾	36¾
Hannibal and St. Joe preferred	80	81	80	81	80
Western Union	93½	93½	92½	92½	92½
Pacific Mail	19½	19½	19½	19½	19½
U. S. Express	109	109	109	109	109
Hannibal and St. Joe	107	107	107	107	107
Delaware and Hudson	119	119	118½	118½	118½
Chicago and Alton	137	137	137	137	137
Manhattan Elevated	85	85¼	84¾	85	84¾
New Jersey Central				5	5
Northern Pacific	27	27	26¾	26¾	26¾
Northern Pacific preferred	74	74	73¾	73¾	73¾
Mobile and Ohio	24½	24½	24½	24½	24½
Louisville and Nashville	56¾	56¾	56¾	56¾	56¾
Ontario	34	34	34	34	34
N. Y. Lake & Western	29	29¼	28¾	28¾	28¾
Ohio and Mississippi	34¾	34¾	34¾	34¾	34¾
St. Paul & Omaha	104¾	107	104¾	106¾	106¾
Chicago and Northwestern	133	133	132½	132½	132½
Lake Erie & Western	34¾	34¾	34¾	34¾	34¾
Peoria, Dec. & Evans	24	24	24	24	24
Texas Pacific	34¾	34¾	34¾	34¾	34¾
Illinois Central	132	132	132	132	132
Chic., Bur. & Quincy	135¾	135¾	135¾	135¾	135¾

LEGISLATIVE.

A Fruitless Democratic Caucus To-day.

Interesting Debate in the Senate, in which Mr. John C. Jacobs Defines his Position and Denies that he Ever Served any Corporation as Attorney. How and Why Other Senators are Anti Monopolists.

[Special to the Eagle.]

ALBANY, N. Y., January 26.

The Democratic Assemblymen met in caucus this morning. The committee appointed to confer with Tammany was discharged, and the chairman of the Caucus Committee, Wm. H. Catlin, was instructed to confer with the Caucus Committee of the Senate, with a view of bringing about a joint session of the caucus committees to listen to a statement of the views of the Union conference wing of the anti monopolists, which body has acted for a hearing. Having done this the caucus adjourned.

Apparently with this spasmodic effort of the assemblymen to effect an organization all negotiations have ceased. There is not the slightest prospect that anything will be done this week. Indeed, the outlook is hopeless unless the ground upon which all stand is shifted. At all events, it may be set down as a settled thing that there will be no settlement of the difficulties this week.

Shortly after the Senate convened Senator Daly offered a resolution suspending the rule providing for a Standing Committee and providing for the reference of all bills to the Committee of the Whole.

This resolution was supported by Senator Daly on the ground that it would remove the calendable cause of the deadlock, which was fritting away the time which should be devoted to the public interest. Senator Grady said that he wanted to give the gentlemen frank notice that the deadlock would soon be broken; perhaps not in the way the gentlemen would like, and therefore, he would move to lay the resolution upon the table. This he withdrew at the request of Senator Jacobs, who said that he hoped that the resolution would prevail. He had introduced a bill providing for a railroad commission, but he was not any the more an anti monopolist, because he made a profession of it. I introduce this bill in obedience to the demands of my party, not of a faction in it. It is done from respect to public opinion." *A few newspapers* had been attacking him, and calling him an attorney of corporations. The Senate would hear him out that he had remained silent under those accusations. He had never been the attorney of any railroad corporations or any other corporation, for he was not a practising lawyer. He had never received a fee either directly or indirectly from any corporation; that if this House and in the other branch of the Legislature during a prolonged service, he had protested against the introduction of bills which were intended as strikes upon corporations and other interests was true, and he should continue to do so. More than that, he should always vote as his conscience, and not as a few men dictated.

Referring to Senator Boyd, he said that he became an anti monopolist three weeks before an election. The district had been searched for a man to stand as a candidate. The nomination had first been offered to General Sickles and declined. His genial friend, Dr. Boyd, had been found to accept it. Had it been upon the monopoly platform it would have been the same. Senator Grady was anti-monopolist because some one had told him to be such. But he was an anti-monopolist because it was the sentiment and the platform of the party to which he was attached. If he understood the sentiment of his party it was that the pledges made in the platform should be carried out, and he was in his place in the Senate for that purpose. There might be a mistake in it, but he was justified in persisting in that course because it was the will and sentiment of the Democratic party. He closed by advocating the adoption of Senator Daly's resolution.

Senator Boyd replied by saying that he had been taught the sublime virtue that when slapped upon one cheek he should turn the other. He had been attacked by Senator Jacobs, and he, forgiving him, turned the other cheek to him. He then set about correcting Senator Jacobs statement by saying that he had been a member of the Anti Monopoly League from its inception, and last Spring had been elected its secretary, and he was an anti monopolist because he believed that the best interests of the people would be served by the application of those principles to government.

Senator Jacobs took the floor again and said that with reference to his act last year upon the railroad commission, that he had moved to amend the bill so that the three commissioners provided for should be elected by the people, but it did not suit a person high in Federal authority who was in Albany at the time urging the passage of the bill as an instrument of great political power to the executive, and in that shape he opposed, and he should oppose, any such measure; for whatever else he was, he was a Democrat. This bounding of men for the expression of conscience is voting, must stop. Better, far better, that the Senate remain disorganized for the rest of the year, than that a bill should be made the instrument of great political power in the hands of political opponents.

Senator Grady, replying to Senator Jacobs' allusion that he was anti monopolist because he was told to be such, said it was true, and that he was told to be such by the constituency that sent him to the Senate. That his present position was inconsistent with his former position, he said was untrue, and he recited at length his record in three years' service in the Assembly.

Senator Fitzgerald followed with a sharp attack upon Tammany and Tammany methods, saying it was in 1876 that they prescribed Tilden, in 1877 it was Robinson, and now in 1882 it was Jacobs. He cared little about Jacobs, but he was the nominee of his party, and in voting for him he simply followed party usage and party methods.

Senator Fitzgerald's attack brought Senator Grady to the floor again, and he made a long speech in defense of Tammany Hall, going over all the events from 1876 to the present time. It was amusing, and was listened to by the Members of Assembly, who crowded into the Chamber after adjournment.

In Assembly four ballots were taken with the following result: Patterson, 56; Alvord, 29; Costello, 5; Cullen, 1. Mr. Brooks endeavored to take from the table his resolution to appoint Patterson speaker *pro tem.* It was defeated by a vote of 50 to 52, the Tammanyites and Republicans voting together. Mr. Benedict attempted to prove by the record that Costello, the Tammany candidate, had been a monopolist during previous years of service. Costello denied that such was his record. Senator Jacobs introduced a bill providing for a railroad commission of three, the members to serve one, two and three years respectively, and leaving the manner of appointment blank to be provided for hereafter. The bill further describes the duties and powers of the commission. Grady's speech occupied nearly an hour in delivery and was characterized by humor, sharp sarcasm and audacity, and enlisted the close attention of a crowded chamber, which seemed to be greatly entertained.

SEAGOAL.

THE GUITEAU VERDICT.

Comments of the English Press—General Satisfaction Expressed With the Result.

LONDON, January 26.

The *Standard, Daily Telegraph, Morning Post, Daily News* and the *Times* this morning express satisfaction at the conviction of Guiteau; but all, with more or less severity, criticise the conduct of the trial.

LONDON, January 26.

The *Standard* this morning says: The announcement of the Guiteau verdict will be received with a sense of relief by the public, which has been wearied by the monstrous protraction of the proceedings and disgusted and scandalized by the outrageous incidents which marked them at every turn. American jurists and politicians may be taught from this case the necessity of recasting the forms of procedure in criminal matters.

The *Daily Telegraph* says: "Guiteau's horrid jests, ribaldry and irreverence toward the majesty of justice were but clutchings at forlorn hope. No suspicion that Guiteau was insane disturbed the minds of the judge and jury, and he is hanged for the benefit of any such doubt. The conduct of the trial casts deep reproach upon the judicial procedure in America. The story of Guiteau's horrible wickedness will live forever. His memory will be branded like that of Cain.

The *Morning Post* says: "Guiteau's guilt was so undeniable that his long trial has been followed here with positive pain. We hope Mr. Scoville will not be far forget what is due to justice and his profession as to repeat the disgraceful lecturing exploit which he once performed in behalf of Guiteau."

The *Daily News* says: "Day after day the world has looked on with disgust and amazement at a spectacle for which it will be impossible to find a parallel in the history of criminal cases. There could be no more beneficial or enduring monument to the memory of Garfield than the adoption of a reform which would do much to stop the growth of the class of which Guiteau is a conspicuous example."

The *Times* says: "The administration of justice in America has been brought into grave disrepute. The trial has been a kind of play enacted for general amusement. That Guiteau deserves hanging, none can doubt. That the nation has a right to hang him which has pursued the sufferings of his victim into food for a sensation, his crime into a jest, and the trial into a prolonged farce is, perhaps, less entirely self evident.

ORGAN OPENING TO-NIGHT.

The superb organ recently placed in position in the First Baptist Church, corner Clinton and Pierrepont streets (Rev. J. R. Thomas, D.D., pastor), is to be publicly exhibited this evening. The organ has been specially designed and built for the church, and is pronounced to be without a superior in the two cities. A grand concert programme has been prepared for this evening, and the beauties and excellences of the instrument will be displayed by Mr. George Washington Morgan, Mr. Henry Eyre Browne and Mr. W. Scottwalker. Mr. M. D. Banton will contribute several cornet solos.

ALBANY.

The Proposed New Military Code Indorsed, with Some Changes.

Report of the Committee Appointed Yesterday Adopted by the State Military Association—Legislative Organization. Failure of the Negotiations with Tammany—The Assembly Caucus Democrats Refuse to Recede from Their Nominees.

[Special Correspondence of the Eagle.]

ALBANY, N. Y., January 26.

The State Military Association continued its sessions through the day, meeting at ten o'clock. All last night, until half past five o'clock this morning, the committee on the proposed new code laboured, and the result was this morning a draft, which was submitted to the association for their approval or disapproval. It was the first question in order, and the association proceeded to a discussion of the various features with an earnestness which showed how interested the members were in the proposed legislation. After all, the committee did not make such essential changes in the code which was submitted to the Legislature, and which failed of passage, as one would have supposed from the opposition it met with last year. Below I shall enumerate the more salient changes suggested by the committee:

First—In time of peace the number of the National Guard is limited to twenty thousand men, and the power of disbandment of regiments and companies is restricted in the way. Before the commander in chief can disband any regiment by his order, the matter must be submitted to a board of officers, convened for that purpose, and only upon the recommendation of that board shall he act.

Second—The staff in all of its integrity as it exists under the Military Code, under which all the military existence at present, is restored to the new code, in which it had been considerably curtailed.

Third—Surgeons are restored to the rank they now hold, and provision is made for assistant surgeons in separate companies located remote from regimental or brigade headquarters, with the rank of first lieutenants.

Fourth—The disability of officers, so lavishly provided for in the new code, is done away with, and especially the provision that surgeons should not serve until they had been so many years in practice.

Fifth—The

ENLISTMENTS

shall be for not less than five years, nor more than seven, each organization being permitted to select its own term within those years.

Sixth—Allowances for officers' uniforms are permitted and the clause which makes them the property of the officers is stricken out.

Seventh—The maintenance of the various militia organizations throughout the State is made a matter of State expense and not a county charge.

These were the principal and important changes made in the code as it stood when cast out of the Legislature last year. There were some others of a minor and technical character, but all the important changes are enumerated above. The committee seems to have appreciated the prevailing idea and to have perfectly understood the sentiment with respect to the proposed code as it stood in the various divisions of the State, for when, this morning, the report was submitted to the association it provoked little debate, but, upon the contrary, universal approbation. This was contrary to expectation. So important a matter as the Military Code, affecting so immediately as it does, the individual interests of nearly every member of the Guard, might naturally be expected to elicit a very considerable discussion, but the temper evidently was to accept the work as it was performed by the committee. This was done, and none of the changes pointed out above were even moderated. They were adopted as they stood, and the code amended and changed remains in the possession of the committee until such time as they can transmit it to the Adjutant General, who will then present it to the Legislature. It is not too much to say that this code will pass the present Legislature without much trouble, for the opposition it met with in its original form last year will be wanting this year.

THE COMMITTEE

to whose labors all of last night this was due is as follows: First Division, Colonel Emmons Clark, Colonel George R. Scott, Lieutenant Colonel Palmer; Second Division, Brigadier General Pryer, Colonel Wm. F. McLoar; Third Division, Captain Jarvis, and Fourth Division, Brigadier General Graves. After the adoption of the report of the committee as above, with the addition that the first sergeant in a company shall hereafter be appointed by the captain, the treasurer's report was read, which showed a balance of $97.38. The election of officers for the ensuing year was proceeded with, with the following result: President, Major David B. Williamson, Second Brigade staff; vice president, Brigadier General John C. Graves; second vice president, Major G. S. Johnson, Seventy-fourth Regiment; recording secretary, Captain A. C. Lawrence; corresponding secretary, Colonel A. D. Palmer, Seventy-first Regiment; treasurer, Captain Charles E. Bridge, Fourth Brigade staff; chaplain, Captain Wesley R. Davis, Eighth Brigade.

LEGISLATIVE ORGANIZATION.

This was the day when a high general rumor had fixed for the organization of the Legislature, and as a consequence the Chamber was well filled by strangers who expected the organization. However, they were doomed to disappointment. There was a political debate which was of more or less interest. Some progress in organization, if not anything else, was made before the day's proceedings, it was then that the chances of breaking the deadlock were more hopeless than ever. It was plainly demonstrated that the Tammany Senators had not the slightest intention of yielding the position they have occupied from the beginning of the session; the Republicans were not permitted to do it, and it seems that they had no intention of helping the Democrats out of their difficulties; and the Regular Democrats were as firm in their attitude as they have been in the past. Indeed, it does seem as if the deadlock in the Senate will be prolonged until the Ides of March at any time. The hope of breaking seems to have passed away, and the prospects are of an interminable do nothing series of sessions. The Assembly people however, are growing restless and impatient, and they have been conferring all day long with themselves and the Tammany Senators. The Democratic caucus of the Democratic Assemblymen met in caucus to hear the report of the Committee of Three—Brooks, Pooshe and Murphy—appointed to confer with the Tammany. This report was that Tammany demanded that the caucus should name five men, as candidates for Senators, and that they intended to then, withdrawing the caucus nominee, Mr. Charles E. Patterson, and from this list Tammany would select one man that they would support unreservedly. This proposition was debated pro and con, but it was quite evident from the beginning that the sense of the caucus was

DECIDEDLY IN OPPOSITION

to the proposition. Indeed, so strongly opposed were the majority, that they would not consent to the postponement of the consideration of the question until to-morrow. It is quite clear that the fear which animated the breasts of the assembled Democrats was that William A. Poucher, of Oswego, would get upon the list and be fixed upon at once by Tammany Hall as their candidate to be voted for. The scheme is impracticable, because the caucus Democrats would be bound by the result of Tammany's choice, and therefore the name agreed upon that list would be such as would be obnoxious to Tammany. If a plan, by which the caucus Democrats could receive from a choice name satisfactory to them, could be devised, doubtless they would be willing, but as it is they were afraid of a snare and rejected the proffer. The caucus, however, will meet again to-morrow morning, the conferring committee is kept in existence. For what purpose it can not be told. In short, the effort has ended in nothing and the breach seems wider than ever.

So far as any hope of settling this difficulty in the Senate with the aid of the Republicans is concerned, it may as well be abandoned. It is true the Republicans hold out the idea and the promise that if the Lieutenant Governor were vested with the power of appointing the committees he would make them Democratic in their composition. This proposition, however, was incontinently rejected by the Democrats, who claim that they do not ask that favor. One thing is quite certain, and that is that the Republican senators believe that the best service they can render their own party at this juncture is to make it clear that the responsibility for this delay does not rest upon Republican shoulders, and then to sit quietly by and see the Democrats do the work of the inharmonious Democrats to get together. They believe that the Democrats are ruining themselves by the course they are pursuing, and that the sole duty of the Republicans, under the circumstances, is to give them all the rope they want to hang themselves. Hence, the Republicans are not at all disposed to see an end of this thing. In fact they are, after having sat quietly neutral, growing mischievous, and are giving the disorganized Democrats a great deal of trouble by their motions and resolutions. The majority Democrats are growing restless and nervous for fear of fright day by day, by some move or another of the Republicans, the purpose said and of which they cannot fathom. The end in the House will be, some one of these fine days, that the Democrats will be caught napping and the House will be organized by the Republicans before they know it. It would serve the Democrats right well, for they are throwing away their chances for effecting good legislation and strengthening their party.

SEAGOAL.

DEATH OF ROSES LANE.

Moses Lane, at one time chief engineer of the Brooklyn Water Works, died yesterday at Milwaukee, Wis., of which city he had been engineer for some time. He was born in Northfield, Vermont, in 1824. He came to Brooklyn in 1853, during the construction of the water works, and was assistant under Chief Engineer Kirkwood in that enterprise. In 1862 he was appointed chief engineer of the department, and held the place until about 1869, when he was succeeded by Colonel Julius W. Adams. He subsequently became engaged in several large public works in other cities, notably in Indianapolis and New Haven, at the latter place being associated with the well known engineer, Mr. Cheesbrough. He was also associated with Mr. Cheesbrough in the improvement of the sewerage system of Boston. He designed the water works at Milwaukee, and taking up his residence there, was appointed the city engineer, which position he held at the time of his death. He resided was a member of the American Society of Civil Engineers and vice president of the engineers' society of the Northwest.

COOKING LESSONS.

The subject of cookery is one which commends itself to the consideration of all mankind, and especially to housekeepers of every degree who have to cater to the appetite and tastes of all who sit at their tables. Recognizing the importance of this fact, the managers of the Industrial Exhibition have invited Miss Juliet Corson to give a course of lessons in the art of cooking at their rooms, No. 112 Lexington avenue, on very reasonable terms. Classes will be formed for Monday afternoons from 3 till 4 o'clock, and the ladies of this city are offered the opportunity of learning what is of unquestionable value to them in the performance of their home duties. Miss Corson is also to deliver a lecture to women of limited means on the proper preparation of fat.

A FIRE WELL STOPPED.

The curtains in the front parlor of Mr. John Bradley's house, at No. 170 Concord street, caught fire last evening from a lighted match which a boy was using to light the gas. Fireman James Campbell, attached to truck No. 3, in Concord street, happened to be passing at the time, and hurrying to the place succeeded in extinguishing the flames before they had gained much headway. The damage was trifling. That is not been for the prompt action of the fireman the house would have been badly damaged.

A SERIOUS CHARGE.

Made Against an Employe of the New Lots Health Board, Accused of Endangering the Lives of School Children and the Employes in a Fireworks Factory.

A very serious charge was made to Supervisor Colyer, of New Lots, this morning, against Sebastian Brown, an employe of the Health Board, by Mr. Edward F. Linton, President of the Unexcelled Fireworks Company of New York, whose factories are located in that town.

When the attention of the Health Board was called by the EAGLE to the frightful ravages smallpox was making in the town, among other persons employed to suppress the disease, was Brown. His duties are to disinfect houses and to burn up the bedding, after the patient dies or recovers.

Day before yesterday a patient died, and Linton charges that Brown took the bedding yesterday afternoon about several hundred feet away from his factory, where one hundred men and women were employed, and but a short distance from one of the school houses, and set it on fire. The wind was blowing directly toward the two places mentioned, and the smoke blew

Brooklyn Public Library

Publication: Brooklyn Eagle; Date: Apr 11, 1896; Section: Front page; Page: 1

TO ABANDON FOUR GAS PLANTS.

The Trust Will Supply Brooklyn From Only Four Works.

ONE WILL MAKE FUEL GAS.

Important Projects Now Being Considered by the Board of Engineers. The Organization of the Brooklyn Union Gas Company Will Not Be Perfected Until the Legislature Adjourns.

The Brooklyn Union Gas company, or the gas trust, as it is better known, is contemplating a radical re-arrangement of its entire system of supplying Brooklyn with gas. The plan now being discussed includes the wiping out of three or four of the present gas works and the use of the three or four remaining for supplying the entire city. It also includes the abandonment of duplicate sets of mains in streets where such exist and, possibly, the use of the abandoned set for supplying Brooklyn with fuel gas.

The Brooklyn Union company at present operates eight works. These are the Brooklyn works situated on the water front near the navy yard, the Citizens in South Brooklyn, the old plant of the Union company of East New York; the Williamsburgh company, in the eastern district; the Fulton Munkcipal company, in South Brooklyn; the Nassau company works at the head of Wallabout creek, the Metropolitan company at Gowanus and the People's company works yhich have been in disuse for several years.

The whole matter is now before the board of engineers consisting of the engineers in charge of the various works, who have been formed into this board for purposes of consultation and furnishing the company with expert opinions upon all these mechanical projects. The board of engineers has as yet

been unable to give any decision and it is probable that no report will be made within the next month or two.

It is pretty well understood, however, that the following works will be retained and used to supply the entire city with gas: The former plant of the Fulton Municipal company, which will supply South Brooklyn and a large part of the Western district; the Williamsburgh works, which will supply the entire eastern district, and the Nassau works which wil furnish gas to the upper section of the city.

The other works, with one exception, will be abandoned, their plants disposed of for old junk, while the real estate will be placed in the market. The exception mentioned will probably be the plant of the former Metropolitan company, which will be retained for the purpose of manufacturing a low priced fuel gas. This can be served all over the city at a very slight expense as the gas war which waged two years caused all the companies to so extend their mains that now one hundred miles of pipe would complete a duplicate system through the entire city. These would be utilized in sending out the fuel gas and it would probably be possible to supply it to householders at 50 or 60 cents per 1,000 cubic feet. At this price, it is claimed, the fuel gas would be much cheaper to burn than coal and would be a source of considerable revenue to the company. The fuel gas plan has not yet gone before the board of engineers, but from the inception of the consolidation project it has been one of the objects aimed at by the men who control the Brooklyn Union Gas company.

It is certain that the organization of the company will not be perfected until after the legislature adjourns. At present the old companies are called branches of the main company. The former secretaries of the old companies are termed branch managers and the former engineers are called branch superinendents. This organization is very imperfect and has caused not inconsiderable friction. As soon as the legislature adjourns the organization will be perfected.

There is no reason to doubt that General James Jourdan, president of the Fulton Municipal company, will be president, and it is said that Major Walter K. Rossiter will be secretary. E. W. Chapman, the present treasurer, will remain in office. It is as yet unknown who will be general manager or who will hold subordinate positions.

The Brooklyn Union Gas company, will in a sshort time, supply the Flatbush company with its gas and the latter will cease to manufacture for itself. Within the past month or two it has been bought out by men interested in the Brooklyn Union Gas company.

The Kings County Illuminating company, which supplies the vacant lots and potatoes of the former town of New Utrecht with brilliant illumination to the extent of about three thousand five hundred lamps, or nearly a

quarter of all the gas lamps that there are in the City of Brokolyn, has recently made a contract with the Brooklyn Gas company by which it will also be suplied with gas.

This company has no works and heretofore has obtained its illuminating product from the Citizens' company. It has recently acquired a very valuable plot of ground on the water front, where, if necessary, works can be erected.

Assistant Treasurer Charles H. Stoddard of the Brooklyn Union Gas company was seen this afternoon by an Eagle reporter about the project. To all inquiries he replied: "I have nothing whatever to say about the business of this company."

Brooklyn Union Gas Drawings

1-G-37

THE BROOKLYN UNION GAS Co.

METROPOLITAN WORKS

FOUNDATION AND PILE PLAN
—OF—
PURIFIER HOUSE AND OXIDE SHED EXT.

SCALE
3/16-3/8-3/4 IN = 1-FT.

FEB. 28TH 1903

APPROVED
J. Hyndman
CHIEF ENG. W.D.

CONCRETE PROPORTIONS
1- OF PORTLAND CEMENT
2- " SHARP SAND
4- " BROKEN STONE
BY MEASURE

1-4-120

THE BROOKLYN UNION GAS CO.
BROOKLYN, N.Y.

METROPOLITAN WORKS
SMALL PROPERTY PLAN

SCALE 1 in. = 120 ft. | DATE June 23, 1902

Drawn by - [illegible] | Approved [illegible] Chief Engr.

Traced by - [illegible] | Construction Engr.

Checked by [illegible]

No.	Capacity	Contents
2	12,157.8	Fuel oil
4	230,277	Crude oil
3	151,532	"
2	500,000	"

1G120

MODIFIED
FLATBUSH HOLDER
2.15 Mill. cu. ft. abt.

MODIFIED
BELMONT AV. HOLDER
1.68 Mill. cu. ft. abt.

MODIFIED
NEWTOWN HOLDER
5.69 Mill. cu. ft. abt.

MODIFIED
METROPOLITAN HOLDER
2.06 Mill. cu. ft. abt.

MODIFIED
WYTHE AV. HOLDER
2.17 Mill. cu. ft. abt.

MODIFIED
BERRY ST. HOLDER
2.21 Mill. cu. ft. abt.

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DWG. No.	REFERENCES
7 B 18	
6 B 48	
Wills Book 3 p. 120 etc.	
Square " 4 pp. 64 & 65	
7-8-27	

DATE	REVISED BY	CHECKED BY	REVISIONS

THE BROOKLYN UNION GAS CO.
AND SUBSIDIARY COMPANIES

DIAGRAMS OF HOLDERS SHOWING HEIGHTS DETERMINED BY GUIDE FRAMING UNDER REQUIREMENTS OF PROPOSED BUILDING CODE

SCALE 1" = 50'
DATE DEC. 21, 1914
Drawn by F. H. Sewell
Traced by
Checked by

DRAWING No. 7-19

MODIFIED
FLATBUSH HOLDER
4.41 Mill. cu. ft. (alt.)

MODIFIED
BELMONT AV. HOLDER
2.66 Mill. cu. ft. (alt.)

MODIFIED
NEWTOWN HOLDER
5.69 Mill. cu. ft. (alt.)

NOTE

This Sheet shows the largest capacity Holders which could be built on the Basis of the proposed Code keeping the Bottom of Tank the same Distance below Curb (lowest Curb if there are 2) as now in each Case + varying the Dia. + Ht. to obtain the largest capacity Holders. (BASED ON GUIDE FRAMING)

MODIFIED
METROPOLITAN HOLDER
2.58 Mill. cu. ft. (alt.)

MODIFIED
WYTHE AV. HOLDER
2.71 Mill. cu. ft. (alt.)

MODIFIED
BERRY ST. HOLDER
2.74 Mill. cu. ft. (alt.)

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DWG. No.	REFERENCES
3-C-16	
5-B-18	
1-R-19	
W.M.W.	Book 3 p. 120, etc.
F.H.S.	" " p. 62 etc. pp 84-89

DATE	REVISED BY	CHECKED BY	REVISIONS

THE BROOKLYN UNION GAS CO.
AND SUBSIDIARY COMPANIES

DIAGRAMS OF HOLDERS OF MAXIMUM CAPACITY WITH TANKS LOCATED AS NOW IN REGARD TO DEPTH BELOW CURB

SCALE 1" = 50' DATE Feb 13 1915

Drawn by F.H. Serrell
Traced by
Checked by

DRAWING No. 7 27

GOWANUS CANAL

INSIDE DIMENSIONS

CARPENTER SHOP - CORR. IRON ON STEEL 50'-0" X 15'-6" HT. 12'-0"
" " - " " " " - 32'-0" X 18'-6" HT. 12'-6"
COAL HOIST HOUSE - WOOD - 13'-0" X 12'-0" - HT. 14'
COAL SHED - WOOD - 96'-0" X 40'-0" - HT. 21'-2"
GENERATOR HOUSE - BRICK & STEEL - 161'-3" X 61'-9" - HT. 55'-0"
FILTER PRESS HOUSE - CORR. IRON ON " - 25'-0" X 19'-6" - HT. 18'-11"
EXHAUSTER HOUSE - BRICK - 34'-0" X 61'-9" - HT. 55'-0"
OFFICE - BRICK - 25'-0" X 32'-0" - HT. 23'-0"
METER ROOM - BRICK - 68'-0" X 32'-0" HT. 23'-0"
PHOTOMETER ROOM - BRICK - 32'-0" X 27'-0" - HT. 23'-0"
ACCOMMODATION ROOM - BRICK - 7'-9" X 32'-0" - HT. 23'-0"
MACHINE SHOP - BRICK - 50'-6" X 32'-0" - HT. 23'-0" HT. 12'
OXIDE SHED - CORR. IRON ON STEEL 50'-0" X 84'-6" & 18'-0" X 74'-4" HT. 19'
PURIFIER HOUSE No. 1 - STEEL FRAME, BRICK FILLED 65' X 74'-6"
" " No. 2 - BRICK, " - 153'-8" X 54'-6" - HT. 44'-10"
GOVERNOR " - BRICK - 14'-6" X 14'-6" - HT. 15'-8"
DINING ROOM - " - 23'-10" X 24'-0" - HT. 15'-8"
LOCKER " - " - 9'-0" X 24'-0" - HT. 15'-8"
STORE HOUSE - WOOD - 14'-2" X 16'-2" - HT. 8'-0"
BLOWER HOUSES #1-2-3-4-6 - BRICK - 18'-8" X 11'-1" - HT. 11'-10"
" " #5-7 - " - 41'-2" X 11'-1" - HT. 11'-10"
" HOUSE #8 - CORR. IRON ON STEEL 16'-4" X 10'-0" HT. 11'-3"
BOILER HOUSE - CORR. IRON ON STEEL - 140'-0" X 52'-6" HT. 24'-0"
PAINT SHED - " " " " - 14'-0" X 10'-0" - HT. 9'-0"
BLACKSMITH SHOP - " " " WOOD - 38'-7" X 18'-1" - HT. 12'-0"
TAR TANK HOUSING - " " STEEL - 28'-0" X 15'-0" - HT. 2'-10"
WATCHMANS HOUSE - " " ON WOOD - 13'-1" X 7'-11" - HT. 9'-0"
PUMP HOUSE - " " STEEL - 32'-8" X 27'-2" - HT. 8'-0"
STILL HOUSE - " " " - 70'-0" X 42'-0" - HT. 44'-6"
LABORATORY - " " " - 25'-0" X 12'-0" - HT. 12'-0"
No. 3 OIL TANK - 54'-0" X 30'-0"
" 4 " " - 40'-0" X 24'-6"
" 5 " " - 35'-0" X 21'-0"
" 2 TAR " - 30'-0" X 24'-6"
" 9 GAS OIL TANK - 21'-0" X 17'-0"
" 10 " " " - 16'-0" X 15'-0"
" 11 " " " - 16'-0" X 15'-0"
" 12 " " " - 16'-0" X 15'-0"
" 13 " " " - 19'-0" X 15'-0"
" 14 " " " - 16'-0" X 15'-0"
" 15 " " " - 21'-0" X 17'-0"
" 16 " " " - 16'-0" X 15'-0"
" 17 " " " - 21'-0" X 17'-0"

2-G-126

SECOND AVE.

THE BROOKLYN UNION GAS CO.
JUNE 29, 1921. METROPOLITAN WORKS SCALE 1" = 100'-0"

2-G-126

THE BROOKLYN UNION GAS CO.

BROOKLYN, N.Y.

12TH ST. STATION
SMALL PROPERTY PLAN

SCALE – 1 in. = 120 ft.	DATE – Feb. 26, 1937
Drawn by – R.D. Hyde	Approved
Traced by – R.D. Hyde	Chief Engineer
Checked by – F.H. Sewall	Construction Engineer

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Brooklyn, NY 11215

Inquiry Number: 2278472.3s
July 29, 2008

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Copyright: 1981

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Copyright: 1950

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Copyright:	1938

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Copyright: 1904

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Copyright: 1886

Site Name: Metropolitan
Address: 124-136 2nd Avenue

City, ST, ZIP: Brooklyn NY 11215

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Copyright: 1886

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SECO

Sanborn Maps with Expanded North View

Metropolitan
124-136 2nd Avenue
Brooklyn, NY 11215

Inquiry Number: 3978183.1
June 20, 2014

Certified Sanborn® Map Report

6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

6/20/14

Site Name:	**Client Name:**
Metropolitan	AECOM
124-136 2nd Avenue	125 Broad St
Brooklyn, NY 11215	New York, NY 10004-0000
EDR Inquiry # 3978183.1	Contact: Jennifer Pfeiffer

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City, State, Zip: Brooklyn, NY 11215
Cross Street:
P.O. # NA
Project: NA
Certification # 277F-4F21-9EDB

Maps Provided:

2007	2001	1988	1979	1922
2006	1996	1987	1977	1915
2005	1995	1986	1969	1904
2004	1993	1982	1950	1886
2003	1992	1981	1938	
2002	1991	1980	1928	

Sanborn® Library search results
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The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

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Sanborn Sheet Thumbnails

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2007 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

2006 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

2005 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

2004 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

2003 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

2002 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

2001 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

1996 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

1995 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

1993 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

1992 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

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Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

1988 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

1987 Source Sheets

Volume 1, Sheet 47

Volume 1, Sheet 36

Volume 1, Sheet 45

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Volume 1, Sheet 47

1982 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

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Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

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Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

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Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

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Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

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Volume 1, Sheet 47

Volume 1, Sheet 36

Volume 1, Sheet 45

1950 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

1938 Source Sheets

Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

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Volume Pier Maps, Sheet 49

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Volume 1, Sheet 36

Volume 1, Sheet 45

Volume 1, Sheet 47

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Volume 1, Sheet 28

Volume 1, Sheet 19

Volume 1, Sheet 21

Volume 1, Sheet 27

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Address:	124-136 2nd Avenue
City, ST, ZIP:	Brooklyn NY 11215
Client:	AECOM
EDR Inquiry:	3978183.1
Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1988

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

Volume 1, Sheet 36
Volume 1, Sheet 45
Volume 1, Sheet 47

N

1987 Certified Sanborn Map

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Certification # 277F-4F21-9EDB

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EDR Inquiry:	3978183.1
Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1987

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0 Feet 150 300 600

Volume 1, Sheet 47
Volume 1, Sheet 36
Volume 1, Sheet 45

N

1986 Certified Sanborn Map

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Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1986

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0 Feet 150 300 600

Volume 1, Sheet 36
Volume 1, Sheet 45
Volume 1, Sheet 47

N

1982 Certified Sanborn Map

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Certification # 277F-4F21-9EDB

Site Name:	Metropolitan
Address:	124-136 2nd Avenue
City, ST, ZIP:	Brooklyn NY 11215
Client:	AECOM
EDR Inquiry:	3978183.1
Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1982

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Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

Volume 1, Sheet 36
Volume 1, Sheet 45
Volume 1, Sheet 47

N

1981 Certified Sanborn Map

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Client:	AECOM
EDR Inquiry:	3978183.1
Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1981

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0 Feet 150 300 600

Volume 1, Sheet 36
Volume 1, Sheet 45
Volume 1, Sheet 47

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1980 Certified Sanborn Map

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Certification # 277F-4F21-9EDB

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Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1980

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0 Feet 150 300 600

Volume 1, Sheet 36
Volume 1, Sheet 45
Volume 1, Sheet 47

N

1979 Certified Sanborn Map

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Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1979

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0 Feet 150 300 600

Volume 1, Sheet 36
Volume 1, Sheet 45
Volume 1, Sheet 47

N

1977 Certified Sanborn Map

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Site Name:	Metropolitan
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Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1977

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0 Feet 150 300 600

Volume 1, Sheet 36
Volume 1, Sheet 45
Volume 1, Sheet 47

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1969 Certified Sanborn Map

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EDR Inquiry:	3978183.1
Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1969

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0 Feet 150 300 600

Volume 1, Sheet 47
Volume 1, Sheet 36
Volume 1, Sheet 45

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1950 Certified Sanborn Map

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Certification # 277F-4F21-9EDB

Site Name:	Metropolitan
Address:	124-136 2nd Avenue
City, ST, ZIP:	Brooklyn NY 11215
Client:	AECOM
EDR Inquiry:	3978183.1
Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1950

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0 Feet 150 300 600

Volume 1, Sheet 36
Volume 1, Sheet 45
Volume 1, Sheet 47

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1938 Certified Sanborn Map

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Certification # 277F-4F21-9EDB

Site Name:	Metropolitan
Address:	124-136 2nd Avenue
City, ST, ZIP:	Brooklyn NY 11215
Client:	AECOM
EDR Inquiry:	3978183.1
Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1938

This Certified Sanborn Map combines the following sheets.
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0 Feet 150 300 600

Volume 1, Sheet 36
Volume 1, Sheet 45
Volume 1, Sheet 47

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1928 Certified Sanborn Map

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Client:	AECOM
EDR Inquiry:	3978183.1
Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1928

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

49

Volume Pier Maps, Sheet 49

N

1922 Certified Sanborn Map

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Client:	AECOM
EDR Inquiry:	3978183.1
Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1922

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

41

Volume Pier Maps, Sheet 41

N

1915 Certified Sanborn Map

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Certification # 277F-4F21-9EDB

Site Name:	Metropolitan
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Client:	AECOM
EDR Inquiry:	3978183.1
Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1915

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

Volume 1, Sheet 36
Volume 1, Sheet 45
Volume 1, Sheet 47

N

1904 Certified Sanborn Map

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Client:	AECOM
EDR Inquiry:	3978183.1
Order Date:	6/20/2014 6:21:02 PM
Certification #	277F-4F21-9EDB
Copyright:	1904

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0 Feet 150 300 600

Volume 1, Sheet 36
Volume 1, Sheet 45
Volume 1, Sheet 47

N

1886 Certified Sanborn Map

SMITH
ST.
COAL YARD
THOMPSON & CO
DONELDSON
STREET
STREET
STREET
STREET
STONE YARD
WEBER & QUINN
NEW YORK
TARTAR COMP'Y
GRELINDOS SHOW CARD FRG.
R.H.SMITH MFG CO. CARPET LAYING
COMPANY
METROPOLITAN
GAS LIGHT
Coal Shed
Gas Meter
Lumber
Brick Yard
Brick Shed
Lumber Shed
Coal Shed
Coal Shed
Coal

Brooklyn Union Gas Photographs

Brooklyn Public Library
Brooklyn Collection

CIRILLO BROS.

Brooklyn Public Library
Brooklyn Collection

Public Library
Fyn Collection

PLAN FOR
MAIN DRAINAGE DEPOT
CITY OF BROOKLYN

BASIN No 4
BASIN No 3
BASIN No 2
BASIN No 1
CANAL
CANAL
CANAL
COWANUS BAY
PLAN
DRAINAGE
CITY OF BROOKLYN
COWANUS CREEK & BAY

FIG. 2.—EAST SHEETING BRACED TO CONCRETE FLOOR. NOTE EDISON CABLES SUPPORTED ON 8-FT. FENCE OF TEMPORARY ROADWAY.

1285-Metropolitan-Birdeye view of Metropolitan Works, Aug. 17, 1910.

ERMILK CHA
OUTH BROOKLYN
COLUMBIA
COURT
SMITH
CANAL
PACIFIC
BERGEN
MARKET
6

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Brooklyn 1880 Plate 16 - Carroll Gardens, Red Hook

Neighborhoods: Red Hook

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ABOUT THIS MAP

Publisher: Geo. W. Bromley & E. Robinson
Map Types: Cadastral Map
Actual Map Size: 18.25" x 28"

Map ID: 997
Collection: WardMaps LLC

More maps from this atlas: Brooklyn Plate 16 (Carroll Gardens, Red Hook)

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Brooklyn 1880 Plate 16 - Carroll Gardens, Red Hook

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Map ID: 997
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Feet
0 1,000

Proteus Gowanus

1766

Bernard Ratzer's Survey map of the Gowanus Canal area for the British Colonial Administration, shows the glacial moraine ridges left by receding prehistoric glaciers. Brouwer, a German mercenary working for the Dutch in Brazil, built one of the first Tidal Mills in America here on the Proteus site in 1645.

Historical Soil Boring and Monitoring Well Logs

Included on a Separate CD

Mueser Rutledge Consulting Engineers Logs – 2002

GRAPHIC SCALE

30' 20' 10' 0 30' 60'

NOTES:

1. FOR GENERAL NOTES SEE DRAWING NO. GS-1.
2. FOR GEOLOGIC SECTIONS SEE DRAWINGS NOS. GS-1, GS-2, AND GS-3.

LEGEND:

PROJECT MRCE BORINGS:

- B-1 – BUILDING BORING, 82 FEET DEEP
- B-2 – BUILDING BORING, 102 FEET DEEP
- PB-1 – PARKING LOT BORING, 82 FEET DEEP
- B-1S – UNDISTURBED SAMPLE TAKEN IN BORING
- B-20P – 30 FOOT DEEP OBSERVATION WELL INSTALLED IN BORING

2002 SUPPLEMENTAL BORINGS:

- T1 – BORING TO INVESTIGATE REMNANTS OF FORMER GAS HOLDERS AND OIL TANKS

PREVIOUS BORINGS:

- LB-1 – 1998 BORING
- RB-1 – 1998 BORING
- BB-1 – 1998 BORING
- GB-1 – 1998 BORING

REV.	DATE	BY	DESCRIPTION
1	12-12-02	J.C.	ADDED SUPPLEMENTAL BORINGS AND UNDERGROUND TANK LOCATIONS MODIFIED LOCATIONS OF PREVIOUS BORINGS

LOWE'S HOME CENTER

BROOKLYN NEW YORK

AKRF ENGINEERING, P.C.

NEW YORK NEW YORK

MUESER RUTLEDGE CONSULTING ENGINEERS

225 WEST 34th STREET, NEW YORK, NY 10122

SCALE	MADE BY J.C.	DATE 1-14-01	FILE NO.
GRAPHIC	CH'KD BY	DATE	9446

BORING LOCATION PLAN

DRAWING NO. B-1

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9446
BORING NO. B-14
SURFACE ELEV.

PROJECT Lowe's Home Centr
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
01/05/00 Wed. 20°F Sep 1350							Drilled Ahead	Automatic Hammer 8" Concrete Surface 2" Asphalt.
	10	1	10-6	Blk c-f sand, sm silt, tr. gl, wood (sm) (Fill)(Cinders)				
		3	3-2					
	20	3	3-3	Brn-Blk m-f sand, sm silt, tr. gl,	(+)			
		5	3-3	Cinders (Fill)(sm)		5		
	30	5	2-2	DO-20 (Fill)(sm)			MW	
		7	1-1					
	40	7	2-1	DO-20 (Fill)(sm)				
		9	1-1					
1420						10		
01/04/01 Thurs. 20°F Cloudy 0640	50	10	WOH/12"	Gray-Blk c-f sand, sm cinders, tr. silt, gl, Brick (Fill)(sp-sm)				
		12	1-1					
	60	12	WOH/12"	Gray-Brn c-f sand, sm silt, cinders,				
		14	1-1	Tr. Brick (Fill)(sm)				
	70	14	2-1	Top(5") - DO - 60 (Fill)(sm)		14.7		
		16	1-2	Bot(16") Soft gray org. silty clay, tr. veg. f. sand (ML)	(0)			
	84	16	Push=24"	Soft gray org. silty clay, tr. f. sand, veg.				Sph. Refusal Bot of Tube.
		18	Rec=24"	Peat (OH)				
	90	18	1-2	Top(6") - Brn Peat (Pt)		18.9		
		20	1-2	Bot(13") - Brn silty f-sand, tr. clay (sm)		20		
	100	20	3-1	DO-90 (Bot) (sm)				
		22	3-3					
						25		
	110	25	7-7	Gray m-f sand, sm silt (sm)				
		27	9-11					
						30		
	120	30	2-4	Top(3") - Gray silty f-sand, tr. clay (sm)				
		32	8-12	Bot(6") Brn m-f sand, tr. silt (sp-sm)	(3)			
						35		
	130	35	8-16	Brn m-f sand, tr. silt (sp-sm)				
		37	13-15					
						40		
	140	40	5-6	DO-120, tr. silt (sp-sm)				
		42	6-5					
						45		
	150	45	1-1	Brn clayey silt, sm f-sand, tr. mica (ML)				
		47	1-1					
						48.5		
						50		
	160	50	11-14	Red-Brn f-c sand, tr. silt, gl, silt lenses	(1)			
		52	14-12	(sp-sm)				

BORING NO. B-14

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 9446
BORING NO. R-1
SURFACE ELEV.

PROJECT Lowe's Home Ctr.
PROJECT LOCATION Brooklyn NY
RES. ENGR. E. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
						55		
170	55		12-14	Top(6") - Brn C-f sand, Tr silt, silt (Sp-SM)				
	57		14-15	Bot(11") - Red-Brn silty, f-sand, Tr mica (SM)				
					T	60		
180	60		8-21	Brn silty f-m sand, sm gvl (SM)				
	62		19-13					
						62		Hard drilling @ 63 FT.
					B	64		
						65		
190	65		15-21	Red-Brn C-f sand, sm gvl, Tr silt (Sp-SM)				
	67		24-34					Hard drilling @ 67.5
						67.5		
					B	68.5		
						70		
200	70		33-34	Lod Brn f-m sand, sm silt, gvl (SM)				
	71.6		36-100/1"			71.6		
					B			
						73.5		
						75		
210	75		40-34	Red Brn C-f sand, sm silt, gvl (SM)				
	77		35-35					
						80		
220	80		23-30	200-210 (SM)				
1330	82		40-31			82		E.O.B. @ 82 FT.

BORING NO. R-1

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B14
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Center
LOCATION Brooklyn NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	SME75	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. split spoon
U-SAMPLER Shelby TUBE
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 4 7/8, 3 7/8, 2 15/16"
TYPE OF DRILLING MUD Quik Gel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 350 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	79.1	NO. OF 3" SHELBY TUBE SAMPLES	—
3.5" DIA. U-SAMPLE BORING	LIN. FT.	—	NO. OF 3" UNDISTURBED SAMPLES	—
CORE DRILLING IN ROCK	LIN. FT.	—	OTHER: obstructions (boulders)	2.9

BORING CONTRACTOR JRD Co.
DRILLER M. Rejonas HELPERS T. Sellon / D. Keith
REMARKS Grouted borehole upon completion
RESIDENT ENGINEER E. Nunez DATE 01/04/01

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-14

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9446
BORING NO. B2
SURFACE ELEV.

PROJECT Lowe's Home Ctr.
PROJECT LOCATION Brooklyn, NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
01/03/01 WED. 9:40 18°F Clear	10	1	12-9	Blk f-m sand, Sm silt, Tr. gvl, cinders (fill) (SM)			Drill's Ahead	Safety Hammer
		3	6-3					1'± Asphalt at surface, and cobble floor.
	20	3	5-6	DO-10 (fill) (SM)				
		5	4-4					
					(F)	5		
	30	5	3-1	gray m-f sand, sm silt, silt, Tr. cinders (fill) (SM)				Petroleum odor.
		7	2-2					
	40	7	3-9	DO-30 (fill) (SM)				
		9	10-11					
						10		
	50	10	4-1	DO-30 (fill) (SM)				R-2"
		12	1-1					
	60	12	3-3	Top (1") - Blk cinders, Tr. gvl (fill) (cinders)				6-5" Petroleum odor strong
		14	2-2	Bot (9") - Brn Peat		13.7		
						15		
	70	15	3-2	Soft gray org silty clay, Tr. veg. (OH)	(O)			
		17	1-1					
	80	17	2-2	Top (16") - DO-70 (OH)				
		19	4-4	Bot (6") - Brn Peat (Pt)		19.5		
						20	W	
	90	20	2-4	gray f-med sand, Sm silt, Tr. mica (SM)	(P)			
		22	4-5					
						25		
	100	25	8-9	Gray-Brn m-f sand, Tr. silt (SP-SM)				
		27	17-13					
						28.5		
						30		
	110	30	3-4	Stiff gray clayey silt, Tr. f-med sand (MH)	(M)			
		32	7-7					
						35.5		
						35		
	120	35	12-15	Brn m-f sand, Tr. silt (SP-SM)	(S)			
		37	25-20					
						40		
	130	40	10-10	DO-120 (SP-SM)				
		42	17-14					
						45		
	140	45	12-13	Gray Brn f-med sand, Tr. silt (SP-SM)				
		47	15-7					
						50		
	150	50	12-18	Brn m-f sand, Tr. silt, gvl (SP-SM)				
		52	21-23					

BORING NO. B2

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 0446
BORING NO. B-2
SURFACE ELEV.

PROJECT Lowe's Home Ctr
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	160	55	30-43	Red f-c sand, Tr. silt (Sp-Sm)	(S)	55		
		57	55-56					
						58.5		
						60		
	170	60	47-42	Red-Brn f-c sand, sm gvl, silt (Sm)				
145		62	75-71					
01/04/01								
Thurs.								
20's of					(T)	65		
Steady	180	65	100/6"	Red Brn f-M sand, sm silt, gvl (Sm)				R-2"
2645		65.5						
						70		
	190	70	28-29	Red Brn f-c sand, Tr. silt, gvl (Sp-Sm)				
		72	30-34					
						75		
	200	75	30-38	Red-Brn c-f sand, sm gvl, Tr. silt (Sp-Sm)				
		77	42-43					
						80		
	210	80	24-31	Red-Brn f-M sand, sm silt, Tr. gvl, mica (Sm)				
		82	37-43					
						85		
	220	85	30-33	DO-210 (Sm)				
			35-35					
						90		
	230	90	30-35	Red-Brn silty f-M sand, Tr. gvl, clay (Sm)				
		92	51-44					
						95		
	240	95	25-32	DO-230 (Sm)				
		97	41-53					
						100		
	250	100	37-33	Red-Brn c-f sand, Tr. silt (Sp-Sm)				
1230		102	40-34			102		E.O.B @ 102 FT.

BORING NO.

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-2
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Center
LOCATION Brooklyn NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED		☒ YES ☐ NO		
TRUCK	CME 55	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM	0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM		TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM		TO
OTHER								

TYPE AND SIZE OF:
D-SAMPLER 2" OD. split spoon
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
DIAMETER OF ROTARY BIT, IN. 4 7/8, 3 7/8"
TYPE OF DRILLING MUD Quik-Gel

AUGER USED ☐ YES ☒ NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 82.6 NO. OF 3" SHELBY TUBE SAMPLES —
3.5" DIA. U-SAMPLE BORING LIN. FT. — NO. OF 3" UNDISTURBED SAMPLES —
CORE DRILLING IN ROCK LIN. FT. — OTHER: —

BORING CONTRACTOR JBD
DRILLER R. Lynch HELPERS E. Feliciano
REMARKS Grouted borehole upon completion.
RESIDENT ENGINEER R. Nunez DATE 01/04/01

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9446
BORING NO. B-3
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
01/02/01	10	0	76-45	Brn m-f SAND, Sm silt, Tr. Brick, gvl (fill)(Sm)			Drilled Ahead	2" asphalt surface
Thurs.		2	27-24					
clear	20	2	15-9	DO-1D, Tr. Cinders (fill)(Sm)				Automatic Hammer
windy		4	10-9					
18°F	30	4	5-5	Gray-Brn m-f SAND, Sm silt, Tr. veg (fill)(Sm)	F	5		
5°F		6	3-3					
wind chill	40	6	3-2	Gray Blk m-f SAND, Tr silt, cinders, shells, ceramic (fill)(Sp-Sm)				R=3" sample saturated w/water.
		8	1-1					
	50	8	1-2	Gray-Blk m-f SAND, Sm silt, Tr gvl, veg,				
		10	3-3	Cinders, shells (fill)(Sm)		10	MUD	
	60	10	2-2	Gray Blk m-f SAND, Tr gvl, silt, shells,				
		12	1-2	cinders, Brick (fill)(Sp-Sm)				
	70	12	1-2	DO-6D (fill)(Sm)				
		14	1-1					
						15		
	80	15	1-1	Top (8") Gray-Brn silty f-SAND, Tr. veg (fill)(Sm)		15.7		
		17	2-2	Bott (16") - Brn Peat (Pt)	Pt			
	90	17	2-2	DO-8D Bot. (Pt)				
		19	2-3					
						19.5		
	100	20	1-2	Brn f-SAND, Sm silt (Sm)				
		22	3-3		S			
						25		
	110	25	6-8	Brn m-f SAND, Tr. silt, C. SAND (Sp-Sm)				
		27	9-8					
						30		
	120	30	3-3	Gray-Brn m-f SAND, Sm silt (Sm)				
		32	6-4					
						35		
	130	35	3-5	Gray-Brn silty f-m SAND, Tr. mica (Sm)				
		37	5-5					
						40		
	140	40	5-6	Gray Brn m-f SAND, Tr. silt (Sp-Sm) Tr. mica				
1415		42	9-9					
1/03/01								
0700						45		
JED.	150	45	5-5	DO-14D (Sp-Sm)				
5°F		47	5-7					
clear								
						50		
	160	50	7-10	Brn f-C SAND, Sm gvl, Tr. silt (Sp-Sm)				
		52	14-15					

BORING NO. B-3

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 9446
BORING NO. B-3
SURFACE ELEV.

PROJECT LOWE'S HOME CENTER
PROJECT LOCATION BROOKLYN, NY
RES. ENGR. R. NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
					5			
						53.5		
						55		
	170	55	16-11	RED-BRN f-c SAND, Sm gvl, silt (SM)	7			
		57	21-40					
						60		
	180	60	21-17	DO. (7D) (SM)				
		62	16-20					
						65		
	190	65	21-17	DO. (7D) (SM)				
		67	25-42					
						70		
	200	70	31-19	RED-BRN f-c SAND, Sm gvl, Tr. silt (SM)				
		72	25-24					
						75		
	210	75	29-24	RED-BRN f-c SAND, Sm gvl, silt (SM)				
		77	30-34					
						80		
	220	80	15-15	DO. 210 (SM)				
13 inches		82	24-36			82		E.O.B. @ 82 FT.

BORING NO. B-3

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-3
SHEET 3 OF 3
FILE NO. 94410
SURFACE ELEV.
DATUM

PROJECT Lewis Home Center
LOCATION Brooklyn NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME 75	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. split spoon
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3 7/8", 5 7/8", 2 15/16"
TYPE OF DRILLING MUD QUIK GEL

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
01/02/01		8	5	7	observed sample 40 saturated with water

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. 82	NO. OF 3" SHELBY TUBE SAMPLES	—
3.5" DIA. U-SAMPLE BORING	LIN. FT. —	NO. OF 3" UNDISTURBED SAMPLES	—
CORE DRILLING IN ROCK	LIN. FT. —	OTHER:	—

BORING CONTRACTOR JBD Co.
DRILLER M. Biswas HELPERS D. Keith / Terry Sutton
REMARKS grouted borehole upon completion.
RESIDENT ENGINEER Z. NUNEZ DATE 01/03/01

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-3

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9446
BORING NO. B4U
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
01/10/01 WED. 25°F windy 0645					CONC.		Drilled AWOD	17": Conc. slab.
	1D	1	2-4	Brn M. f SAND, Tr. gvl, silt, cinders,				
		3	6-7	Brick (Fill) (Sp-Sm)				
	2D	3	9-9	Blk-Brn M. f SAND, Sm silt, Tr. wood,	(4)			
		5	12-21	cinders, Brick (Fill) (SM)		5		Rope broke, changed
	3D	5	19-25	Blk M. f SAND, Sm gvl, silt, Tr. cinders,			HWD	Rope to Hammer.
		6-4	100/5"	Brick (Fill) (Sm)				SD-Rock fragments in the
	4D	7	8-4	Blk M. f SAND, Sm cinders, silt, Tr. gvl,				tip of the spoon.
		9	5-15	Brick (Fill) (Sm)				
						10		
	5D	10	14-4	No Recovery				2nd attempt no
		12	4-4					recovery, new trap.
	6D	12	4-1	No Recovery				
		14	3-1					
						15		
	7D	15	7-6	Blk gravel, Tr. wood (Fill) (Sp) (Cinders)				Possible wash, R=1"
		17	11-6					
	8D	17	2-4	Blk M. f SAND, Sm cinders, Tr. gvl, silt				Petroleum odor, strong
		19	4-3	(Fill) (Sp-Sm)				
						20		
	9U	20	P=24"	Stiff gray org. silty clay, Tr. f SAND (OH)				
		22	R=21		(6)			
	10D	22	WOH/24"	Do - 9U (OH)				
		24						
						24.5		
	11D	25	WOH-5	Brn Silty f - SAND, Tr. Mica (SM)	(5)			
		27	6-7					
						30		
	12D	30	15-20	Brn-Gray M. f SAND, Tr. silt (SP-SM)				
		32	22-27					
						33.5		
				Stiff.		35		
	13D	35	9-6	Gray org. silty clay, Sm f SAND, Tr mica.	(6)			P.P. = 1.0 TSF
		37	7-11	(OH)				
1400 01/11/01 THURS. 32°F SNOW 5 windy cloudy	14U	37	P=12"	Top - Do - 13D (OH)				Tube Stopped @ 38 FT.
		39	R=12"	Bot. Stiff gray silt and M. f SAND Tr. clay		39		
				(ML) & (SP-SM)		40		
	15D	40	32-40	Brn M. f SAND, Tr. silt, Mica (SP-SM)				
		42	41-39					
					(5)	45		
	16D	45	12-13	Do - 15D (SP-SM)				
		47	18-12					
						50		
	17D	50	13-11	Do - 15D (SP-SM)				
		52	16-14					

BORING NO. B4U

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 2
FILE NO. 9942
BORING NO. B-44
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn, NY
RES. ENGR. E. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
					S			
						55		
	180	55	6-5	Brn-Gry Clayey f-M sand, Sm silt (SC)				
		57	10-9					
						60		
	190	60	24-19	Brn M-f sand, Tr. silt (SP-SM)				
		62	30-26					
						65		
	200	65	24-31	Brn f sand, Sm silt, Tr. mica (SM)				
		67	45-33					
								Rod chattering @ 68 ft hard drilling
						68.5		
						70		
	210	70	100/5"	Red-Brn f-M sand, Tr. silt, Tr. gvl, mica (SP-SM)	T			Rod chattering; hard drilling @ 73 ft; cobbles.
		70.4				73		
						75		
	220	75	37-42	Red-Brn f-M sand, Sm silt, gvl, Tr. clay (SM)				
		77	47-42					Change taps, lose broke
						80		
Lateral	230	80	35-58	DO-220				Spoon bouncing
		81.2	100/6"			81.2		E.O.R @ 81.2 ft

BORING NO. B-44

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-44
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Center
LOCATION Brooklyn NY
BORING LOCATION offset → 1 ft south

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK		MECHANICAL		DIA., IN. 4	DEPTH, FT. FROM 0	TO 20	
SKID	Acker	HYDRAULIC	X	DIA., IN.	DEPTH, FT. FROM	TO	
BARGE		OTHER		DIA., IN.	DEPTH, FT. FROM	TO	
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. split spoon
U-SAMPLER Shelby Tube
S-SAMPLER
CORE BARREL
CORE BIT Thinwall bit
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 2 15/16, 3 7/8
TYPE OF DRILLING MUD Quik-Gel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATION.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. 78.2	NO. OF 3" SHELBY TUBE SAMPLES	2
3.5" DIA. U-SAMPLE BORING	LIN. FT. 3	NO. OF 3" UNDISTURBED SAMPLES	—
CORE DRILLING IN ROCK	LIN. FT. —	OTHER:	—

BORING CONTRACTOR TBDG
DRILLER R. Lynch HELPERS E. Feliciano
REMARKS Grouted borehole upon completion
RESIDENT ENGINEER E. Nunez DATE 6/11/01

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-44

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9446
BORING NO. B-64
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn, NY
RES. ENGR. R. NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
01/05/00					CONC		Drilled	7" conc. slab.
Fri.	10	1	9-9	Brn f-m sand, Sm silt, Tr. gvl, cinders,			Ahead	
20'50F		3	29-44	brick (fill) (Sm)	(F)			
Cloudy.	20	3	22-25	Brn-Blk f-c sand, Sm silt, Tr. gvl,				
0945 hrs.		4.4	100/5"	cinders, brick (fill) (Sm)		5		
	30	5	70-41	Brn m-f gravel, Sm f sand, Tr. silt (fill)				R=1"
		6.3	100/4"	(Sp-Sm)				
	40	7	12-8	wood (fill)				
		9	6-5					
						10		
	50	10	9-6	gray-Blk c-f sand, Sm silt, Tr. gvl,				
		12	3-3	cinders (fill) (SM)				
	60	12	7-10	70-50 (fill) (Sm)				R=2"
		14	3-2					
						15		
	70	15	14-3	No recovery				
		17	2-2					
	80	17	1-2	Blk c-f sand, Sm gvl, cinder, Tr. silt,				
		19	1-2	brick (fill) (Sm)				
1400 hrs						20		Peat/clay in wash @ appx 19.5 ft!
01/06/01	94	20	R=24"	Soft gray org. silty clay, Tr. veg (OH)	(O)			
Mon.		22	R=16"					
Cloudy	100	22	4-3	Top (12") Brn Peat, Sm org. silty clay (Pt)				
35°F		24	3-5	Bot (8") Brn silty f-sand, Tr. veg (Sm)		23.3		
0645						25		
	110	25	6-6	Brn f-sand, Sm silt, Tr. mica (Sm)				
		27	7-12					
					(S)			
						30		
	120	30	19-17	gray m-f sand, Tr. silt, mica (Sp-Sm)				
		32	27-22					
						35		
	130	35	9-13	70-80 Tr. silt pockets (Sp-Sm)				
		37	15-17					
						40		
	140	40	17-25	Brn m-f sand, Tr. silt (Sp-Sm)				
		42	33-36					
						45		
	150	45	10-21	Brn f-m sand, Sm silt, Tr. mica (Sm)				
		47	29-24					
						50		
	160	50	16-28	Brn f-m sand, Tr. silt, gvl (Sp-Sm)				
		52	34-34	mica				

BORING NO. B-64

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 94460
BORING NO. B-6A
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn NY
RES. ENGR. Z. Nowicz

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
					(5)			
						55		
	170	55	24-49	Brn silty f-m sand, Tr. gvl (SM)				
		57	37-30					
						60		
	180	60	38-41	Brn m-f sand, Tr silt (SP-SM)				
1410 hrs		62	51-47					
01/09/01 Tues. Overcast 30°F Windy Cloudy						65		
	190	65	29-33	Brn f-c sand, Sm silt (SM)				
		67	50-49					
					(7)	68.5		
						70		
	200	70	100/5"	Red-Brn f-sand, Sm silt (SM)	(8)	70.5		Hard drilling @ 70.5 ft to 73 ft±. Rock chisel to 75 ft. Hard drilling @ 75 ft. Rig lifted up. Cont. drilling from 75 ft to 76 ft. Bouldery.
		70.4						
						73		
						75		
					(9)	76		
	210	76	100/5"	Red-Brn f-m sand and gvl, Sm silt (SM)				
		76.4						
						80		
	220	80	48-59	Red-Brn clayey silt, Tr gvl, f-sand (ML)				
1345 hrs		81.2	100/3"			81.2		E.O.B @ 81.2 ft.

BORING NO.

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-611
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Ctr.
LOCATION Brooklyn, NY
BORING LOCATION As planned

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK		MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 20
SKID	Acker	HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" o.d. split spoon
U-SAMPLER Shelby Tube
S-SAMPLER
CORE BARREL
CORE BIT Thin wall bit (Cont. Casc. Flow)
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 2 15/16, 3 1/8"
TYPE OF DRILLING MUD Quik-Gel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 75.7
3.5" DIA. U-SAMPLE BORING LIN. FT. 2.
CORE DRILLING IN ROCK LIN. FT. —
NO. OF 3" SHELBY TUBE SAMPLES 1
NO. OF 3" UNDISTURBED SAMPLES —
OTHER: obstructions (boulders) 3.5 FT.

BORING CONTRACTOR JED Co.
DRILLER R. Lynch HELPERS E. Feliciano
REMARKS Grouted borehole upon completion.
RESIDENT ENGINEER E. Nunez DATE 01/09/01

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-611

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF
FILE NO. 94446
BORING NO. B74
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn NY
RES. ENGR. E. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
01/15/01 Mobilize drilling 32°F (1 snow) 1230 hrs					Surf.		Drilled Hand	8" conc. slab
	10	1	7-8	Brn f-m sand, sm silt, gvl, Tr. cinders,				
		3	40-34	Brick (fill) (SM)	(F)			
	20	3	40-23	Do-10, Tr. Conc. (fill) (SM)				
		5	17-12			5		
	30	5	21-15	Brn-blk m-f sand, sm silt, Tr. gvl, cinders			Hand	
		7	9-11	(fill) (SM)				
	40	7	13-10	30-30 (fill) (SM)				
		9	14-14					
						10		
	50	10	26-19	Do-30 (fill) (SM)				
		12	11-9					
	60	12	12-11	Brn c-f sand, sm gvl, Brick, Tr.				
		14	6-4	cinder, (fill) (SP-SM)				
						15		
	70	15	4-7	No recovery				wash w/ cmplg.
		17	5-2					
	80	17	2-2	Med. gray org. silty clay, Tr. veg, f sand				P.P. = .5 tsf
		19	2-1	(OH)		18.3		
						20	V	
	90	20	P=24"	Do-80 (OH)				
		22	R=18"		(O)			
	100	22	P=24"	Top - Do 80 (OH)				
		24	R=22"	Bot - Brn peat (Pt)				
	110	24	Wor-2	Top (11") Soft gray org. silty clay, Tr. f sand,		24.9		
		26	2-3	Peat (OH)				
				Bot (13") Brn silty m-f sand, Tr. veg (SM)	(S)			
						30		
	120	30	20-21	Brn m-f sand, Tr. silt, mica (SP-SM)				P.P. = 0.75 tsf
		32	26-17					
						33.5		
						35		
	130	35	Wor-4	Med. gray org. silty clay, Tr. f sand, veg (OH)				
		37	8-11		(O)			
						38.5		
						40		
	140	40	15-21	Gray-Brn m-f sand, Tr. silt (SP-SM)	(S)			
		42	23-25					
						45		
	150	45	11-14	Do-140 (SP-SM)				
1400		47	19-17					
01/15/01 0900 Begin drill								
	160	50	19-13	Do-140 (SP-SM)				
		52	18-19					

BORING NO. 07

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 9446
BORING NO. B74
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
					(S)	53.5		
120	55		WOR/12"	soft gray org silty clay, tr. f sand (OH)	(O)	55		P.P. < 0.5 TSF
	57		6-16					
						58.5		
180	60		27-27	Brn f-c sand, tr. silt (SP-SM)	(S)	60		
	62		34-37					
						62.5		Rod chattering @ 62.5 Hard drilling to 64 ft
					(B)	64		
190	65		39-37	Red-brn f-c sand, sm silt, tr. gvl (SM)		65		
	67		34-45					
					(T)			Rod chattering @ 67.5 ft. to 70 ft±
						70		
200	70		100/5"	Red-brn f-c sand, sm silt, gvl (SM)				
	70.4							
						75		
210	75		100/4"	DO-ZOD, sm rock frag. (SM)				rock frag in the tip of the spoon - Rod chattering @ 75.5 ft.
	75.3							
						80		
220	80		14-40	Red-brn f-c sand, sm silt, gvl (SM)				
1535	82		40-26			82		E.O.D. @ 82 ft.

BORING NO. B74

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-74
SHEET 3 OF 3
FILE NO. 94416
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Center
LOCATION Brooklyn NY
BORING LOCATION As Planned

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	☑ YES ☐ NO		
TRUCK		MECHANICAL		DIA., IN. 4	DEPTH, FT. FROM 0	TO 20	
SKID	Acker	HYDRAULIC	X	DIA., IN.	DEPTH, FT. FROM	TO	
BARGE		OTHER		DIA., IN.	DEPTH, FT. FROM	TO	
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. split spoon
U-SAMPLER Shelby Tube
S-SAMPLER
CORE BARREL
CORE BIT Diamond bit
DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
DIAMETER OF ROTARY BIT, IN. 3 7/8", 2 15/16"
TYPE OF DRILLING MUD Quikgel

AUGER USED ☐ YES ☒ NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. 75.5	NO. OF 3" SHELBY TUBE SAMPLES	2
3.5" DIA. U-SAMPLE BORING	LIN. FT. 4	NO. OF 3" UNDISTURBED SAMPLES	—
CORE DRILLING IN ROCK	LIN. FT. —	OTHER: obstructions (boulder)	2.5 FT

BORING CONTRACTOR JBD
DRILLER R. Lynch HELPERS E. Feliciano / Louie Abbate
REMARKS Grouted boreholes upon completion
RESIDENT ENGINEER R. Nunez DATE 01/19/01

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9446
BORING NO. B8
SURFACE ELEV.

PROJECT Lowe's Home Ctr
PROJECT LOCATION Brooklyn NY
RES. ENGR.

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
01/20/01 MON. SUNNY 25°F OPO hrs					CONC		Drilled	8" conc slab.
	1	1	16-20	Gray-Brn f-m sand, sm silt, Tr. gvl, cinders (fill)(sm)			Ahead	
		3	27-45					
	20	3	10-15	DO-10 (fill)(sm)	(F)			
		5	24-32			5		
	30	5	17-19	Gray-Blk c-f sand sm silt, cinders, Tr. gvl, brick (fill)(sm)			NW	
		7	24-10					
	40	7	7-8	DO-30, sm brick (fill)(sm)				
		9	12-7					
						10		
	50	10	23-8	Gray-Brn c-f sand, sm silt, cinder, Tr. gvl, brick (fill)(sm)				
		12	9-9					
	60	12	2-2	Gray-Brn m-f sand, sm silt, Tr. vcs, cinders, brick (fill)(sm)				
		14	7-8					
						15		
	70	15	12-8	Gray-Blk m-f sand, sm cinder, silt, Tr. gvl, metal (fill)(sm)				
		17	8-5					
	80	17	4-3	Gray-Blk c-f sand, sm cinders, silt, Tr. gvl, wood (fill)(sm)				R=3"
		19	4-3					
						19.5		
	90	20	3-4	Brn Peat (Pt)	(Pt)			
		22	7-7					
						23.5		
						25		
	100	25	8-7	Brn f-m sand, Tr. silt, vsg (sp-sm)	(S)			
		27	9-10					
						30		
	110	30	15-20	Brn c-f sand, Tr. silt (sp-sm)				
		32	23-17					
						35		
	120	35	7-4	Top (15") - gray org. clayey silt, sm f sand (MU)				
		37	11-9	Bot (9") - gray silty f-m sand, Tr. clay (sm)				
						40		
	130	40	20-25	Gray m-f sand, Tr. silt, micaceous (sp-sm)				
1415 01/22/00 TUES. SUNNY 20°F OGHS		42	25-27					
						45		
	140	45	12-15	DO-130 (sp-sm)				
		47	22-21					
						50		
	150	50	12-14	Brn m-f sand, Tr. silt, mica (sp-sm)				
		52	14-15					

BORING NO. B8

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 9446
BORING NO. B8
SURFACE ELEV.

PROJECT Lowe's Home Ctr.
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. Nunez

SS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
					(S)			
						55		
KO	55	7-11		Brown m-f sand, sm silt, Tr. mica (SM)				
	57	16-16						
						60		
170	60	10-11		Do-160, Tr. clay (SM)				
		12-15						
								Red chatter bit. Hand drilled @ 64.5 FT to 66 FT.
					(B)	64.5		
						66		
180	66	23-27		Red-Brown f-c sand, sm gvl, Tr. silt (SP-SM)				
	67	24-25						
					(T)	70		
RO	70	34-42		Red-Brown f-c sand, sm gvl, silt (SM)				
	71.1	100/1"				74.5		Hand drill to 74.5±FT to 75 FT boulder
					(B)			
						75		E.O.B. @ 75 FT.
						80		

BORING NO.

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-8
SHEET 3 OF 3
FILE NO. 94446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Ctr
LOCATION Brooklyn NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK		MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 20
SKID	Acker	HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" OD. split spoon
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3 7/8, 4 7/8
TYPE OF DRILLING MUD Quikgel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 70.0 NO. OF 3" SHELBY TUBE SAMPLES
3.5" DIA. U-SAMPLE BORING LIN. FT. — NO. OF 3" UNDISTURBED SAMPLES
CORE DRILLING IN ROCK LIN. FT. — OTHER: obstruction (boulder) 5 FT

BORING CONTRACTOR STENCO.
DRILLER R. Lynch HELPERS E. Fellerano
REMARKS Grouted borehole upon completion
RESIDENT ENGINEER E. Nunez DATE 8/24/01

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type: dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B8

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9440
BORING NO. B4A
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
01/14/01 0645 50's. 35°F Cloudy					Conc.		Drilled 8" conc. slab	
	10	1	7-17	Brn M-f sand, Sm silt, Tr. gvl, Brick,			NARRO	
		3	18-12	cinders (Fill) (SM)				
	20	3	70-100/5"	Blk-Brn f-c sand, Sm silt, Cinders, Gvl,	(4)			
		3.9		Tr. Brick (Fill) (SM)		5		
	30	5	21-27	Brn f-m sand, Sm silt, Cinders, Tr gvl				
		7	29-15	(Fill) (SM)				
	40	7	7-6	Blk-Brn M-f sand, Sm Brick, Tr Cinders, gvl,				
		9	11-6	Silt (Sp-SM) (Fill)				
						10		
	50	10	32-22	Brn C-f sand, Sm silt, Tr. Brick, gvl, Cinders				
		12	20-13	(Fill) (SM)				
	60	12	4-2	Gry-Blk C-f sand, Sm silt, Cinders, Tr. gvl				
		14	3-4	(Fill) (SM)				
						15		
	80	15	5-5	Do-60 (Fill) (SM)				
		17	2-2					
	80	17	2-5	Do-60, Tr. veg (Fill) (SM)				
		19	4-2					
						20		
	90	20	3-4	Blk-Gry f-c sand, Tr. Brick, Silt (Fill) (Cinders)				R=1"
		22	5-4					Clay in wash @ 23ft.
	100	23	R=24"	Top-Gray org. silty clay, SM f sand (OL)				
		25	R=21"	Bot-Brn silty M-f sand, Tr. veg. (SM)	(6) ?			
	110	25	7-8	Do-100 Bot (SM)		25		
		27	18-16					
					(5)			
						30		
	120	30	15-15	Brn M-f sand, Tr. silt (Sp-SM)				
		32	22-21					
						35		
	130	35	8-12	Brn silty f-m sand (SM)				
		37	12-11					
						40		
	140	40	23-24	Brn M-f sand, Tr silt (Sp-SM)				
		42	23-28					
						45		
	150	45	10-10	Do-140, Tr. mica (Sp-SM)				
		47	13-12					
	160	50	10-14	Brn clayey f-sand, Sm silt, Tr. mica				
1410		52	9-11	(SM)				

BORING NO. B4A

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3

FILE NO. 9446

BORING NO. B9u

SURFACE ELEV.

PROJECT Lowe's Home Center

PROJECT LOCATION Brooklyn, NY

RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
0847 to 1								
0845 Partly cloudy 38°F					(3)			
						55		
	170	55	32-28	Brn f-m sand, sm silt (-Sm)				
		57	41-34					
						60		
	180	60	28-32	Brn m-f sand, tr silt (sp-sm)				
		62	30-29					
					?	63.5		
						65		
	190	65	100/6"	No Recovery				Spoon bouncing. Hard drilling from 65' to 68 feet, cobbles
					(T)			
						70		
	200	70	100/4"	No Recovery				2nd attempt, No Rec. Red chert @ 70.3'
		70.3						
						75		
	210	75	56-41	Red-Brn f-c sand, sm silt, gvl (Sm)				Back flow in the tip of the spoon.
			30-32					
						80		
	220	80	23-29	Red-Brn f-m sand, sm silt, tr mica (Sm)				
1230		82	41-34			82		

BORING NO. B 1

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B94
SHEET 3 **OF** 3
FILE NO. 94446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Center
LOCATION Brooklyn NY
BORING LOCATION Not Planned

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK		MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 20
SKID	Acker	HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. split spoon
U-SAMPLER Shelby Tube
S-SAMPLER
CORE BARREL
CORE BIT Diamond bit
DRILL RODS NJ

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3 7/8", 2 15/16"
TYPE OF DRILLING MUD Quik Gel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
01/17/01	1245	82	—	7.2	Upon Completion

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 80
3.5" DIA. U-SAMPLE BORING LIN. FT. 2
CORE DRILLING IN ROCK LIN. FT. —
NO. OF 3" SHELBY TUBE SAMPLES 1
NO. OF 3" UNDISTURBED SAMPLES —
OTHER: —

BORING CONTRACTOR SBD Co.
DRILLER R. Lynch HELPERS E. Feliciano
REMARKS Grouted borehole upon completion
RESIDENT ENGINEER R. Nungz DATE 01/17/01

NOTES:
1. Make a seperate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 94442
BORING NO. B-11
SURFACE ELEV.

PROJECT Lowe's Home Centers
PROJECT LOCATION Brooklyn, NY
RES. ENGR. R. Parnell

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
12/19/00 Tues. 50°F Cloudy 12 Crews.	10	1	19-33	Dk. f-m sand, sm silt, tr. [illegible], [illegible]			Drilled	Safety Harness
		3	24-37	[illegible] (Fill) (SM)			10 BLOWS	to [illegible] @ 50 blows
	20	3	10-4	DO-10 (Fill) (SM)				
		5	12-15					
					4	5		
	30	5	3-3	Wood sample			WO	R=2"
		7	4-4					
	40	7	3-4	Gray m-f sand, sm [illegible]				
		9	6-3					
						10		Wood in mash, [illegible]
	50	10	2-1	Gray f-m sand, sm silt, [illegible]				
		12	1-1					
	60	12	2-1	DO-50, tr. [illegible] (Fill) (SM)				
		14	1-1					
						15		
	70	15	3-4	Soft gray org. silty clay, tr. veg, [illegible]				R=2",
		17	4-8		6			
	80	17	2-2	DO-70 (OA)				PP = 0.5 TSF
		19	2-2					
						20		
	90	20	1-1	Gray silty f-m sand, tr. veg, clay (SM)				
14 Sacks		22	1-1					
12/20/00 WED Crews working [illegible] 36°F					3			
						25		
	100	25	8-10	Brn m-f sand, sm silt (SM)				
		27	15-10					
						30		
	110	30	5-4	Gray-Brn clayey silt, tr. f-sand, veg (ML)				
		32	4-5					
						35		
	120	35	10-12	Brn m-f sand, tr. silt, veg (SP-SM)				
		37	12-15					
						40		
	130	40	16-14	Brn m-f sand, tr. silt, mica (SP-SM)				
		42	21-17					
						45		
	140	45	10-13	Brn silty f-sand, tr. mica (SM)				
		47	17-17					
						50		
	150	50	12-14	DO-140 (SM)				
		52	13-12					

FORM NO. B-1

BORING NO. B-11

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 9446
BORING NO. B-11
SURFACE ELEV.

PROJECT Lowe's Home Ctr.
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. Nunez

SS	SAMPLE NO.	DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
						55		
160	55	26-19		BRN C-f SAND, Tr. Silt, mica (SP-SM)	(S)			
	57	23-25						
						60		
170	60	9-12		DKO-RED, Tr. gvl (SP-SM)				
	62	23-22						
						65		
180	65	10-11		BRN M-f SAND, Tr. C SAND mica (SP-SM)				
	67	11-12						
						68.5'		
						70		
190	70	41-30		RED-BRN Silty f-c SAND, sm gvl (SM)	(T)			
	72	45-49						
						75		
200	75	46-43		RED-BRN f-c SAND, Sm silt, gvl (SM)				
	77	56-44						
						80		
210	80	80-65		Rock fragments, RED BRN Silty f-M				2-3" rock fragments in the tip of the spoon.
	81.2	100/2"		SAND, Tr. gvl (SM)				
						85		
220	85	37-40		RED-BRN f-C SAND, Sm silt, gvl, Tr. Rock				Rock frag. in the tip of the spoon.
	87	41-50		frag (SM)				
						90		
230	90	13-13		RED-BRN C-f SAND, Sm gvl, Tr. silt (SP-SM)				
	92	18-16						
						95		
240	95	16-14		BRN M-f SAND, Tr. Silt gvl (SP-SM)				
	97	27-20						
						100		
250	100	20-20		RED-BRN Silty f-M SAND sm gvl (SM)				
	102	25-23						E.O.B. @ 102 FT.

BORING NO. B-11

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-11
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Center
LOCATION Brooklyn NY
BORING LOCATION Fleet → Bergen

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED		☒ YES ☐ NO			
TRUCK	CME 55	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM	0	TO	20
SKID		HYDRAULIC		DIA., IN.		DEPTH, FT. FROM		TO	
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM		TO	
OTHER									

TYPE AND SIZE OF:
D-SAMPLER 2" o.d. split spoon
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
DIAMETER OF ROTARY BIT, IN. 5 7/8, 3 7/8, 2 3/4
TYPE OF DRILLING MUD Quik Gel

AUGER USED ☐ YES ☒ NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 340 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 102 NO. OF 3" SHELBY TUBE SAMPLES –
3.5" DIA. U-SAMPLE BORING LIN. FT. – NO. OF 3" UNDISTURBED SAMPLES –
CORE DRILLING IN ROCK LIN. FT. OTHER:

BORING CONTRACTOR SBDCo.
DRILLER R. Lynch HELPERS E. Felicano
REMARKS Grouted borehole upon completion.
RESIDENT ENGINEER R. Nunez DATE 12/20/00

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 94446
BORING NO. B-12
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
12/14/00 30'wc Tues Cloudy 12:15	10	0.5	5-10	Blk-Brn Vy f sand, Sm silt, Tr gvl, Cinders,			Drilled	Automatic Hammer
		2	23	Brick (Fill)(SM)			Mud	Concrete @ surface
	20	2	9-19	DO-10 (Fill)(SM)				4" thick
		4	12-6					10-1.5 ft sample.
	30	4	1-1	Blk f-m sand, Sm silt, Tr. peat, gvl,	(4)	5		
		6	1-1	(Fill)(SM)				
	40	6	2-2	Blk-Gray f-m sand, Sm silt, Cinders, Tr. Brick,			Mud	
		8	2-2	wood (Fill)(SM)				
	50	8	2-3	Blk-Gray, f-m sand, Sm silt, Cinders, Tr. gvl				
		10	3-4	(Fill)(SM)		10		
	60	10	2-2	DO-50 (Fill)(SM)				
		12	1-1					
	70	12	2-2	DO-50 (Fill)(SM)				
		14	2-1					
	80	14	1-1	Top(6")-DO-50 (Fill)(SM)		15		R-12"
		16	1-1	Bot(6") Gray org silty clay, Sm veg, Tr f sand (OH)				
	90	16	1-1	DO-80-Bot (OH)	(0)			
		18	1-1					
						19		
						20		
	100	20	1-1	Gray silty f-m sand, Tr. veg (SM)	(5)			
1415		22	1-2					
12/20/00 Wed. Overcast Windy Cloudy 15°F								
						25		
	110	25	4-6	Brn-M-f sand, Tr. silt (SP-SM)				
		27	8-8					
						30		
	120	30	3-3	Top(9")-Brn C-f sand, Tr. silt (SP-SM)				
		32	2-2	Bot(8")-Stiff gray-Brn silt, Sm f-sand (ML)				Bot PD=1.5 T.S.F
						35		
	130	35	5-8	Brn M-f sand, Tr. silt, mica (SP-SM)				
		37	12-15					
						40		
	140	40	6-8	DO-130 (SP-SM)				
		42	11-11					
						45		
	150	45	3-3	DO-130, Tr. gvl (SP-SM)				
		47	3-4					
						50		
	160	50	4-4	Brn silty f-sand, Tr. mica (SM)				
		52	6-5					

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 9446
BORING NO. B-12
SURFACE ELEV.

PROJECT Lowe's Home Ctr.
PROJECT LOCATION Brooklyn, NY
RES. ENGR. T. NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
					(S)	55		
170	55	7-11		Gray M-f sand, sm silt, tr. mica (SM)				
	57	11-12						
						60		
180	60	12-16		100-170 (SM)				
	62	19-18						
						65		
190	65	23-19		Gray silty f-m sand and rock frag. (SM)				Rock fragments in the tip of the spoon.
	67	22-22						
						68.5		
						70		
200	70	20-40		Red-brn silty f-c sand, sm gvl (SM)				
	72	35-22						
						73		Rubber, hard drilling from 73'-74.5'
					(B)			
						74.5		
210	75	19-15		Red brn f-m sand, sm gvl, silt (SM)				
	77	19-21						
					(T)	80		
220	80	20-24		200-210 (SM)				
	82	29-25						Hard drilling @ 82.5' Fine rubber.
					(B)	83		
						83.5		
						85		
230	85	30-26		Red brn silty f-m sand, sm gvl (SM)				
	87	31-28						
						90		
240	90	20-20		Red-brn f-c sand, sm silt, gvl (SM)				R-2"
	92	17-21						
						95		
250	95	15-30		No rec. (w ash)				
	97	30-28						
						100		
260	100	34-33		Red-brn f-c sand, sm silt, gvl (SM)				
345	102	21-32				102		E.O.B @ 102 FT

FORM NO. B-1

BORING NO. B-12

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-12
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Center
LOCATION Brooklyn NY
BORING LOCATION [illegible] - 169.5N

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME 75	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. split spoon
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3 7/8", 5 7/8", 2 7/8"
TYPE OF DRILLING MUD Quikgel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 340 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE:	TYPE	ID, IN.	LENGTH, FT.	TOP ELEV.
INTAKE ELEMENT:	TYPE	OD, IN.	LENGTH, FT.	TIP ELEV.
FILTER:	MATERIAL	OD, IN.	LENGTH, FT.	BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. 99.5	NO. OF 3" SHELBY TUBE SAMPLES	—
3.5" DIA. U-SAMPLE BORING	LIN. FT. —	NO. OF 3" UNDISTURBED SAMPLES	—
CORE DRILLING IN ROCK	LIN. FT. —	OTHER: obstruction (boulders)	2.5

BORING CONTRACTOR JSDCo.
DRILLER M. Blagrove HELPERS D. Keith
REMARKS Grouted borehole upon completion
RESIDENT ENGINEER E. Nunez DATE 12/20/00

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-12

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9440
BORING NO. B-13
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn NY
RES. ENGR. T.E. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
12/20/00 Wed. Windy Clear 30°F 3.50 hrs	10	0.5	24-15	Blk f-c sand, Sm silt, Tr. cinder, cly			Drilled	Automatic Hammer
		2	17	Brick (Fill) (Sm)			NWD	4" thick concrete
	20	2	7-11	Do-10 (Fill) (Sm)				Surface.
		4	16-6					
	30	4	4-4	Do-10 (Fill) (Sm)	(f)	5		Start pneumatic
		6	2-2				NWD	
	40	6	1-1	Gray Blk f-m sand, Sm silt, Tr. veg. matl,				
		8	1-1	Brick (Fill) (Sm)				
	50	8	2-1	Do 40, Tr. cinders (Fill) (Sm)				
		10	2-2			10		
	60	10	4-2	Blk-gray f-c sand, Sm silt, cinders, Tr. matl,				
		12	2-1	Brick (Fill) (Sm).				
	70	12	1-1	Blk-gray f-c sand, Sm silt, cinders, Tr.				
		14	1-1	Brick, shells (Fill) (Sm)				
						15		
	80	15	8-6	Black cinders, w/ f-m sand, Tr. shells				R=1"
		17	5-5	(Fill) (cinders)		17		
	90	17	2-1	Brn Peat (Pt)	(Pt)			
		19	1-1					
						19.5	↓	
	100	20	WOH/18"	Gray silty f-m sand, Tr. Peat (Sm)				
10:15 hrs		22	1					
12/21/00 Thurs 25°F overcast cloudy						23.5		
						25		
	110	25	4-5	Brn f-c sand, Tr. silt, mica (Sp-Sm)	(f)			
		27	5-9					
						30		
	120	30	8-7	Brn silty f sand, Tr. mica (Sm)				
		32	4-4					
						33.5		
						35		
	130	35	2-2	Stiff gray org. silty clay, Sm f-sand (OH)	(O)			PP=1.25 T.S.F
		37	7-5					
						38.5		
						40		
	140	40	3-5	Gray m-f sand, Tr. silt, mica (Sp-Sm)	(5)			
		42	4-6					
						45		
	150	45	4-4	Do-140 (Sp-Sm)				
		47	4-7					
						50		
	160	50	2-4	Gray f-m sand, Sm silt (Sm)				
		52	4-6					

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 94446
BORING NO. B-13
SURFACE ELEV.

PROJECT Louis Home Center
PROJECT LOCATION Brooklyn, NY
RES. ENGR. E. Muner

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
					(5)			
						53.5		
						55		
170	55		WOR/24"	Soft Gray org. silty clay, with f-sand seams (OH)	(O)			P.P. = <0.5 T.S.F.
	57							
						58.5		
						60		
180	60		6-3	Red-Brn silty f-c sand, tr. gvl,	(T)			R-2"
	62		10-9	Rock frag (SM)				
						65		
190	65		9-10	DO-18D (SM)				R-3" Rock frag. in the tip of the spoon.
	67		11-17					
						70		
200	70		13-22	Red-Brn f-c sand, some silt, gvl (SM)				
	72		27-29					
					(B)	73		Hard drilling @ 73 FT. boulder.
						75		
210	75		12-14	DO-20D (SM)				
	77		17-21					Borehole caving, boulder rolled into borehole.
						80		
220	80		21-25	DO-20D, SM Rock frag. (SM)				Rec. 3" Rock frag. in the tip of the spoon.
	82		25-34					
						85		Borehole caved in due to boulder, to 70 FT. Reamed borehole to 85 FT.
230	85		24-17	Red-Brn f-c sand, some silt, gvl (SM)	(T)			
	87		21-18					
						89		Hard drilling from 89'-90'.
					(B)	90		
240	90		20-17	DO-23D (SM)				
	92		13-13					
						95		
250	95		20-23	DO-23D (SM)				
	97		26-25					
						100		
260	100		21-25	DO-23D (SM)				
1410		102	23-23			102		E.O.B. @ 102

BORING NO. B-13

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-13
SHEET 3 OF 3
FILE NO. 94446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Center
LOCATION Brooklyn, NY
BORING LOCATION See Bor. #7

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME 75	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. split spoon
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 2 7/8", 3 7/8", 4 7/8"
TYPE OF DRILLING MUD Quik Gel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 340 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
12/21/00	1400	102	20	110±	mud/water level upon completion.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. 100	NO. OF 3" SHELBY TUBE SAMPLES	–
3.5" DIA. U-SAMPLE BORING	LIN. FT. –	NO. OF 3" UNDISTURBED SAMPLES	–
CORE DRILLING IN ROCK	LIN. FT. –	OTHER: Obstruction (boulders)	2 FT.

BORING CONTRACTOR SBD Co.
DRILLER M. Blejwas HELPERS D. Keith
REMARKS Secured borehole upon completion.
RESIDENT ENGINEER R. Alvarez DATE 12/21/00

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

BORING NO. B-14
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 10.4
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
06:30	1D	0.0	20-23	Black fine to medium sand, some silt, trace			DRILLED	
12-12-00		2.0	15-18	gravel, cinders (Fill) (SM)			AHEAD	
Friday	2D	2.0	10-21	Black brown coarse to fine sand, some silt,			4"	
Light Snow		4.0	18-23	trace cinders, gravel, brick (Fill) (SM)				
30°F						5		
	3D	5.0	1-1	Blk brn silty fine to coarse sand, tr gravel,				
		7.0	1-2	cinders, brick, vegetation (Fill) (SM)				
	4D	7.0	3-1	Do 3D (Fill) (SM)	F			
		9.0	3-3					
						10		
	5NR	10.0	1-1	No recovery				
		12.0	1-1					
	6D	12.0	1-1	Black cinders (Fill)				
		14.0	1-1					
						15		
	7D	15.0	1-1	Gray coarse to fine sand, some silt, trace				
		17.0	1-1	clay, cinders (Fill) (SM)		17		
	8D	17.0	2-2	Soft gray organic silty clay, trace				WC=73
		19.0	2-2	vegetation (OH)				
					O	20		
	9D	20.0	1-1	Do 8D (OH)				WC=58
		22.0	2-2			22		
					S1	25		
	10D	25.0	8-13	Brown fine to medium sand, some silt (SM)				
		27.0	16-18					
						28.5		
					M	30		
	11D	30.0	7-5	Gray brown fine to medium sandy silt, trace				WC=24
		32.0	7-7	clay pocket (ML)				Percent Passing
								No. 200 Sieve=76
						33.5		11D: Petroleum
	12D	35.0	12-17	Brown fine to medium sand, some silt (SM)		35		odor.
		37.0	21-22					
						40		
	13D	40.0	11-12	Gray brown fine to medium sand, some silt				
		42.0	12-11	(SM)	S1			
						45		
	14D	45.0	10-11	Gray brown silty fine sand, trace clay (SM)				
		47.0	14-13					
						50		
	15D	50.0	9-12	Gray brown silty fine sand (SM)				
		52.0	17-14					

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-14
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.4
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd 12-12-00 Friday Light Snow 30°F						55		
	16D	55.0	15-16	Do 15D, trace fine to medium sand seams (SM)				
		57.0	25-20					
						60		
	17D	60.0	100/5"	Brown fine to medium sand, trace silt (SP-SM)	S1			REC=3"
		60.4						
						65		
	18NR	65.0	100/0"	No recovery				
						70		
	19D	70.0	84-100/4"	Brown gravelly fine to coarse sand, some silt (SM)				19D-20D: Rock fragments in tip of spoon. 19D: REC=4"
		70.9						
						75		
						76		
	20D	75.0	61-75	Top: Brown coarse to fine sandy gravel, trace silt (GP-GM)				
		76.2	100/3"	Bot: Red brown silt, trace fine sand (ML)	M			
						80		
	21D	80.0	21-30	Do 20D, Bottom (ML)				WC=25
		82.0	38-40			82		Percent Passing No. 200 Sieve=96
4:30								End of Boring at 82'.
						85		
								WC=Water Content in percent of dry weight.
						90		
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT	LOWE'S HOME CENTER	BORING NO.	B-14
LOCATION	BROOKLYN, NEW YORK	SHEET	3 OF 3
BORING LOCATION	SEE PLAN	FILE NO.	9446
		SURFACE ELEV.	10.4
		DATUM	BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME-55	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:

D-SAMPLER	2" O.D. SPLIT SPOON
U-SAMPLER	
S-SAMPLER	
CORE BARREL	
CORE BIT	
DRILL RODS	N

DRILLING MUD USED [X] YES [ ] NO

DIAMETER OF ROTARY BIT, IN. 3-7/8, 2-15/16

TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO

TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24

*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

*SAFETY HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE:	TYPE		ID, IN.		LENGTH, FT.		TOP ELEV.
INTAKE ELEMENT:	TYPE		OD, IN.		LENGTH, FT.		TIP ELEV.
FILTER:	MATERIAL		OD, IN.		LENGTH, FT.		BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	80.3	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER: OBSTRUCTION (BOULDERS)	1.7

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.

DRILLER RAY LYNCH HELPERS EDWIN FELICIANO

REMARKS BOREHOLE GROUTED UPON COMPLETION.

RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-22-00

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

BORING NO. B-15
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 10.7
RES. ENGR. RANDOLPH NUNE

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
06:30	1D	0.0	13-5	Brown fine to coarse sand, some silt, trace			DRILLED	
02-22-00		2.0	8-6	brick, cinders (Fill) (SM)			AHEAD	
Friday	2D	2.0	6-5	Brown medium to fine sand, trace silt (Fill)			4"	
Light		4.0	4-5	(SP)				
Snow	3D	4.0	3-2	Gray brown medium to fine sand, trace silt,		5		
30°F		6.0	2-2	brick, cinders (Fill) (SP-SM)				
	4D	6.0	2-2	Gray brown fine to coarse sand, some silt,	F			
		8.0	2-2	trace cinders, vegetation (Fill) (SM)				
	5D	8.0	3-2	Black fine to coarse sand, some cinders,				
		10.0	2-2	silt, trace gravel, brick, clay (Fill) (SM)		10		
	6D	10.0	1-1	Brown silty fine to medium sand, trace				
		12.0	1-1	cinders, vegetation, gravel (Fill) (SM)				
	7D	12.0	1-1	Gray brown fine to coarse sand, sm cinders,				
		14.0	1-1	tr silt, gravel, brick (Fill) (SP-SM)		14		
	8D	14.0	1-1	Brown soft organic silty clay, some		15		WC=214
		16.0	2-1	vegetation (OH)				
	9D	16.0	2-2	Do 8D (OH)	O			REC=4"
		18.0	2-2					Water in jar.
						19		
	10D	20.0	1-2	Gray brown fine sand, some silt, trace		20		
		22.0	3-3	vegetation (SM)				
					S1			
	11D	25.0	6-6	Brown fine sand, some silt (SM)		25		
		27.0	10-11					
						28.5		
	12D	30.0	3-2	Brown fine sandy silt (ML)		30		
		32.0	2-5		M			WC=23
						33.5		
	13D	35.0	3-4	Gray brown fine sand, some silt (SM)		35		
		37.0	9-12					
	14D	40.0	6-7	Brown fine sand, some silt (SM)	S1	40		
		42.0	9-9					
	15D	45.0	5-4	Brown fine to medium sand, trace silt		45		
		47.0	6-8	(SP-SM)				
						48.5		
	16D	50.0	1-1	Soft gray clayey silt, trace fine sand (ML)	M	50		WC=39
		52.0	1-1					

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

BORING NO. B-15
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.7
RES. ENGR. RANDOLPH NU

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd								
02-22-00								
Friday					M			
Light								
Snow								
30°F						53.5		
	17D	55.0	10-14	Gray brown fine sand, some silt (SM)	S1	55		
		57.0	15-17					
								Hard drilling at 58'.
						58		
	18D	60.0	11-12	Red brown silty fine to medium sand, some gravel (SM)		60		
		62.0	11-10					Hard drilling at 62'.
	19D	65.0	10-13	Red brown silty fine to medium sand, trace gravel (SM)		65		
		67.0	12-14					Hard drilling at 67.5'.
	20D	70.0	24-15	Red brown fine to coarse sand, some gravel, silt (SM)	S2	70		
		72.0	17-37					
	21D	75.0	29-65	Do 20D (SM)		75		
		77.0	40-38					
	22D	80.0	25-21	Red brown gravelly coarse to fine sand, some clay (SC)		80		
4:30		82.0	46-52					
						82		End of Boring at 82'.
						85		WC=Water Content in percent of dry weight.
						90		
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO.	B-15
SHEET	3 OF 3
FILE NO.	9446
SURFACE ELEV.	10.7
DATUM	BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

PROJECT	LOWE'S HOME CENTER
LOCATION	BROOKLYN, NEW YORK
BORING LOCATION	SEE PLAN

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME-75	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:

D-SAMPLER	2" O.D. SPLIT SPOON
U-SAMPLER	
S-SAMPLER	
CORE BARREL	
CORE BIT	
DRILL RODS	N

DRILLING MUD USED [X] YES [ ] NO

DIAMETER OF ROTARY BIT, IN. 2-15/16, 3-7/8, 5-7/8

TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO

TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24

*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

*AUTOMATIC HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE:	TYPE		ID, IN.		LENGTH, FT.		TOP ELEV.
INTAKE ELEMENT:	TYPE		OD, IN.		LENGTH, FT.		TIP ELEV.
FILTER:	MATERIAL		OD, IN.		LENGTH, FT.		BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	79.1	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER: OBSTRUCTION (BOULDERS)	2.9

BORING CONTRACTOR	JERSEY BORING & DRILLING CO. INC.		
DRILLER	MIKE BLEJWAS	HELPERS	DENNIS KEITH
REMARKS	BOREHOLE GROUTED UPON COMPLETION.		
RESIDENT ENGINEER	RANDOLPH NUNEZ	DATE	12-22-00

BORING NO. B-15

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-15AS
SHEET 1 OF 2
FILE NO. 9446
SURFACE ELEV. 10.7
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
10:00 01-24-01 Wednesday Partly Cloudy 30°F							DRILLED AHEAD 4"	Drilled ahead to 50'; obtained 1S tube. No sampling in the top 50'. For strata, see Boring Log B-15.
						5		
					F			
						10		
						14		
						15		
					O			
						19		
						20		
					S1			
						25		
						28.5		
						30		
					M			
						33.5		
						35		
						40		
					S1			
						45		
						48.5		
						50		
	1S	50.0	PUSH=24"	Soft gray organic silty clay, some fine sand (OH)	M/O			End of Boring at 52'.
12:00		52.0	REC=24"			52		

BORING NO. B-15AS

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-15AS
SHEET 2 OF 2
FILE NO. 9446
SURFACE ELEV. 10.7
DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NEW YORK
BORING LOCATION SEE PLAN

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG
TRUCK CME-55
SKID
BARGE
OTHER

TYPE OF FEED DURING CORING
MECHANICAL
HYDRAULIC X
OTHER

CASING USED [X] YES [ ] NO
DIA., IN 4 DEPTH, FT. FROM 0 TO 20
DIA., IN. DEPTH, FT. FROM TO
DIA., IN. DEPTH, FT. FROM TO

TYPE AND SIZE OF:
D-SAMPLER
U-SAMPLER
S-SAMPLER SHELBY TUBE
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3-7/8
TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. AVERAGE FALL, IN.
SAMPLER HAMMER, LBS. AVERAGE FALL, IN.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 52
3.5" DIA. U-SAMPLE BORING LIN. FT.
CORE DRILLING IN ROCK LIN. FT.

NO. OF 3" SHELBY TUBE SAMPLES 1
NO. OF 3" UNDISTURBED SAMPLES
OTHER:

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
DRILLER RAY LYNCH HELPERS EDWIN FELICIANO
REMARKS BOREHOLE GROUTED UPON COMPLETION.
RESIDENT ENGINEER RANDOLPH NUNEZ DATE 1-24-01

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

BORING NO. B-16
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 11.1
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
06:30	1D	0.0	55-100/5"	Gray white gravel, trace concrete, coarse			DRILLED	4" Asphalt at
12-27-00		0.9		to fine sand, cinders (Fill) (GP-GM)			AHEAD	surface.
Wednesday	2D	1.0	34-26	Black coarse to fine sand, some silt, trace			4"	
		3.0	7-5	gravel, cinders (Fill) (SM)				
19°F	3D	3.0	3-3	Brown fine to coarse sand, some silt, trace		5		
		5.0	2-3	gravel, cinders, brick (Fill) (SM)				
	4D	5.0	3-3	Black brown coarse to fine sand, some silt,				
		7.0	3-6	cinders, trace gravel, brick (Fill) (SM)	F			
	5D	7.0	3-4	Do 4D (Fill) (SM)				
		9.0	3-3			10		
	6D	9.0	1-1	Brown silty fine to coarse sand, trace				
		11.0	2-1	gravel, brick (Fill) (SM)				
	7D	11.0	1-1	Brown gray fine to coarse sand, some silt,				
		13.0	1-1	trace gravel, wood, cinders (Fill) (SM)				
	8D	13.0	3-2	Brown fine to coarse sand, some silt,		15		
		15.0	2-3	gravel, trace wood, cinders (Fill) (SM)		16		
	9D	15.0	1-2	Brown peat, trace vegetation (Pt)				WC=286
		17.0	1-2		O			
	10D	17.0	2-2	Do 9D (Pt)				WC=322
		19.0	2-2			19.5		
	11D	20.0	2-2	Red brown fine sand, some silt, trace				
		22.0	1-1	vegetation (SM)				
						25		
	12D	25.0	5-7	Red brown fine to medium sand, trace silt				
		27.0	7-9	(SP-SM)				
						30		
	13D	30.0	2-4	Brown fine sand, some silt, silt layers (SM)				
		32.0	4-4					
					S1			
						35		
	14D	35.0	2-3	Gray medium sand, some silt (SM)				
		37.0	7-8					
						40		
	15D	40.0	4-4	Gray fine to medium sand, trace silt				
		42.0	7-10	(SP-SM)				
						45		
	16D	45.0	3-4	Gray fine sand, some silt (SM)				
		47.0	3-3					
						48.5		
					M	50		
	17D	50.0	WH/18"	Top 18": Gray fine sandy silt (ML)				17D Top: WC=32
		52.0	4	Bot 6": Gray silty fine sand (SM)		51.5		

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-16
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 11.1
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd					M			
12-27-00						51.5		
Wednesday								
19°F					S1	55		
	18D	55.0	8-11	Gray brown fine sand, some silt, gravel (SM)				
		57.0	12-12					
						58.5		
						60		
	19NR	60.0	30-39	No recovery				Wash in sample.
		62.0	50-47					
								Hard drilling at 63.5'.
						65		
	20D	65.0	20-20	Red brown fine to coarse sand, some gravel, silt, trace clay (SM)				
		67.0	25-27					
								Hard drilling at 69'.
					S2	70		
	21D	70.0	18-19	Red brown fine to coarse sand, some gravel, silt (SM)				
		72.0	19-21					
						75		
	22D	75.0	27-23	Do 21D (SM)				
		77.0	25-26					
						80		
	23D	80.0	24-22	Do 21D (SM)				End of Boring at 82'.
14:15		82.0	19-28			82		
								WC=Water Content in percent of dry weight.
						85		
						90		
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT	LOWE'S HOME CENTER	BORING NO.	B-16
LOCATION	BROOKLYN, NEW YORK	SHEET	3 OF 3
BORING LOCATION	SEE PLAN	FILE NO.	9446
		SURFACE ELEV.	11.1
		DATUM	BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO			
TRUCK	CME-75	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM	0	TO 25
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM		TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM		TO
OTHER								

TYPE AND SIZE OF:

D-SAMPLER	2" O.D. SPLIT SPOON
U-SAMPLER	
S-SAMPLER	
CORE BARREL	
CORE BIT	
DRILL RODS	N

DRILLING MUD USED [X] YES [ ] NO

DIAMETER OF ROTARY BIT, IN. 3-7/8, 4-7/8

TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO

TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24

*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

*AUTOMATIC HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
12-27-00	14:15	82	25	9	MUD/WATER UPON COMPLETION.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE:	TYPE		ID, IN.		LENGTH, FT.		TOP ELEV.
INTAKE ELEMENT:	TYPE		OD, IN.		LENGTH, FT.		TIP ELEV.
FILTER:	MATERIAL		OD, IN.		LENGTH, FT.		BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	79.5	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER: OBSTRUCTION (BOULDERS)	2.5

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.

DRILLER MIKE BLEJWAS HELPERS DENNIS KEITH

REMARKS BOREHOLE GROUTED UPON COMPLETION.

RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-27-00

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-17
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
06:45	1D	0.0	77-100/1"	Gray white fine to coarse sand, gravel,			DRILLED	Drilled ahead to 1'.
12-18-00		0.5		trace silt, concrete (Fill) (SP-SM)			AHEAD	2D-4D, 13D-14D:
Monday	2D	1.0	6-4	Black brown fine to coarse sand, sm gravel,			4"	Petroleum odor.
		3.0	4-5	tr silt, brick, cinders (Fill) (SP-SM)				
30°F	3D	3.0	4-3	Black brown coarse to fine sand, some silt,		5		
		5.0	6-6	trace gravel, cinders, brick (Fill) (SM)			MUD	
	4D	5.0	3-3	Gray brown fine to coarse sand, some silt,				
		7.0	2-5	trace gravel, cinders, brick (Fill) (SM)				
	5D	7.0	2-2	Gray brown coarse to fine sand, some silt,				
		9.0	6-5	gravel, trace cinders, brick (Fill) (SM)	F	10		
	6D	9.0	1-1	Gray black fine to coarse sand, some silt,				REC=5"
		11.0	1-1	cinders, trace shells (Fill) (SM)				
	7D	11.0	1-1	Gray silty fine to coarse sand, trace gravel,				
		13.0	1-2	shells, brick, cinders (Fill) (SM)				
	8D	13.0	2-1	Gray silty fine sand, trace wood, mica (Fill)		15		
		15.0	1-3	(SM)				
	9D	15.0	1-2	Gray silty fine sand, trace vegetation (Fill)				
		17.0	2-2	(SM)				
	10D	17.0	1-2	Gray silty fine sand, some silt, trace organic				
		19.0	2-1	clay layers, brick (Fill) (SM)		20		
	11D	20.0	1-2	Gray fine sand, some silt, trace vegetation				
		22.0	1-1	(Fill) (SM)				
						23.5		
						25		
	12D	25.0	4-6	Gray fine sand, some silt, trace mica (SM)				
		27.0	8-11		S1			
						28.5		
						30		
	13D	30.0	5-3	Gray silt, trace fine sand (ML)	M			WC=23
		32.0	5-5					
						33.5		
						35		
	14D	35.0	4-8	Gray fine sand, some silt, trace silt layers,				
		37.0	11-13	trace mica (SM)				
						40		
	15D	40.0	6-5	Brown silty fine sand, trace clay pockets,				
		42.0	9-7	mica (SM)	S1			
						45		
	16D	45.0	9-10	Do 15D (SM)				
		47.0	13-13					
						50		
	17D	50.0	10-12	Red brown silty fine sand with medium to				Sand layer in
		52.0	13-20	fine sand layers (SM)				middle of sample.

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

BORING NO. B-17
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd								
12-18-00								
Monday								
30°F								
						55		
	18D	55.0	5-11	Top 10": Red brown silty fine sand, trace mica (SM)	S1			
		57.0	13-14	Bot 8": Brown fine to medium sand, trace silt, gravel (SP-SM)				
						60		
	19D	60.0	13-12	Brown fine to medium sand, some gravel, trace silt (SP-SM).				
		62.0	12-12					
						63.5		
						65		
	20D	65.0	19-37	Brown fine to coarse sand, some silt, gravel, decomposed rock fragments, trace mica (SM)				Decomposed mica schist fragments.
		67.0	28-25					
						70		
	21D	70.0	17-21	Red brown silty fine to medium sand, trace gravel, clay, mica (SM)	S2			
		72.0	16-20					
						75		
	22D	75.0	20-25	Red brown gravelly fine to coarse sand, some silt, trace clay (SM)				
		77.0	22-30					
						80		
	23D	80.0	23-26	Red brown gravelly fine to coarse sand, some clay (SC)				
14:00		82.0	19-15			82		End of Boring at 82'.
						85		WC=Water Content in percent of dry weight.
						90		
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK
BORING LOCATION: SEE PLAN

BORING NO. B-17
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG
TRUCK CME-75
SKID
BARGE
OTHER

TYPE OF FEED DURING CORING
MECHANICAL
HYDRAULIC X
OTHER

CASING USED [X] YES [ ] NO
DIA., IN 4 DEPTH, FT. FROM 0 TO 20
DIA., IN. DEPTH, FT. FROM TO
DIA., IN. DEPTH, FT. FROM TO

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. SPLIT SPOON
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3-7/8, 4-7/8
TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30
*AUTOMATIC HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 82
3.5" DIA. U-SAMPLE BORING LIN. FT.
CORE DRILLING IN ROCK LIN. FT.

NO. OF 3" SHELBY TUBE SAMPLES
NO. OF 3" UNDISTURBED SAMPLES
OTHER:

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
DRILLER MIKE BLEJWAS HELPERS DENNIS KEITH
REMARKS BOREHOLE GROUTED UPON COMPLETION.
RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-18-00

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK

BORING NO. B-18
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. +10.5
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
06:30	1D	0.0	19-24	Brown fine to coarse sand, some silt, trace			DRILLED	
12-15-00		2.0	22-18	gravel, brick, cinders (Fill) (SM)			AHEAD	
Friday	2D	2.0	15-15	Gray coarse to fine sand, trace silt, brick,			4"	
		4.0	12-10	cinders, concrete (Fill) (SP-SM)				
30°F	3D	4.0	2-2	Brown fine to coarse sand, some silt, trace		5		
		6.0	4-2	brick, cinders (Fill) (SM)				
	4D	6.0	2-2	Black brown fine to coarse sand, some silt,	F			
		8.0	5-5	trace cinders (Fill) (SM)				
	5D	8.0	4-3	Black fine to coarse sand, some silt, trace				
		10.0	5-7	gravel, cinders (Fill) (SM)				5D-6D: Petroleum
	6D	10.0	2-3	Black gray fine to coarse sand, some silt,		10		odor.
		12.0	4-3	trace brick, cinders (Fill) (SM)				REC=6"
	7D	12.0	4-3	Red brown silty fine to medium sand, trace				
		14.0	1-1	gravel (Fill) (SM)				
	8D	15.0	WH/18"	Top 7": Brn f-m sand, sm silt, tr gvl (SM)		15		
		17.0	1	Bot 6":Soft gray brn org si cl, sm veg (OH)				
	9D	17.0	1-1	Do 8D, Bottom (OH)		16.4		8D Bot: WC=236
		19.0	3-2		O			WC=302
	10D	20.0	1-1	Gray silty fine sand, trace vegetation (SM)		19.5		
		22.0	1-2					WC=23
					S1			
	11D	25.0	5-7	Gray fine sand, some silt (SM)		25		
		27.0	6-9					
						28.5		
	12D	30.0	4-1	Gray silt, some fine sand, trace clay (ML)		30		
		32.0	1-2					WC=27
					M			
	13D	35.0	1-2	Medium clayey silt, trace fine sand (ML)		35		
		37.0	3-5					WC=31
						38.5		
	14D	40.0	6-7	Gray brown fine sand, trace silt (SP-SM)	S1	40		
		42.0	9-11					
						43.5		
	15D	45.0	1-4	Top 14": Medium gray clayey silt, trace	M	45		
		47.0	13-12	mica, fine sand (ML)				15D Top: WC=32
				Bot 10": Gray fine sand, some silt, trace		46.2		
				mica (SM)	S1			
						48.5		
	16D	50.0	9-12	Red brown micaceous fine sand, some silt		50		
		52.0	13-16	(SM)	S2			

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

BORING NO. B-18
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. +10.5
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd								
12-15-00								
Friday								
								Hard drilling from 54' to 55'.
30°F								
						55		
	17D	55.0	17-12	Red brown fine to medium sand, some silt, gravel, trace clay, mica (SM)				
		57.0	9-14					
								Hard drilling from 59' to 60'; possible boulder.
						60		
	18D	60.0	18-5	Red brown fine to medium sand, some gravel, silt (SM)				
		62.0	15-11					
						65		
	19D	65.0	34-17	Red brown coarse to fine sandy gravel, some silt (GM)				
		67.0	30-19					
								Hard drilling from 67.5' to 69'; possible boulder.
						70		
	20D	70.0	14-44	Red brown fine to medium sand, some silt, gravel, trace clay (SM)				
		72.0	82-37					
								Hard drilling boulder from 74' to 75'.
					S2	75		
	21D	75.0	100/5"	Red brown fine to medium sand, some gravel, silt, trace coarse sand (SM)				REC=5"
		77.0						Rods chattering at 76'. Hard drilling from 76' to 77.5'; possible boulder.
						80		
	22D	80.0	20-25	Red brown fine to medium sand, some silt, gravel (SM)				
		82.0	24-25					
						85		
	23D	85.0	100/3"	Red brown fine to medium sand, some silt, gravel, trace clay (SM)				
		87.0						REC=3"; hard drilling from 85.2' to 87.5'; possible boulder.
						90		
	24D	90.0	46-26	Red brown gravelly fine to medium sand, some silt, trace clay (SM)				
		92.0	23-27					
						95		
	25D	95.0	53-41	Gray brown gravel, trace fine to medium sand, silt (GP-GM)				
		97.0	52-39					Rock fragments in tip of spoon. WC=Water Content in percent of dry weight.
						100		
	26D	100.0	29-30	Red brown fine to medium sand, some gravel, silt, trace clay (SM)				
		102.0	23-20			102		End of Boring at 102'.

15:40

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-18
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV. +10.5
DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NEW YORK
BORING LOCATION SEE PLAN

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME-75	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. SPLIT SPOON
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN.
TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30
*AUTOMATIC HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
12-15-00	15:40	102	20	10	MUD/WATER UPON COMPLETION.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	102	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER: OBSTRUCTIONS	6

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
DRILLER MIKE BLEJWAS HELPERS DENNIS KEITH
REMARKS BOREHOLE GROUTED UPON COMPLETION.
RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-15-00

BORING NO. B-18

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

BORING NO. B-19
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUN

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
06:30	1D	0.0	5-6	Brown coarse to fine sand, some gravel silt,			DRILLED	
12-13-00		2.0	4-4	trace brick, concrete (Fill) (SM)			AHEAD	
Wednesday	2D	2.0	4-5	Light gray coarse to fine sand, some gravel,			4"	2D-4D, 8D, 13D:
Sunny		3.6	25-50/1"	silt (Fill) (SM)				Petroleum odor.
20°F						5		Hard drilling from
								4' to 7'.
	3D	7.0	5-3	Black brown silty fine to coarse sand, trace				
		9.0	2-3	gravel, vegetation (Fill) (SM)				
	4D	9.0	2-1	Black coarse to fine sand, some silt,	F			
		11.0	2-2	cinders, trace shells (Fill) (SM)		10		REC=6"
	5D	11.0	2-2	Do 4D (Fill) (SM)				
		13.0	1-2					
	6D	13.0	2-2	Do 4D (Fill) (SM)				
		15.0	3-6					
	7D	15.0	1-2	Black cinders (Fill)		15		
		17.0	3-1					REC=1"
	8D	17.0	2-2	Brown peat (Pt)		17		
		19.0	2-2		O			WC=289
								Sheen in wash at
	9D	20.0	2-2	Brown fine sand, some silt, trace		19.5	▽	20'.
		22.0	3-2	vegetation, mica (SM)				
	10D	25.0	8-9	Gray brown fine sand, some silt, trace mica		25		
		27.0	12-12	(SM)	S1			
	11D	30.0	8-8	Gray brown fine sand, some clay pockets,		30		
		32.0	6-7	silt (SM)				
						33.5		
	12D	35.0	4-4	Medium gray clayey silt, some micaceous		35		
		37.0	3-4	fine sand (ML)	M			pp=1.0, WC=30
						37.5		
	13D	40.0	6-4	Gray fine to medium sand, some silt, trace		40		
		42.0	3-17	mica (SM)	S1			
	14D	45.0	6-8	Gray fine to medium sand, trace silt		45		
		47.0	10-7	(SP-SM)				
						48.5		
	15D	50.0	4-2	Gray brown micaceous fine sandy silt, trace		50		15D: WC=20
		52.0	2-3	clay (ML)	M			Percent Passing No.
								200 Sieve=74

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

BORING NO. B-19
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd								
12-13-00								
Wednesday								
Sunny								
20°F								
						55		
	16D	55.0	WR-2	Gray micaceous fine sandy silt (ML)	M			WC=29
		57.0	1-3					Percent Passing No. 200 Sieve=59
						60		
	17D	60.0	7-11	Do 16D (ML)				
		62.0	16-12					
						63.5		
						65		
	18D	65.0	22-18	Brown fine to coarse sand, some gravel, silt (SM)	S1			
		67.0	23-15					
						68.5		
						70		
	19D	70.0	19-16	Top 12": Red brown silty fine to medium sand, trace gravel (SM)				
		72.0	10-18	Bot 4": Red brown fine to medium sand, some silt, trace silt (SM)				
					S2	75		
	20D	75.0	35-24	Red brown some fine to coarse sand, silt, gravel (GM)				REC=8"
		77.0	100/4"					Roller bitted boulder from 76.4' to 78.2'.
						80		End of Boring at 82'.
	21D	80.0	20-22	Red brown fine to coarse sandy gravel, some silt (GM)				
14:00		82.0	22-19			82		
								pp=Pocket Penetrometer Unconfined Compressive Strength in tsf.
						85		
								WC=Water Content in percent of dry weight.
						90		
						95		
						100		

BORING NO. B-19

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT	LOWE'S HOME CENTER	**BORING NO.**	B-19
LOCATION	BROOKLYN, NEW YORK	**SHEET**	3 OF 3
BORING LOCATION	SEE PLAN	**FILE NO.**	9446
		SURFACE ELEV.	10.5
		DATUM	BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME-75	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:

D-SAMPLER	2" O.D. SPLIT SPOON
U-SAMPLER	
S-SAMPLER	
CORE BARREL	
CORE BIT	
DRILL RODS	N

DRILLING MUD USED [X] YES [ ] NO

DIAMETER OF ROTARY BIT, IN. 3-7/8, 4-7/8

TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO

TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24

*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

*AUTOMATIC HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
12-13-00	14:00	82		10	CASING REMOVED UPON COMPLETION.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE	ID, IN.	LENGTH, FT.	TOP ELEV.	
INTAKE ELEMENT: TYPE	OD, IN.	LENGTH, FT.	TIP ELEV.	
FILTER: MATERIAL	OD, IN.	LENGTH, FT.	BOT. ELEV.	

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	80.2	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER: BOULDER	1.8

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.

DRILLER MIKE BLEJWAS HELPERS DENNIS KEITH

REMARKS BOREHOLE GROUTED UPON COMPLETION.

RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-13-00

BORING NO. B-19

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

BORING NO. B-20
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
13:45	1D	0.0	11-38	Brown fine to coarse sand, some silt, trace			DRILLED	
12-20-00		2.0	49-56	brick, cinders, gravel (Fill) (SM)			AHEAD	
Wednesday	2D	2.0	100/6"	Do 1D (Fill) (SM)			4"	2D, 4D-5D, 7D:
Windy,		2.5						REC=3"
Clear						5		
30°F-50°F	3D	5.0	8-2	Black brown coarse to fine sand, some silt,				3D, 18D: REC=2"
		7.0	4-5	trace cinders, brick (Fill) (SM)				Petroleum odor.
	4D	7.0	7-3	Do 3D (Fill) (SM)				
		9.0	3-2		F			
						10		
	5D	10.0	2-1	Do 3D (Fill) (SM)				
		12.0	1-1					
	6D	12.0	1-2	Black silty fine to coarse sand, trace gravel,				REC=1"
		14.0	1-1	cinders (Fill) (SM)				
						15		
	7D	15.0	3-3	Black coarse to fine sand, some silt,				
		17.0	3-3	cinders, trace brick (Fill) (SM)		17		
	8D	17.0	4-5	Top 22": Brown peat (Pt)	O			8D Top: WC=292
		19.0	8-5	Bot 2": Brown silty fine sand, trace peat		18.9		
16:15				(SM)		20	▽	
06:30	9D	20.0	2-2	Gray silty fine sand, trace concrete,				
12-21-00		22.0	4-4	vegetation (Fill) (SM)				
Thursday								
Cloudy								
20°F						25		
	10D	25.0	10-17	Brown fine sand, some silt (SM)	S1			
		27.0	20-14					
						30		
	11D	30.0	3-6	Brown silty fine sand (SM)				
		32.0	5-5					
						33.5		
						35		
	12D	35.0	5-4	Soft gray clayey silt, trace fine sand, mica				WC=38
		37.0	2-2	(ML)				
						40		
	13D	40.0	2-2	Soft gray clayey silt, trace fine sand, trace				pp=0.5, WC=44
		42.0	2-2	mica (ML)				
					M			
						45		
	14D	45.0	WR/12"	Do 13D (ML)				WC=39
		47.0	2-2					
						50		
	15D	50.0	WR-2	Do 13D (ML)				WC=38
		52.0	2-3					

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

BORING NO. B-20
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd								
12-21-00								
Thursday					M			
Cloudy								
20°F								
						54.5		
	16D	55.0	14-15	Gray brown fine to medium sand, some silt, trace mica (SM)	S1			
		57.0	18-19					Hard drilling at 57.9'.
						58		Boulder from 58' to 60'.
	17D	60.0	20-20	Red brown silty fine to coarse sand, trace gravel (SM)		60		
		62.0	35-37					
						65		
	18D	65.0	100/2"	Do 17D (SM)				
		65.2						
					S2			
						70		
	19D	70.0	20-100/5"	Gray brown gravel, trace fine to coarse sand, silt (GP-GM)				REC=4"
		70.9						Possible wash.
						75		
	20D	75.0	41-32	Red brown silty fine to medium sand, trace gravel (SM)				
		77.0	32-43					
						80		
	21D	80.0	36-38	Red brown fine to medium sand, some gravel, silt (SM)				
12:45		82.0	56-51					Rock fragments in tip of spoon.
						82		End of Boring at 82'.
						85		
								pp=Pocket Penetrometer Unconfined Compressive Strength in tsf.
						90		
								WC=Water Content in percent of dry weight.
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-20
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NEW YORK
BORING LOCATION SEE PLAN

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME-55	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. SPLIT SPOON
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3-7/8, 2-15/16
TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

*SAFETY HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	100	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER: OBSTRUCTION (BOULDERS)	2

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
DRILLER RAY LYNCH HELPERS EDWIN FELICIANO
REMARKS BOREHOLE GROUTED UPON COMPLETION.
RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-21-00

BORING NO. B-20

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 2
FILE NO. 9446
BORING NO. B20AM
SURFACE ELEV.

PROJECT Lowe's Home Cntr.
PROJECT LOCATION Brooklyn NY
RES. ENGR. E. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
1/24/01 Wed. 0715 body temp 30 sof				Drilled ahead to 35 ft, obtained			Drilled ahead	
				2 - U-tubes, no sampling in the				
				top 35 ft.		5		
							mud	
						10		
						15		
						20		
						25		
						30		
						35		
	1U	35	P = 24"	soft gray org. silty clay, tr. f sand (OH)				
		37	R = 20					
					⓪	40		
						45		
	2U	45	P = 24"	DO - 1U (OH)				
0930		47	R = 19"			47		E.O.B @ 47 ft

BORING NO. B-20AU

FORM NO. R-1

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-20AU
SHEET 2 OF 2
FILE NO. 9446
SURFACE ELEV.
DATUM

PROJECT Lewis Home Site
LOCATION Brooklyn NY
BORING LOCATION 5 FT EAST of B20

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED		☒ YES ☐ NO		
TRUCK	CME 55	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM	0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM		TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM		TO
OTHER								

TYPE AND SIZE OF:
D-SAMPLER
U-SAMPLER Shelby Tube
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
DIAMETER OF ROTARY BIT, IN. 3 7/8"
TYPE OF DRILLING MUD Quikgel

AUGER USED ☐ YES ☒ NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. — AVERAGE FALL, IN. —
SAMPLER HAMMER, LBS. — AVERAGE FALL, IN. —

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					no observation

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	43	NO. OF 3" SHELBY TUBE SAMPLES		2
3.5" DIA. U-SAMPLE BORING	LIN. FT.	4	NO. OF 3" UNDISTURBED SAMPLES		—
CORE DRILLING IN ROCK	LIN. FT.	—	OTHER:		—

BORING CONTRACTOR SBOC
DRILLER E. Lynch HELPERS G. Fabricaro
REMARKS Grouted borehole upon completion
RESIDENT ENGINEER E. Lawnt DATE 09/24/01

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type: dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Indicate sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B20AU

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-20P
SHEET 1 OF 4
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
08:00							DRILLED	Drilled to 30' for
12-21-00							AHEAD	piezometer instal-
Thursday							4"	lation.
Cloudy								Drilled borehole with
20°F						5		water.
								For strata, see
								Boring Log B-20.
					F			
						10		
						15		
						17		
					O			
						18.9		
						20		
					F			
						25		
								End of Boring at
						30		30'.
						35		
						40		
						45		
						50		

BORING NO. B-20P

SHEET 2 OF 4
FILE NO. 9446
SUBCODE

MUESER RUTLEDGE CONSULTING ENGINEERS

PIEZOMETER RECORD

PROJECT Lowe's Home Center
PIEZOMETER NO. B-20P
LOCATION Brooklyn NY
PIEZOMETER LOCATION 4ft± Northeast from boring B-20
DATE OF INSTALLATION 12/21/00
☐ SEE SKETCH ON BACK
RES. ENG. K. Nunez

PIEZOMETER TYPE SCH40 slotted PVC

INTAKE POINT

depth to bottom, ft = 30
depth to top, ft = 24
length, ft = 6 = L
diameter, in = 4, ft = = 2R

STANDPIPE/RISER

elevation of rim, ft = 10.2
diameter, in = 1¼, ft = = 2r

READING TIME DATE	CLOCK	DEPTH – RIM TO WATER (ft)	ELEVATION OF WATER	REMARKS
12/27/00	0850	7.6		Riser → 0.3 ft. below ground surface.
12/27/00	0915	7.6		
12/27/00	1300	7.55		
12/28	0715	7.5		
12/29	0710	7.7		
01/02	1135	7.9		
01/03	1024	7.8		
	1245	7.85		
01/04	0720	7.7		
01/05	0940	7.7		
01/08	0754	7.8		
01/09	0813	7.75		
01/10	1210	7.9		
01/12	0915	7.9		
01/16	1123	7.5		
01/19	1120	7.2		
01/23	1150	7.2		

Sand Bentonite
Gravel Grout

GROUND SURFACE ELEV. 10.5

PIEZOMETER NO. B-20P

SHEET 3 OF 4
FILE NO. 9446
SUBCODE

MUESER RUTLEDGE CONSULTING ENGINEERS

VARIABLE HEAD PERMEABILITY TEST

☐ BOREHOLE OR ☒ PIEZOMETER NO. B-20P
TEST NO. 1

PROJECT Lowe's Home Center RES.ENG. R. Nunez
LOCATION Brooklyn, NY CALC.BY ____ DATE ____
PIEZOMETER LOCATION ____ CH'KD BY ____ DATE ____

ELAPSED TIME, Δt, MIN.

INTAKE POINT

depth to bottom, ft = 30
depth to top, ft = 24
length, ft = 6 = L
diameter, in = 4, ft = ____ = 2R

STANDPIPE/RISER

diameter, in = 1¼, ft = ____ = 2r

depth of casing, ft = ____

depth to which standpipe was bailed, ft = ____ = Z

READING TIME			TEST DEPTH-RIM TO WATER ft.	DEPTH-RIM TO TIDE OR GWL ft.	UNBALANCED HEAD H ft.	HEAD RATIO Ht/Ho	REMARKS
DATE	CLOCK	Δt MIN.					
12/27/00	0855	—	0.0	7.6	0		STATIC WATER LEVEL
		0.5	0.8				Riser is 0.3 ft. below ground surface
		1	1.8				
		2	2.4				min / depth (Can't Test.)
		3	3.1				15 / 7.3
		4	4.0				16 / 7.35
		5	4.9				17 / 7.45
		6	5.4				18 / 7.5
		7	5.8				19 / 7.5
		8	6.0				20 / 7.6
		9	6.3				
		10	6.55				
		11	6.9				
		12	7.0				
		13	7.1				
		14	7.2				

PIEZOMETER NO. B-20P

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-20P
SHEET 4 OF 4
FILE NO. 9446
SURFACE ELEV. 10.5
DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NEW YORK
BORING LOCATION SEE PLAN

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME-55	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [ ] YES [X] NO
DIAMETER OF ROTARY BIT, IN. 3-7/8
TYPE OF DRILLING MUD

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. AVERAGE FALL, IN.
SAMPLER HAMMER, LBS. AVERAGE FALL, IN.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
12-27-00	8:50			7.6	PIEZOMETER READING.
12-27-00	9:15			7.6	AFTER FALLEN HEAD TEST.

PIEZOMETER INSTALLED [X] YES [ ] NO SKETCH SHOWN ON SEE SHEET 3 OF 4

STANDPIPE:	TYPE	SCHEDULE 40 PVC	ID, IN.		LENGTH, FT.	TOP ELEV.	
INTAKE ELEMENT:	TYPE	SLOTTED PVC	OD, IN.		LENGTH, FT.	TIP ELEV.	
FILTER:	MATERIAL	SAND	OD, IN.		LENGTH, FT.	BOT. ELEV.	

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.		NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER: BORING WITHOUT SAMPLING	30 LIN. FT.

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
DRILLER RAY LYNCH HELPERS EDWIN FELICIANO
REMARKS PLACED MANHOLE COVER 5" DIAMETER.
RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-21-00

BORING NO. B-20P

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-21
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
06:45	1D	0.0	40-29	Brown fine to coarse sand, some silt, trace			DRILLED	
12-18-00		2.0	32-31	gravel, brick (Fill) (SM)			AHEAD	
Monday	2D	2.0	9-20	Brown coarse to fine sand, some gravel,			4"	
		4.0	23-15	silt, trace brick (Fill) (SM)				
30°F						5		
	3D	5.0	1-3	Brown fine to coarse sand, some silt, trace				
		7.0	3-3	brick, cinders, vegetation (Fill) (SM)				
	4D	7.0	1-1	Brown gray peat, some silty clay (Pt)				WC=125
		9.0	1-1		F			
						10		
	5D	10.0	1-1	Brown peat, trace vegetation (Pt)				WC=281
		12.0	1-1					
	6D	12.0	5-7	Top 7": Do 5D, tr gravel, bricks, glass (Pt)				6D Top: WC=351
		14.0	9-6	Bot 12": Gray brown fine to medium sand,				
				some silt, trace gravel, mica (SM)		15		
	7D	15.0	1-1	Brown fine sand, some silt (SM)				Sample saturated
		17.0	2-2					with water.
	8D	17.0	3-1	Top 11" Do 7D, trace vegetation (SM)		17.9		
		19.0	2-2	Bot 13": Brown peat, trace vegetation (Pt)	O			8D Bot: WC=259
						19.5		
	9D	20.0	1-1	Gray silty fine sand, trace peat (SM)				
		22.0	2-1					
					S1			
						25		
	10D	25.0	10-12	Gray silty fine sand, trace mica (SM)				Petroleum odor.
		27.0	16-19					
						28.5		
						30		
	11D	30.0	5-3	Soft gray clayey silt, trace fine sand (ML)				WC=25
		32.0	6-5		M			
						35		
	12D	35.0	WH/12"	Top 10": Do 11D (ML)		36		12D Top: pp=0.5,
		37.0	13-17	Bot 7": Gray brown fine sand, some silt,	S1			WC=33
				mica (SM)				
						38.5		
						40		
	13D	40.0	WR-4	Soft gray clayey silt, some fine sand, trace	M			WC=32
		42.0	4-3	mica (ML)				
						43.5		
						45		
	14D	45.0	15-20	Brown fine sand, some silt, trace gravel				Petroleum odor;
		47.0	21-23	(SM)				sheens.
					S1			
						50		
	15D	50.0	18-26	Brown fine sand, some silt, trace mica (SM)				
		52.0	24-26					

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-21
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd								
12-18-00								
Monday								
30°F						55		
	16D	55.0	16-19	Brown fine sand, some silt, vegetation, mica (SM)				Petroleum odor.
		57.0	28-21					
						60		
	17D	60.0	17-19	Brown fine sand, some silt, mica (SM)				
		62.0	22-24					
					S1			
						65		
	18D	65.0	16-18	Brown fine to medium sand, some silt, trace gravel (SM)				
		67.0	22-20					
						70		
	19D	70.0	19-18	Brown gravelly coarse to fine sand, some silt (SM)				Heavy petroleum odor.
		72.0	26-31					
						75		
	20D	75.0	36-37	Do 19D (SM)				
		77.0	48-36					
						80		
	21D	80.0	50-100/3"	Brown silty fine to coarse sand, some gravel (SM)		80.8		REC=5"
		80.8						End of Boring at 80.8'.
						85		pp=Pocket Penetrometer Unconfined Compressive Strength in tsf.
						90		WC=Water Content in percent of dry weight.
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-21
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NEW YORK
BORING LOCATION SEE PLAN

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME-55	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. SPLIT SPOON
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3-7/8
TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

*SAFETY HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	82	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER:	

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
DRILLER RAY LYNCH HELPERS EDWIN FELICIANO
REMARKS BOREHOLE GROUTED UPON COMPLETION.
RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-18-00

BORING NO. B-21

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-22
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 10.4
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
13:00	1D	0.0	33-26	Brown fine to coarse sand, some gravel,			DRILLED	
12-13-00		2.0	21-34	silt, trace brick (Fill) (SM)			AHEAD	
Wednesday	2NR	2.0	100/1"	No Recovery			4"	
		2.1					MUD	
30°F	3D	4.0	2-1	Black fine to coarse sand, some silt, trace		5		3D, 5D, 9D: Petrol-
		6.0	2-2	gravel, brick (Fill) (SM)				leum odor.
	4D	6.0	4-6	Do 3D (Fill) (SM)				Sheen in wash.
		8.0	19-14					
					F			
						10		
	5D	10.0	3-5	Brown fine to coarse sand, some silt, trace				REC=5"
		12.0	4-4	gravel (Fill) (SM)				
	6D	12.0	4-10	Brown silty fine sand, trace gravel, trace				
		14.0	10-7	wood (Fill) (SM)				
	7D	14.0	11-8	Brown silty fine sand, some gravel, trace		15		
		16.0	9-2	vegetation (Fill) (SM)				
	8D	16.0	1-1	Brown fine sand, some silt, gravel (Fill) (SM)				REC=1"
		18.0	1-1					Driller placed new
						19		trap; 19' clay
						20		in wash.
	9D	20.0	1-1	Brown silty fine sand, trace vegetation (SM)				
		22.0	3-3					
					S1			
						25		
	10D	25.0	10-13	Gray fine sand, some silt (SM)				
14:30		27.0	22-16					
06:30								
12-15-00						28.5		
Friday						30		Percent Passing
	11D	30.0	5-5	Gray fine sandy silt, trace fine sand (ML)				No. 200 Sieve=90
30°F		32.0	5-10					WC=36
						35		
	12D	35.0	4-3	Medium gray clayey silt, some fine sand	M			pp=0.75, WC=31
		37.0	6-6	(ML)				
						40		
	13D	40.0	2-3	Stiff gray clayey silt, some fine sand (ML)				pp=1.0, WC=35
		42.0	3-4					
						43.5		
						45		
	14D	45.0	9-13	Brown fine sand, some silt (SM)				
		47.0	19-13					
					S1			
						50		
	15D	50.0	7-20	Brown silty fine sand, trace micaceous (SM)				
		52.0	19-22					

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-22
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.4
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd								
12-15-00								
Friday								
					S1			
30°F						55		
	16D	55.0	11-15	Gray brown fine sand, some silt (SM)				
		57.0	20-24					
						58.5		
						60		
	17D	60.0	18-30	Red brown silty fine sand, trace gravel, trace micaceous (SM)				
		62.0	28-20					
						65		
	18D	65.0	16-23	Red brown fine sand, some silt, trace gravel (SM)				REC=6"
		67.0	38-43					
						70		
	19D	70.0	28-35	Red brown fine to medium sand, some gravel, silt (SM)				
		72.0	40-22					
						75		
					S2			
								Driller overdrilled to 80'.
						80		
	20D	80.0	23-30	Red brown fine to medium sand, some gravel, silt (SM)				
		82.0	22-24					
						85		
	21D	85.0	60-88	Red brown fine to coarse sand, some gravel, silt (SM)				Rock fragments in the tip of spoon.
		86.3	100/4"					
						90		
	22D	90.0	62-53	Red brown fine to coarse sand, some gravel, silt (SM)				REC=5"
		92.0	50-31					pp=Pocket Penetrometer Unconfined Compressive Strength in tsf.
						95		
	23D	95.0	46-68	Red brown fine to coarse sand, some gravel, silt (SM)				
		96.0	100/2"					WC=Water Content in percent of dry weight.
						100		REC=7"
	24D	100.0	76-64	Do-23D (SM)				End of Boring at 102'.
15:00		102.0	55-36			102		

BORING NO. B-22

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-22
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV. 10.4
DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NEW YORK
BORING LOCATION SEE PLAN

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME-55	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM 0	TO 25
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. SPLIT SPOON
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN.
TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
*SAMPLER HAMMER, LBS 140 AVERAGE FALL, IN. 30

*SAFETY HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	98.5	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER: OBSTRUCTION (BOULDERS)	3.5

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
DRILLER RAY LYNCH HELPERS EDWIN FELICIANO
REMARKS BOREHOLE GROUTED UPON COMPLETION.
RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-15-00

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-23
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 10.4
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
11:00	1D	0.0	5-9	Brown fine to coarse sand, some silt,			DRILLED	REC=13"
02-12-00		2.0	23-32	gravel, trace brick, concrete (Fill) (SM)			AHEAD	
Tuesday	2D	2.0	36-50	Do 1D (Fill) (SM)			4"	
Windy		4.0	38-100/3"					
						5		
	3NR	5.0	100/0"	No recovery				Spoon bouncing.
								Hard drilling from
	4NR	7.0	100/0"	No recovery	F			5' to 7'. Spoon
								bouncing.
						10		4NR: Rock frag-
								ments in wash.
								Hard drilling from
	5D	12.0	1-2	Gray silty fine to coarse sand, trace peat,				5' to 11.5'.
		14.0	2-2	wood (SM)				5D: WC=46
						15		
	6D	15.0	4-2	Soft gray organic silty clay, some				WC=124
		17.0	2-2	vegetation, fine sand layers (OH)				
	7D	17.0	1-2	Soft gray organic silty clay, some	O			WC=107
		19.0	1-1	vegetation, trace fine sand (OH)				
						19.5		
	8D	20.0	4-6	Gray brown silty fine sand, trace mica (SM)				
		22.0	10-13					
					S1			
						25		
	9D	25.0	9-18	Do 8D (SM)				
		27.0	24-26					
						28.5		
						30		
	10D	30.0	5-6	Red brown fine sandy silt, trace fine sand				WC=23
		32.0	6-7	seams (ML)				
						35		
	11D	35.0	1-2	Soft gray clayey silty trace micaceous fine				WC=33
		37.0	2-5	sand (ML)				Percent Passing
								No. 200 Sieve=93
					M			
						40		
14:30	12D	40.0	1-2	Soft gray fine sandy silt (ML)				WC=37
06:30		42.0	2-2					Percent Passing
12-13-00								No. 200 Sieve=64
Wednesday								
Sunny						45		
20°F	13D	45.0	4-3	Do 12D (ML)				WC=31
		47.0	4-4					
						48.5		
						50		
	14D	50.0	4-15	Brown fine sand, some silt, trace mica (SM)	S1			
		52.0	19-23					

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-23
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.4
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd								
12-13-00					S1			
Wednesday								
Sunny						53.5		
20°F						55		
	15D	55.0	15-13	Red brown silty fine to medium sand, trace gravel (SM)				
		57.0	18-21					
						60		
	16D	60.0	50-28	Do 15D (SM)				Hard drilling from 62.5' to 65'; possible boulders. Spoon bouncing.
		62.0	15-14					
						65		
	17NR	65.0	100/2"	No recovery				Possible boulder. Hard drilling from 65' to 69'.
		65.2			S2			
						70		
	18D	70.0	40-67	Red brown fine to medium sand, some gravel, silt, trace coarse sand, clay pockets, mica (SM)				
		72.0	38-32					
						75		
	19D	75.0	45-51	Red brown fine to medium sand, some gravel, silt, trace coarse sand, mica (SM)				
		77.0	43-41					
						80		End of Boring at 81'.
12:30	20D	80.0	41-100/6"	Red brown fine to medium sand, some silt, gravel, trace coarse sand (SM)		81		
		81.0						WC=Water Content in percent of dry weight.
						85		
						90		
						95		
						100		

BORING NO. B-23

MUESER RUTLEDGE CONSULTING ENGINEERS

		BORING NO.	B-23
		SHEET	3 OF 3
PROJECT	LOWE'S HOME CENTER	FILE NO.	9446
LOCATION	BROOKLYN, NEW YORK	SURFACE ELEV.	10.4
BORING LOCATION	SEE PLAN	DATUM	BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME-55	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM 0	TO 15
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:

D-SAMPLER	2" O.D. SPLIT SPOON
U-SAMPLER	
S-SAMPLER	
CORE BARREL	
CORE BIT	
DRILL RODS	N

DRILLING MUD USED [X] YES [ ] NO

DIAMETER OF ROTARY BIT, IN. 3-7/8, 4-7/8

TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO

TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24

*SAMPLER HAMMER, LBS 140 AVERAGE FALL, IN. 30

*SAFETY HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE:	TYPE		ID, IN.		LENGTH, FT.		TOP ELEV.
INTAKE ELEMENT:	TYPE		OD, IN.		LENGTH, FT.		TIP ELEV.
FILTER:	MATERIAL		OD, IN.		LENGTH, FT.		BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	81	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER:	

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.

DRILLER RAY LYNCH HELPERS EDWIN FELICIANO

REMARKS BOREHOLE GROUTED UPON COMPLETION.

RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-13-00

BORING NO. B-23

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9446
BORING NO. PB-1
SURFACE ELEV.

PROJECT Lowe's Home center
PROJECT LOCATION Brooklyn, NY
RES. ENGR. E. NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
					(Cons)		Drilled with Safety Hammer	
							Auger	3 [illegible] at surface
	1D	3	35-31	Concrete (Fill) (Cons)				
		5	38-34		(F)			
	2D	5	11-17	Brn M-f sand, Sm silt, gvl, Tr. Brick (Fill)(Sm)		5		R=2"
		7	18-18				4/12	
	3D	7	15-14	Red-Brn silty m-f sand, Sm Brick, Tr. gvl (Fill)(Sm)				
		9	15-17					
	4D	10	4-2	Brn silty m-f sand, Sm Cinders, Tr. Brick (Fill)(Sm)		10		R=2"
		12	2-1					
	5D	12	2-2	No Recovery				
		14	2-2					
								Wood in wash.
						14.5		
	6D	15	6-4	Gray org silty clay, Sm f-sand, Tr. wood (OH)	(O)			
		17	2-2					
	7D	17	1-2					
		19	2-1					
						20		
	8D	20	1-1	Gray org silty clay, Sm f-sand (OH)				
		22	1-1					
						25		
	9D	25	1-2	DO 8D, Tr. shells (OH)				
		27	1-1					
						28.5		
						30		
	10D	30	7-10	gray f-c sand, Tr. silt (SP-SM)	(Z)			
		32	12-14					
						35		
	11D	35	5-8	gray-Brn c-f sand, Tr. silt (SP-SM)				Petroleum in sample
		37	17+16					
						40		
	12D	40	14-9	Gray m-f sand, Tr. silt (SP-SM)				
		42	22-15					
						45		
	13D	45	10-11	Gray f-c sand, Tr. silt, gvl (SP-SM)				
		47	12-14					
						50		
	14D	50	7-9	DO 13D (SP-SM)				
		52	14-16					

BORING NO. PB-1

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 94440
BORING NO. PB-1
SURFACE ELEV.

PROJECT Lowe's Home Ctr
PROJECT LOCATION Brooklyn, NY
RES. ENGR. R. Nunez

CSS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	15D	55	14-14	DO-14D (SP-SM)	(3)	55		Petroleum in samples
		57	13-12					
						60		
	16D	60	11-20	BRN silty f-sand (SM)				
		62	18-18					
						65		
	17D	65	10-15	BRN c-f sand, sm gvl, tr. silt (SP-SM)				
		67	15-11					
						70		
	18D	70	9-14	BRN c-f sand, tr. gvl, silt (SP-SM)				
		72	15-13					
						75		
	19D	75	12-17	BRN silty f-c sand, tr. gvl (SM)				
		77	34-14					
						80		
	20D	80	10-13	BRN f-c sand, sm silt, tr. gvl (SM)				
		82	17-21			82		Bio. B @ 82 FT

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. PB-1
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Center
LOCATION Brooklyn NY
BORING LOCATION As Drawn

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME 55	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" OD split spoon
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3 7/8, 5 7/8
TYPE OF DRILLING MUD Quikgel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. 82	NO. OF 3" SHELBY TUBE SAMPLES	—
3.5" DIA. U-SAMPLE BORING	LIN. FT. —	NO. OF 3" UNDISTURBED SAMPLES	—
CORE DRILLING IN ROCK	LIN. FT. —	OTHER:	—

BORING CONTRACTOR JBD Co.
DRILLER R. Lynch HELPERS E. Feliciano
REMARKS Grouted boreholes upon completion
RESIDENT ENGINEER E. Nunez DATE 12/29/00

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9446
BORING NO. PB-2
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
01/02/01 Rics. clear windy 18°F 5" Hyd. Drill USUS	10	0	14-16	Blk-M.f sand, Sm silt, Tr. gvl, cinders (fill)(SM)			Drilled hand	Safety Hammer
		2	19-19					
	20	2	48-100/2"	Blk-Brn M.f sand, Tr. gvl, silt, cinders, concrete (fill)(Sp-Sm)	4			
		2.7						
						5		
	30	5	14-16	gray gravel, Tr. metal (GP)(fill)			HSD	R=3"
		7	10-12					
	40	7	8-8	Gray gravel, Tr. cole. (fill)(Gp)				R=4"
		9	11-13					
						10		
	50	10	10-9	Red-Brn M.f sand, Sm gvl, Tr. silt (Sp-Sm)				
		12	12-20			12		
	60	12	8-2	gray org. silty clay, Sm veg, f-sand (OH)	0			
		14	2-2					
						15		
	70	15	1-1	Soft gray org. silty clay, Tr. f-sand, shells (OH)				
		17	1-1					
	80	17	1-1	Do-70, Tr. veg. (OH)				
		19	1-1					
						20		
	90	20	1-1	no recovery				Drilled hand to next sample depth, unable to take sample below sample #90.
		22	3-3					
					?	23.5		
						25		
	100	25	WH/2"	gray silty M.f sand, Tr. mica (SM)	5			
		27	3-4					
						30		
	110	30	13-22	Brn M.f sand, Tr. silt, mica (Sp-Sm)				
		32	28-21					
						33.5		
						35		
	120	35	10-12	Red-Brn silty f-sand (SM)				
		37	13-16					
						40		
	130	40	12-18	Red-Brn M.f sand, Tr. silt, mica (Sp-Sm)	5			
		42	13-14					
						45		
	140	45	9-9	Brn M.f sand, Tr. silt, mica (Sp-Sm)				
		47	12-12					
						50		
	150	50	12-13	Do-140 (Sp-Sm)				
		52	14-15					

FORM NO. R-1

BORING NO. PB-2

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 94440
BORING NO. P-B-2
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn, NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
					(E)	55		
	160	55	23-24	Brown M-f sand, Tr. silt, gvl. (SP-SM)				R=3"
		57	24-21					
						58.5		
						60		
	170	60	9-8	Red-Brown M-f sand, Sm silt (SM)				
1410		62	9-9		(T)			
01/03/01								
w/ Geo.								
18°F								
7:00						65		
	180	65	41-36	Red-Brown silty f-sand, sm gvl (SM)				
		67	21-32					
						70		
	190	70	21-35	DO-18D (SM)				
		72	38-40					
						75		
	200	75	19-16	Red-Brown f-sand, Sm silt (SM)				
		77	26-28					
						80		
	210	80	10-11	DO-20D, Tr. gvl. (SM)				
0915		82	14-18			82		E.O.B @ 82 FT.

BORING NO. DQ-7

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. PB-2
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Ctr.
LOCATION Brooklyn NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME 55	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. split spoon
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3 1/8", 4 7/8", 6 1/16"
TYPE OF DRILLING MUD Quikgel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. 82	NO. OF 3" SHELBY TUBE SAMPLES	—
3.5" DIA. U-SAMPLE BORING	LIN. FT. —	NO. OF 3" UNDISTURBED SAMPLES	—
CORE DRILLING IN ROCK	LIN. FT. —	OTHER:	—

BORING CONTRACTOR JBD Co.
DRILLER R. Lynch HELPERS G. Feliciano
REMARKS Grouted borehole upon completion
RESIDENT ENGINEER R. Nunez DATE 01/03/01

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9446
BORING NO. PB-3
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn, NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
12/20/00 Thurs. 0915hrs rainy 35°F, [illegible]	10	0.5	5-6	Blk-C-f sand, sm silt, Tr. gvl, cinders (fill)(SM)			Drilled	Automatic Hammer
		2	6				HWD	4" conc. at surface
	20	2	5-8	Blk-Brn C-f sand, sm silt, asphalt, Tr. gvl				
		4	17-16	sand (fill)(SM)				
	30	4	4-7	Blk-f-C sand, sm silt, gvl, Tr. cinders	(1)	5		
		6	21-15	(fill)(SM)				
	40	6	10-12	Brn C-f sand, sm silt, Tr. gvl, cinders			HWD	
		8	13-16	(fill)(SM)				
	50	8	8-7	Blk C-f sand, sm cinders, Tr. silt, gvl				
		10	7-4	(fill)(SP-SM)		10		
	60	10	2-1	Gray Brn C-f sand, sm gvl, silt, cinders,				
		12	2-2	wood (fill)(SM)				
	70	12	2-4	DO-60, Tr. Brick (fill)(SM)				
		14	1-1					
						15		
	80	15	2-1	Fg(7")-DO-70 (fill)(SM)				
		17	2-1	Bot(6")-Med gray org. silty clay, Tr. f sand (OH)		16.5		P.P. = .75 T.S.F.
	90	17	2-1	DO-80 (Bot), Tr. wood (OH)				
		19	2-2					
						20		
	100	20	WOH/18"	soft gray org. silty clay, Tr. f sand (OH)	(2)			P.P. < 0.5 T.S.F.
		22	1	Tr. shells				
						25		
	110	25	WOH/18"	Med gray org. silty clay, Tr. f sand (OH)				P.P. = 0.75 T.S.F.
		27	1					
						30		
	120	30	2-2	DO-110 (OH)				
		32	1-2					
						33.5		
						35		
	130	35	9-6	Brn M-f sand, sm silt, (SM)	(3)			
		37	8-8					
						40		
	140	40	5-8	Brn M-f sand, Tr. silt (SP-SM)				
		42	8-7					
						45		
	150	45	5-7	Brn C-f sand, sm gvl, Tr. silt (SP-SM)				
		47	6-6					
						50		
	160	50	5-9	DO-150 (SP-SM)				
		52	5-6					

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 2
FILE NO. 9416
BORING NO. PB-3
SURFACE ELEV.

PROJECT Lewis House Cntr
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
					S	55		
	17D	55	5-6	Brn M-f sand, Tr. silt, gvl (Sp-Sm)				
		57	7-7					
						60		
	RD	60	5-8	Brn C-f sand, Sm gvl, Tr. silt, mica				
		62	7-7	(Sp-Sm)				
						67.5		
						65		
	19D	65	5-7	Red-Brn C-f sand, Sm gvl, Tr. silt, mica				
		67	8-8	(Sp-Sm)				
						70		
	20D	70	12-9	Red-Brn f-c sand, Sm silt, gvl (Sm)	T			Rock fragments in the top of the spoon.
		72	11-15					
						75		
	21D	75	8-7	Red-Brn M-f sand, Tr. silt (Sp-Sm)				
		77	9-8					
						80		
	22D	80	10-11	Red-Brn C-f sand, Tr. silt (Sp-Sm)				
1430 hrs.		82	13-15			82		E.O.B. @ 82 Ft.

BORING NO. PB-3

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. PB-3
SHEET 3 OF 3
FILE NO. 9946
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Cntr.
LOCATION Brooklyn NY
BORING LOCATION As planned

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME 55	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. split spoon
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 2 7/8", 5 7/8", 3 7/8"
TYPE OF DRILLING MUD Quik gel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	NO. OF 3" SHELBY TUBE SAMPLES	—
3.5" DIA. U-SAMPLE BORING	LIN. FT. —	NO. OF 3" UNDISTURBED SAMPLES	—
CORE DRILLING IN ROCK	LIN. FT. —	OTHER:	

BORING CONTRACTOR JBD Co.
DRILLER M. Blejwas HELPERS D. Keith
REMARKS Grouted borehole upon completion
RESIDENT ENGINEER R. NUNEZ DATE 12/28/00

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. PB-3

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9446
BORING NO. PB-4
SURFACE ELEV.

PROJECT Lowe's Home Center

PROJECT LOCATION Brooklyn, NY RES. ENGR. K. Nunez

DAILY PROGRESS	SAMPLE NO.	DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
12/8/86 Rig of Mary Lear 9446	1D	0	100/6"	BRN C-f SAND, Tr. silt, gvl, conc (Fill) (SP-SM)			Drilled	Automatic Hammer
		0.5					NWCD	
	2D	2	22-18	BRN C-f SAND, sm silt, cinders, Tr. brick (Fill) (SM)	(F)			
		4	12-7					
	3D	4	3-2	DO-3D (Fill) (SM)		5		
		6	2-2				MUD	
	4D	6	1-1	Gray Blk-m-f sand, sm silt, Tr. veg, cinders (Fill) (SM)				
		8	1-1					
	5D	8	2-1	DO-4D (Fill) (SM)				
		10	2-1			10		
6D		10	2-2	BRN f-c SAND, sm silt, Tr. brick, cinders (Fill) (SM)				Sample saturated w/ water. R=5"
		12	2-2					
7D		12	2-2	DO-6D (Fill) (SM)				R=6"
		14	3-3					
						14.5 15		
8D		15	WH/12"	Soft gray org. silty clay, Tr. f sand, shells (OH)	(O)			
		17	2-2					
9D		17	WH/6"	Soft gray org. silty clay, Tr. f sand, veg. (OH)				
		19	WH/18"					
						20		
10D		20	1-3	DO-9D (OH)				
		22	3-3					
						23.5 25		
11D		25	1-1	Gray m-f sand, sm silt, Tr. clay, shells (SM)				
		27	2-1					
						30		
12D		30	13-19	BRN C-f SAND, Tr. silt (SP-SM)	(S)			
		32	23-24					
						35		
13D		35	5-7	RED BRN silty f-SAND (SM)				
		37	9-8					
						40		
14D		40	6-8	BRN m-f SAND, Tr. silt (SP-SM)				
		42	10-10					
						45		
15D		45	5-6	BRN C-f SAND, Tr. gvl, silt (SP-SM)				
			6-7					
						50		
16D		50	4.5	BRN m-f SAND, Tr. silt (SP-SM)				
		52	6-8					

BORING NO. PB-4

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. [illegible]
BORING NO. PB-4
SURFACE ELEV.

PROJECT Lowe's Home Ctr
PROJECT LOCATION Brooklyn NY
RES. ENGR. E. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
					(S)			
170	55	5-5		Red-brn m.-f. sand, tr. silt (sp-sm)		55		
	57	5-5						
180	60	6-7		Do-red (sp-sm)		60		
	62	10-12						
190	65	8-9		Rock fragments		65		Rock from in the top of the spoon.
	67	8-6						
200	70	8-9		Red-brn m.-f. sand, tr. c. sand silt (sp-sm)		70		
	72	11-11						
210	75	8-10		Red-brn m.-f. sand, tr. silt (sp-sm)		75		
	77	11-10						
						78.5		
220	80	10-12		Red-brn silt, tr. f. sand, clay (ML)	(M)	80		
	82	12-15				82		E.O.B. @ 82 ft.

BORING NO. PB-4

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. PB-4
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV.
DATUM

PROJECT Lou's Home Entr
LOCATION Brooklyn NY
BORING LOCATION As Planned

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED					
				[X] YES	[ ] NO				
TRUCK	CME 75	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM	0	TO	20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM		TO	
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM		TO	
OTHER									

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. Split Spoon
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3 7/8 4 7/8
TYPE OF DRILLING MUD Quikgel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 350 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					no observation

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. 82	NO. OF 3" SHELBY TUBE SAMPLES	–
3.5" DIA. U-SAMPLE BORING	LIN. FT. –	NO. OF 3" UNDISTURBED SAMPLES	–
CORE DRILLING IN ROCK	LIN. FT. –	OTHER:	–

BORING CONTRACTOR TBD Co.
DRILLER H. Blagrove HELPERS D. Keith
REMARKS Grouted borehole upon completion
RESIDENT ENGINEER E. Nunez DATE 12/29/00

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 4
FILE NO. 9446
BORING NO. PB-4P
SURFACE ELEV.

PROJECT Lowe's Home Center

PROJECT LOCATION Brooklyn, NY RES. ENGR. J. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
9/02/01							Drilled	
Tues,				Piezometer Installation			Thread	
Sept								
Windy				Drilled to 30 FT.				
18°F						5		
29 Fwind chill				No Sampling.				
0800								
						10		
						15		
						20		
						25		
1040hrs						30		Ended 30 FT

BORING NO. PB4P

SHEET 2 OF 4
FILE NO. 9446
SUBCODE

MUESER RUTLEDGE CONSULTING ENGINEERS

PIEZOMETER RECORD

PROJECT Lowe's Home Center
PIEZOMETER NO. PB-4P
LOCATION Brooklyn NY
PIEZOMETER LOCATION
DATE OF INSTALLATION 01/02/01
☐ SEE SKETCH ON BACK
RES. ENG. R. NUNEZ

PIEZOMETER TYPE slotted PVC

INTAKE POINT

depth to bottom, ft = 30
depth to top, ft = 22
length, ft = 8 = L
diameter, in = 4, ft = = 2R

STANDPIPE/RISER

elevation of rim, ft =
diameter, in = 1¼, ft = = 2r

READING TIME		DEPTH – RIM TO WATER	ELEVATION OF WATER	REMARKS
DATE	CLOCK			
01/02/01	1147	7.5		
01/02/01	1030	7.3		
	1250	7.2		
01/04/01	0725	7.1		
01/05/01	0930	7.1		
01/08/01	0946	6.8		

Sand
Bentonite
Gravel
Grout

GROUND SURFACE ELEV.

PIEZOMETER NO. PB-4P

SHEET 2 OF 4
FILE NO. 9446
SUBCODE

MUESER RUTLEDGE CONSULTING ENGINEERS

VARIABLE HEAD PERMEABILITY TEST

☐ BOREHOLE OR ☒ PIEZOMETER NO. PB-4P
TEST NO. 1

PROJECT Lowe's Home Center
RES. ENG. R. Nunez
LOCATION Brooklyn NY
CALC. BY ____ DATE ____
PIEZOMETER LOCATION ____
CH'KD BY ____ DATE ____

ELAPSED TIME, Δt, MIN.

INTAKE POINT

depth to bottom, ft = 30
depth to top, ft = 22
length, ft = 8 = L
diameter, in = 4, ft = ____ = 2R

STANDPIPE/RISER

diameter, in = 1¼, ft = ____ = 2r

depth of casing, ft = ____

depth to which standpipe was bailed, ft = ____ = Z

READING TIME			TEST DEPTH-RIM TO WATER ft.	DEPTH-RIM TO TIDE OR GWL ft.	UNBALANCED HEAD H ft.	HEAD RATIO Ht/Ho	REMARKS
DATE	CLOCK	Δt MIN.					
01/06/01	0948	0		6.8	0		STATIC WATER LEVEL
		0.5	0.8				
		1	1.8				
		2	3.2				
		3	4.3				
		4	5.0				
		5	5.6				
		6	5.8				
		7	5.9				
		8	6.1				
		9	6.4				
		10	6.45				
		11	6.55				
		12	6.6				
		13	6.7				
		14	6.75				
		15	6.75				
		16	6.8				

PIEZOMETER NO. PB-4P

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. PB4P
SHEET 4 OF 4
FILE NO. 9446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Center
LOCATION Brooklyn NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME 75	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [ ] YES [X] NO
DIAMETER OF ROTARY BIT, IN. 3 7/8"
TYPE OF DRILLING MUD

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. — AVERAGE FALL, IN. —
SAMPLER HAMMER, LBS. — AVERAGE FALL, IN. —

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
01/02/01	1147			7.3	Piezo. Reading, approx. one hour after installation

PIEZOMETER INSTALLED [X] YES [ ] NO SKETCH SHOWN ON

STANDPIPE:	TYPE	SCH 40	ID, IN.	1 1/4"	LENGTH, FT.	TOP ELEV.	
INTAKE ELEMENT:	TYPE	Slotted PVC	OD, IN.		LENGTH, FT.	TIP ELEV.	
FILTER:	MATERIAL	SAND	OD, IN.		LENGTH, FT.	BOT. ELEV.	

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	30	NO. OF 3" SHELBY TUBE SAMPLES	—
3.5" DIA. U-SAMPLE BORING	LIN. FT.	—	NO. OF 3" UNDISTURBED SAMPLES	—
CORE DRILLING IN ROCK	LIN. FT.	—	OTHER:	—

BORING CONTRACTOR JBD
DRILLER M. Blagrove HELPERS D. Keith
REMARKS
RESIDENT ENGINEER D. Nunez DATE 01/02/01

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. PB4P

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9446
BORING NO. PB-5
SURFACE ELEV.

PROJECT Lowe's Home Center

PROJECT LOCATION Brooklyn NY RES. ENGR. J. Nuner

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
2/25/00 Times, scattered wind, Cold 20°F 10 mph wind	10	1	6-28	Top(8") - Wht f-c sand, Tr. silt (Fill) !			Drilled through	Safety Hammer, 4" Conc. at surface.
		3	56-37	Bot(8") - Blk-f-c sand, Sm silt, Tr. Cinders (Fill) (Sm)	(F)			
	20	3	100/6"	No Recovery				
		3.5						
	30	5	4-3	Rock frag., Tr. Conc. (Fill)		5		
		7	2-1				MUD	
	40	7	1-1	No Recovery				Rock frag in the tip of the spoon.
		9	1-1					
						10		
	50	10	1-1	Blk-c-f gvl, Tr. f-sand, Shells (Fill) (Cinders)				R=3"
		12	1-1					
	60	12	2-2	Rock frag., Tr. wood (Fill)				R=2"
		14	3-7					
						15		
	70	15	4-2	No Recovery				Loose fill spoons. Have neutrons
		17	2-2					
	80	17	2-4	Top(5") - Soft gray-Blk org. silty clay, Tr. f-sand, Tr. wood (OH)				
		19	4-3	Bot(9") - Gray silty f-m sand, Tr. cinders, wood (Fill) (Sm)				
						20		
	90	20	2-1	Gray gravel, Tr. org clay (Fill) (GP)				R=1"
		22	2-1					
						25		
	100	25	1-1	Gray silty m-f sand, Tr. clay (SM)				
		27	1-1					
						27.5		
						30		
	110	30	WOR-2	Med gray org silty clay, Tr. f sand very (OH)	(O)			KP=0.75 Tsf.
		32	2-3					
						32.5		
						35		
	120	35	WOR-12	Brn c-f sand, Tr. silt, gvl (SP)	(S)			
		37	16-22					
						40		
	130	40	8-10	Brn f-c sand, Tr. silt (SP-SM)				
		42	13-16					
						45		
	140	45	10-10	Brn c-f sand, Tr. silt (SP-SM)				
		47	16-19					
						48.5		
						50		
	150	50	9-17	Brn gravelly c-f sand, Tr. silt (SP-SM)	(T)			Refusal in spoon.
		52	18-13					

BORING NO. PB-5

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 9440
BORING NO. PB-5
SURFACE ELEV.

PROJECT Lowe's Home Ctr
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
					(3)	55		
	160	55	12-14	DO-150 (SP-SM)				Petroleum in sample
		57	15-17					
						60		
	170	60	11-20	DO-150 (SP-SM)				
		62	20-24					
						65		
	180	65	27-29	BRN C-f SAND, Tr. SILT, gvl (SP-SM)				
		67	31-38					
						70		
	190	70	14-17	BRN M-f SAND, Tr. SILT, (SP-SM)				
		72	21-23					
						75		
	200	75	12-10	BRO-BRN f-c SAND, Sm SILT, (SM)				
		77	14-16					
						80		
	210	80	25-45	DO-200 (SM)				
1410 hrs.		82	32-36			82		E.O.A. @ 82 FT.

BORING NO. PB-5

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. PB-5
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Cntr
LOCATION Brooklyn NY
BORING LOCATION As planned

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME 55	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 25
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. Split Spoon
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 2 7/8", 4 1/8", 3 7/8"
TYPE OF DRILLING MUD Quikgel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	82	NO. OF 3" SHELBY TUBE SAMPLES	—
3.5" DIA. U-SAMPLE BORING	LIN. FT.	—	NO. OF 3" UNDISTURBED SAMPLES	—
CORE DRILLING IN ROCK	LIN. FT.	—	OTHER:	—

BORING CONTRACTOR JBD Co.
DRILLER R. Lynch HELPERS E. Feliciano
REMARKS Grouted borehole upon completion
RESIDENT ENGINEER TC. Nunez DATE 12/28/00

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9466
BORING NO. PB6
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
12/27/00 0630 Wed. 19°F	10	1	2-4	Blk-Brn f-c sand, sm silt, Tr. gvl, Brick (fill)(SM)			Drilled	Safety Hammer
		3	4-5				NQ	
	20	3	2-3	Blk-Brn m-f sand, Sm gvl, Tr. S-Brick, silt	(5)			
		5	4-4	Tr. gvl (fill)(SM)				
	30	5	1-1	Gray-Brn f-c sand, sm silt, Tr. veg (fill)(SM)		5		
		7	1-1				NQ	
	40	7	1-1	Gray-Brn m-f sand, sm silt, Tr. veg, Tr. Brick (fill)(SM)				
		9	1-1					
						9.5		
				soft		10		
		10	1-1	Gray org. silty clay, Tr. veg, f-sand (OH)				
		12	1-1					
	60	12	2-1	Soft gray org. silty clay, Tr. f sand (OH)				
		14	2-1					
					(6)	15		
	70	15	1-1	DO-60 (OH)				
		17	1-1					
	80	17	1-2	DO-60 (OH)				
		19	1-1					
						19.5		
						20		
	90	20	3-4	Gray-Brn silty f-sand, Tr. clay (SM)				
		22	8-16					
						25		
	100	25	5-7	Brn-gray silty m-f sand (SM)				
		27	8-10		(5)			
						30		
	110	30	11-20	Brn f-c sand, Tr. silt (SP-SM)				
		32	20-10					
						35		
	120	35	12-13	DO-110 (SP-SM)				
		37	11-12					
						40		
	130	40	14-26	DO-110 (SP-SM)				
		42	31-38					
						45		
	140	45	15-20	Brn m-f sand, Tr. silt (SP-SM)				
		47	21-25					
						50		
	150	50	13-11	Brn f-c sand, Tr. silt (SP-SM)				
		52	13-14					

BORING NO. PB-6

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3
FILE NO. 9446
BORING NO. PB-6
SURFACE ELEV.

PROJECT Louie's Home Center
PROJECT LOCATION Brooklyn NY
RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
						55		
	60	55	14-14	BRN M-f SAND, Tr. Silt, gvl (SP-SM)				
		57	15-17		(3)			
						58.5		
						60		
	170	60	15-18	RED-BRN C-f SAND, Some gvl, Tr. Silt (SP-SM)				
		62	17-9					
						65		
	180	65	12-13	DO-170 (SP-SM)	(4)			
		67	23-20					
						70		
	190	70	14-18	BLK-BRN C-f SAND, Some gvl, Tr. Silt (SP-SM)				Sample is saturated w/ Petroleum.
		72	28-30					
						75		
	200	75	18-12	RED-BRN M-f SAND, Tr. Silt (SP-SM)				Petroleum odor.
		77	14-17					
						78.5		
						80		
	210	80	12-14	RED-BRN Silt, Tr. f-sand, clay (ML)	(M)			
1400 hrs.		82	27-25			82		E.O.B. @ 82 ft.

BORING NO. PB-6

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. PB-6
SHEET 3 **OF** 3
FILE NO. 94440
SURFACE ELEV.
DATUM

PROJECT Lowe's Home Center
LOCATION Brooklyn NY
BORING LOCATION Appr. 1563 NE

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	SH55	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 15
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. split spoon
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3 7/8", 4 7/8"
TYPE OF DRILLING MUD Quik Gel

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 350 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	82	NO. OF 3" SHELBY TUBE SAMPLES		—
3.5" DIA. U-SAMPLE BORING	LIN. FT.	—	NO. OF 3" UNDISTURBED SAMPLES		—
CORE DRILLING IN ROCK	LIN. FT.	—	OTHER:		—

BORING CONTRACTOR SBD Co.
DRILLER E. Lynch HELPERS E. Peliciano
REMARKS Grouted boreholes upon completion.
RESIDENT ENGINEER E. Nunez DATE 12/27/00

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
FILE NO. 9416
BORING NO. PB-7
SURFACE ELEV.

PROJECT Lowe's Home Center
PROJECT LOCATION Brooklyn, NY
RES. ENGR. NUNEZ

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
12/18/00 Mon. 30°C 1435hrs	1D	0	11-13	Brn m.f sand, Tr. silt, gvl (Fill)(Sp-Sm)			Drilled	Automatic Hammer
		2	15-16				Mud	
	2D	2	9-26	Blk-gray, c.f sand, Sm gvl, Tr. silt, Sm brick (Fill)(Sp-Sm)	1			
		4	26-16					
	3D	4	6-8	Gray f-m sand, Sm silt, Tr gvl (Fill)(Sm)		5		
		6	7-5				mud	
	4D	6	1-1	Gray f-m sand, Sm silt, Tr veg, wood (Fill)(Sm)				
		8	1-1					
	5D	8	1-1	DO-4D (Fill)(Sm)				
		10	1-1			10		
	6D	10	WOR-1	Brn f-c sand, Tr. silt, gvl, veg, brick (Fill)(Sp-Sm)				
		12	1-1					
	7D	12	1-1	Blk-gray, f-m sand, Sm silt, Tr. wood,				R=2"
		14	1-2	wood (Fill)(Sm)				
	8D	14	WOR-1	Olive-gray org silty clay, Tr f sand,	0	15		R.P. <0.5 T.S.F.
		16	1-1	very (OH)				
	9D	16	WOR/12"	DO-8D (OH)				
		18	WOR/12"					
						18.5		
1645						20		
12/19/00 Tues. 30°F cloudy 0645hrs	10D	20	1-3	Brn f-m sand, Sm silt (Sm)				
		22	2-3					
						25		
	11D	25	4-7	Brn m.f sand, Tr silt, gvl (Sp-Sm)				
		27	7-8					
					5			
						30		
	12D	30	6-5	Brn m.f sand, Sm silt (Sm)				
		32	8-9					
						35		
	13D	35	8-10	Brn m.f sand, Tr. silt, mica (Sp-Sm)				
		37	4-3					
						40		
	14D	40	5-8	Brn f-m sand, Sm silt, Tr gvl, mica (Sm)				
		42	11-11					
						45		
	15D	45	5-5	Brn m-f sand, Tr. silt, gvl, mica (Sp-Sm)				
		47	6-5					
						50		
	16D	50	3-5	Brn c.f sand, Tr. silt, gvl, mica (Sp-Sm)				
		52	5-7					

FORM NO. B-1

BORING NO. B-2

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

BORING NO. PB-7
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 8.9
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd								
12-19-00								
Tuesday								
Cloudy					S1			
30°F						55		
	17D	55.0	6-6	Brown fine to medium sand, trace silt				
		57.0	8-7	(SP-SM)				
						58.5		
						60		
	18D	60.0	13-13	Red brown fine to medium sand, some				
		62.0	12-10	gravel, silt, trace mica (SM)				
						65		
	19D	65.0	9-8	Red brown fine to medium sand, some silt,				
		67.0	6-7	trace gravel (SM)				
					S2	70		
	20D	70.0	18-15	Red brown fine to medium sand, some				
		72.0	22-20	gravel, silt, trace clay, mica (SM)				
						75		
	21D	75.0	18-37	Red brown fine to medium sand, some				
		77.0	17-16	gravel, silt (SM)				
						80		
	22D	80.0	14-15	Do 21D, trace clay (SM)				End of Boring at
11:35		82.0	24-19			82		82'.
								pp=Pocket
						85		Penetrometer
								Unconfined Compres-
								sive Strength in tsf.
								WC=Water Content
						90		in percent of dry
								weight.
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

		BORING NO.	PB-7
		SHEET	3 OF 3
PROJECT	LOWE'S HOME CENTER	FILE NO.	9446
LOCATION	BROOKLYN, NEW YORK	SURFACE ELEV.	8.9
BORING LOCATION	SEE PLAN	DATUM	BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME-75	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:

D-SAMPLER	2" O.D. SPLIT SPOON
U-SAMPLER	
S-SAMPLER	
CORE BARREL	
CORE BIT	
DRILL RODS	N

DRILLING MUD USED [X] YES [ ] NO

DIAMETER OF ROTARY BIT, IN. 3-7/8, 4-7/8

TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO

TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24

*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

*AUTOMATIC HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
12-19-00		82	20	11	MUD/WATER UPON COMPLETION.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE:	TYPE	ID, IN.	LENGTH, FT.	TOP ELEV.	
INTAKE ELEMENT:	TYPE	OD, IN.	LENGTH, FT.	TIP ELEV.	
FILTER:	MATERIAL	OD, IN.	LENGTH, FT.	BOT. ELEV.	

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	82	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER:	

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.

DRILLER MIKE BLEJWAS HELPERS DENNIS KEITH

REMARKS BOREHOLE GROUTED UPON COMPLETION.

RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-19-00

BORING NO. PB-7

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. PB-8
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 7.4
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	1D	0.0	16-26	Brown medium to fine sand, some silt, trace			DRILLED	
12-18-00		2.0	30-31	gravel, brick, cinders (Fill) (SM)			AHEAD	
Monday	2D	2.0	17-19	Do 1D, some gravel (Fill) (SM)			4"	
		4.0	16-14					
30°F						5		
	3D	5.0	2-2	Brown fine to medium sand, some silt, trace				3D,7D, 10D-12D &
		7.0	2-2	gravel (Fill) (SM)				17D: Petroleum
	4D	7.0	2-2	Do 3D (Fill) (SM)				odor.
		9.0	3-4					
						10		
	5D	10.0	2-3	Red brown fine to medium sand, some silt,	F			
		12.0	6-6	trace gravel (Fill) (SM)				
	6D	12.0	4-4	Do 5D (Fill) (SM)				
		14.0	6-8					
						15		
	7D	15.0	3-2	Gray brown fine to medium sand, some silt,				
		17.0	3-3	trace gravel, metal, cinders (Fill) (SM)				
	8D	17.0	5-16	Brown fine to medium sand, some silt, rock				
		19.0	31-14	fragments, trace wood (Fill) (SM)				
						20		
	9D	20.0	12-7	Rock fragments (Fill)				REC=1"; rock
16:15		22.0	9-9					fragments in tip of
06:45								spoon.
12-19-00						23.5		
Tuesday						25	▽	
Cloudy	10D	25.0	9-14	Brown fine to medium sand, some silt (SM)				
30°F		27.0	20-16		S1			
						29		
						30		
	11D	30.0	5-9	Stiff gray brown clayey silt, trace fine sand				Silt & clay in wash
		32.0	14-18	(MH)	M			at 29'.
						33.5		
						35		
	12D	35.0	7-12	Brown gray silty fine to medium sand (SM)				
		37.0	12-12					
						40		
	13D	40.0	9-13	Brown silty fine sand (SM)				
		42.0	14-13					
					S1			
						45		
	14D	45.0	10-12	Brown fine sand, some silt (SM)				Heavy petroleum
		47.0	12-14					odor oil in sample.
						50		
	15D	50.0	11-15	Brown fine to medium sand, some silt (SM)				
		52.0	26-29					

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. PB-8
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 7.4
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd								
12-19-00								
Tuesday								
Cloudy								
30°F						55		
	16D	55.0	8-14	Brown fine to medium sand, trace silt				
		57.0	15-19	(SP-SM)				
					S1			
						60		
	17D	60.0	5-15	Gray brown fine to medium sand, some silt,				Hard drilling at
		62.0	38-55	gravel (SM)				62.5'.
								Possible boulder &
								cobbles from 62.5'
						65		to 65'.
	18D	65.0	18-15	Gray fine to medium sand, some gravel, silt,				
		67.0	15-8	trace coarse sand (SM)				
						68.5		
						70		
	19D	70.0	22-18	Red brown silt, some fine sand, trace clay				
		72.0	18-18	seams, gravel (ML)				
					S2	75		
	20D	75.0	27-27	Red brown silty fine to medium sand, trace				
		77.0	25-16	gravel, coarse sand, clay (SM)				
						80		
	21D	80.0	48-26	Red brown fine to medium sand, some silt,				End of Boring at
11:45		82.0	28-15	trace gravel, coarse sand (SM)		82		82'.
						85		
						90		
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT	LOWE'S HOME CENTER	BORING NO.	PB-8
LOCATION	BROOKLYN, NEW YORK	SHEET	3 OF 3
BORING LOCATION	SEE PLAN	FILE NO.	9446
		SURFACE ELEV.	7.4
		DATUM	BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME-55	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM 0	TO 25
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:

D-SAMPLER	2" O.D. SPLIT SPOON
U-SAMPLER	
S-SAMPLER	
CORE BARREL	
CORE BIT	
DRILL RODS	N

DRILLING MUD USED [X] YES [ ] NO

DIAMETER OF ROTARY BIT, IN. 3-7/8, 2-15/16

TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO

TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24

*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

*SAFETY HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE		ID, IN.	LENGTH, FT.	TOP ELEV.	
INTAKE ELEMENT: TYPE		OD, IN.	LENGTH, FT.	TIP ELEV.	
FILTER: MATERIAL		OD, IN.	LENGTH, FT.	BOT. ELEV.	

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	79.5	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER: OBSTRUCTION (BOULDER)	2.5

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.

DRILLER RAY LYNCH HELPERS EDWIN FELICIANO

REMARKS BOREHOLE GROUTED UPON COMPLETION.

RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-19-00

BORING NO. PB-8

GOWANUS CANAL
PROPOSED LOWE'S PARKING LOT
PROPERTY LINE
PROPOSED LOWE'S BUILDING
10TH STREET
11TH STREET
12TH STREET
CANAL INLET
EXISTING SUPERMARKET PROPERTY
HAMILTON PL.
2ND AVENUE
BORING DATA INCLUDED.
LEGEND
PROJECT MARCEL BORINGS
PREVIOUS BORINGS
NOTES
NORTH
GRAPHIC SCALE

INFORMATIO
NORTH
BORINGS B-5 & B-10 NOT COMPLETED.
JC
PB-1
PB-3
PB-5
GOWANUS CANAL
REET
PROPOSED LOWE'S PARKING LOT
CANAL INLET
EET
EXISTING SUPERMAI PROPERTY
EET
EXISTING SUPERI PARKING LC
CALE
100'
LEGEND
B-1 - PROPOSED BUILDING BORING, 82 FEET DEEP
B-2 - PROPOSED BUILDING BORING, 102 FEET DEEP
PB-1 - PROPOSED PARKING LOT BORING, 82 FEET DEEP
B-1P - 30 FOOT DEEP OBSERVATION WELL TO BE INSTALLED IN BORING
LB-1 - EXISTING BORING
RB-1 - EXISTING BORING
PRELIMINARY
LOWE'S HOME CENTER
BROOKLYN
NEW YORK
AKRF ENGINEERING, P.C.
NEW YORK
NEW YORK
MUESER RUTLEDGE CONSULTING ENGINEERS
708 THIRD AVENUE, NEW YORK, N.Y. 10017
SCALE
GRAPHIC
MADE BY J.C.
DATE 10-28-00
CH'KD BY
DATE
FILE NO.
9446
PROPOSED BORING LOCATION PLAN
DRAWING NO.
PB-1

MUESER RUTLEDGE CONSULTING ENGINEERS

FIELD LOG

SHEET 1 OF 2
FILE NO. 9854
BORING NO. T1
SURFACE ELEV. 10.2 ±

PROJECT LOWE'S HOME CENTER

PROJECT LOCATION BROOKLYN, NY RES. ENGR. A. MODICA

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
FRIDAY 3 NOV 02 PARTY CLOUDY ~55°F 1200	1D	0'-	8-11	BROWN C-F SAND, SM GVL, TR BRICK,	F		3" 4"	
		2'	10-7	SILT (FILL) (SP-SM)				
	2D	2'-	6-5	BROWN C-F SAND, SM GVL, TR BRICK,				
		4'	6-14	WOOD, CONCRETE, SILT (FILL) (SP-SM)				
	3D	4'-	17-17	BROWN C-F SAND, CONCRETE, SM GVL,		5		
		6'	18-21	TR BRICK, SILT (FILL) (SP-SM)				
	4D	6'-	13-11	GRAY C-F SAND, SM GVL, TR BRICK				
		8'	9-7	SILT (FILL) (SP-SM)				
	5D	8'-	9-6	GRAY C-F SAND, SM GVL, CONCRETE				
		10'	9-14	TR BRICK (FILL) (SM)		10		
	6D	10'-	10-16	GRAY C-F SAND, SM CONCRETE, GVL,				
		12'	23-56	TR BRICK, GLASS (FILL) (SM)				
	7D	12'-	11-9	CONCRETE, GVL, SM C-F SAND, TR				POOR RECOVERY
		14'	6-6	BRICK (FILL) (SM)				
	8D	14'-	11-14	GRAY C-F SAND, SM GVL, TR BRICK		15		POOR RECOVERY
		16'	10-8	(FILL) (SM)				
	9D	16'-	6-8	GRAY C-F SAND, SM GVL, TR				PETROLEUM ODOR
		18'	5-5	BRICK (FILL) (SM)				PRESENSE
	10D	18'-	6-100/4"	SPUN CASING THRU CONCRETE,		18.5		
		20'		CONCRETE IN BAG	CONC.	19.5		CONCRETE @ ~18.5'
	11NR	20'-	2-2	NO RECOVERY	?			CONCRETE ENDED @ ~19
		22'	3-5			22		REC: ~7" CONC.
	12D	22'-	6-5	GRAY SILTY F-SAND (SM)				+ 2" BRICK
		24'	6-10					22'-28' PETROLEUM
	13D	24'-	11-10	"DO 12D" (SM)	S	25		
		26'	13-15					
	14D	26'-	11-11	"DO 12D" (SM)				
1530		28'	16-10			28		EOB @ 28'

FORM NO. B-1

BORING NO. T1

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. T1
SHEET 2 OF 2
FILE NO. 9854
SURFACE ELEV. 10.2 ±
DATUM BROOKLYN HWY

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	☒ YES ☐ NO		
TRUCK	☒	MECHANICAL		DIA., IN.	3	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC		DIA., IN.	4	DEPTH, FT. FROM 0	TO 4
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. S.S.
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS

DRILLING MUD USED ☒ YES ☐ NO
DIAMETER OF ROTARY BIT, IN. 2 7/8", 3 7/8"
TYPE OF DRILLING MUD

AUGER USED ☐ YES ☒ NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING LIN. FT. 28
3.5" DIA. U-SAMPLE BORING LIN. FT.
CORE DRILLING IN ROCK LIN. FT.
NO. OF 3" SHELBY TUBE SAMPLES
NO. OF 3" UNDISTURBED SAMPLES
OTHER: SPUN CASING THRU 12" CONCRETE

BORING CONTRACTOR ADT, INC
DRILLER DAVID CARTER HELPERS LIONEL EDWARDS
REMARKS
RESIDENT ENGINEER A. MODICA DATE 15 NOV 02

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

FIELD LOG

SHEET 1 OF 2
FILE NO. 9854
BORING NO. T2
SURFACE ELEV. 10.0 ±

PROJECT LOWE'S HOME CENTER
PROJECT LOCATION BROOKLYN, NY
RES. ENGR. A. MODICA

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
ONDAY NOV 02 AIN ~65°F 500 500							4"	
					F			
	1D	3'-	5-4	BROWN C-F SAND, SM GVL, TR				
		5'	2-2	BRICK (FILL) (SM)	STEEL	5		
ESDAY 12 NOV 02 9IN ~50°F 1815	2NR	5'-	50/0"	NO RECOVERY, SPUN CASING THRU 18"	CONC			1½" STEEL PLATE
		7'		CONCRETE REC ≈ 11" IN BAG		6.5 ±		18" CONCRETE
					WOOD	7 ±		
	3NR	8'-	—	FOUND VOID 8' TO 10'	NOID			
		10'				10		
	4D	10'-	1-1	BLACK PT, TR WOOD, VEGETATION	O			PETROLEUM ODOR
		12'	2-2	(PT)				
	5D	12'-	WH/24"	BLACK PT (PT)				
		14'						
	6D	14'-	WR/24"	TOP 24" = "DO 5D" (PT)		15		
		16'		TIP OF S.S. = GRY SILTY F-SAND, TR VEG (SM)		15.8'		
	7D	16'-	WH/24"	GRAY, SILTY F-SAND, TR VEG (SM)				
		18'		BRN	S			
	8D	18'-	3-4	GRAY, SILTY F-SAND, TR MICA (SM)				
		20'	4-3	BRN		20		
	9D	20'-	WH/12"	"DO 8D" (SM)				
		22'	2-4					
	10D	22'-	4-8	GRAY F-SAND, SM SILT, TR MICA				
1330		24'	11-11	(SM)		24		EOB @ 24'

FORM NO. B-1

BORING NO. T2

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. T2
SHEET 2 OF 2
FILE NO. 9854
SURFACE ELEV. 10.0 ±
DATUM BROOKLYN HWY.

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	X	MECHANICAL		DIA., IN.	4"	DEPTH, FT. FROM 0	TO 12
SKID		HYDRAULIC		DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. S.S.
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3 7/8", 4 7/8"
TYPE OF DRILLING MUD

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. AVERAGE FALL, IN.
* AUTOMATIC HAMMER

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NONE MADE

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING LIN. FT. 24 NO. OF 3" SHELBY TUBE SAMPLES
3.5" DIA. U-SAMPLE BORING LIN. FT. NO. OF 3" UNDISTURBED SAMPLES
CORE DRILLING IN ROCK LIN. FT. OTHER: STUN CASING THRU 18" CONCRETE

BORING CONTRACTOR A.D.T. INC
DRILLER DAVID CARTER HELPERS LIONEL EDWARDS
REMARKS
RESIDENT ENGINEER A. MODICA DATE 13 NOV 02

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

FIELD LOG

SHEET 1 OF 2
FILE NO. 9854
BORING NO. T3
SURFACE ELEV. 10.5 ±

PROJECT LOWE'S HOME CENTER
PROJECT LOCATION BROOKLYN, NY
RES. ENGR. A. Malick

DAILY PROGRESS	SAMPLE NO.	DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
1DAY NOV.02 SUNNY ~45°F 700	1D	0'-	37-67	BROWN C-F SAND, SM CONCRETE, GVL,			4" 3"	
		2'	100/5"	TR BRICK, SILT (FILL) (SP-SM)	F			
	2D	2'-	19-50	BROWN C-F SAND, SM GVL, TR CONCRETE,				
		4'	21-20	BRICK, SILT (FILL) (SP-SM)				
	3D	4'-	10-100/3"	OIL, BLACK C-M SAND, SM GVL, TR		4.5		CONCRETE SLAB @
		6'		CONCRETE (SM)	CONC.	5.5		4'-9" REC=6½"
	4NR	6'-	—	VOID, NO RECOVERY	VOID			IN BAG LABELED
		8'				7.5		C1 (CORED →12")
	5D	8'-	3-3	BROWN C-F SAND, TR GVL, SILT				
		10'	6-3	(SP-SM)		10		
	6D	10'-	2-4	BROWN C-F SAND, SM GVL, TR MICA				
		12'	5-5	SILT (SP-SM)	F?			
	7D	12'-	5-5	BROWN C-F SAND, SM GVL, TR MICA				
		14'	11-9	SILT (SP-SM)				
	8D	14'-	3-3	GRAY CLAYEY F-M SAND, SM VEG.		15		8D - POOR RECOVERY
		16'	2-2	(CL)		16		
	9D	16'-	1-2	SOFT GRAY CLAY, SM VEG. (OH)	O			
		18'	2-3					
	10D	18'-	3-3	TOP 6" - "DO 9D" (OH)				
		20'	3-4	BOTTOM 18" GRY CLAYEY F-M SAND, SM VEG (CL)		20		
	11D	20'-	3-4	GRAY F-M SAND, SM SILT (SM)	S			
		22'	4-6					
	12D	22'-	6-6	"DO 11D" (SM)				
1130		24'	7-14			24		EOB @ 24'

FORM NO. B-1

BORING NO. T3

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. T3
SHEET 2 OF 2
FILE NO. 9854
SURFACE ELEV. 10.5 ±
DATUM BROOKLYN HWY

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG
TRUCK ✓
SKID
BARGE
OTHER

TYPE OF FEED DURING CORING
MECHANICAL
HYDRAULIC
OTHER

CASING USED ☒ YES ☐ NO
DIA., IN. 3 DEPTH, FT. FROM 0 TO 13
DIA., IN. 4 DEPTH, FT. FROM 0 TO 4
DIA., IN. DEPTH, FT. FROM TO

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. S.S.
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS

DRILLING MUD USED ☒ YES ☐ NO
DIAMETER OF ROTARY BIT, IN. 3 7/8, 2 7/8"
TYPE OF DRILLING MUD QUIK GEL

AUGER USED ☐ YES ☒ NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NONE MADE

PIEZOMETER INSTALLED ☐ YES ☒ NO

SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING LIN. FT. 24
3.5" DIA. U-SAMPLE BORING LIN. FT.
CORE DRILLING IN ROCK LIN. FT.

NO. OF 3" SHELBY TUBE SAMPLES
NO. OF 3" UNDISTURBED SAMPLES
OTHER: SPUN CASING THRU 12" CONCRETE

BORING CONTRACTOR ADT, INC
DRILLER DAVID CARTER HELPERS LIONEL EDWARDS
REMARKS
RESIDENT ENGINEER A. Moder DATE 15 NOV 02

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

FIELD LOG

SHEET 1 OF 2

FILE NO. 9854

BORING NO. T4

SURFACE ELEV. 10.5±

PROJECT LOWE'S HOME CENTER

PROJECT LOCATION BROOKLYN, NY

RES. ENGR. A. MODEA

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
125. NOV 02 SUNNY ~50°F 200	1D	0'-	10-14	BROWN C-F SAND, SM GVL, CONCRETE,			3" 4"	
		2'	27-26	TR BRICK, GLASS (FILL) (SM)	F			
	2D	2'-	10-29	CONCRETE, BROWN C-F SAND, SM				
		4'	19-15	GVL, BRICK, TR SILT, GLASS (FILL) (SP-SM)				
	3D	4'-	4-7	CONCRETE		5		POOR RECOVERY,
		6'	10-100/2"			5.5		RECOVERED 2" OF
	4C	6'-	——	SPUN 3" CASING THRU 12" CONCRETE,	CONCRETE	6.5		CONCRETE IN TIP OF
		8'		IN BAG	VOID	7.5		S.S.
	4D	8'-	2-2	BRN C-F SAND, SM GVL, SILT				-STARTED CORING
		10'	3-2	(SM)		10		@ 5.5' STOPPED @ 6.5'
	5D	10'-	10-7	BRN C-F SAND, SM GVL, TR SILT	F?			REC = ~8" CONCRETE
		12'	4-8	(SP-SM)				-@ VOID RIG LOST
	6D	12'-	10-14	BRN M-F SAND, SM SILT, TR GVL				A LOT OF WATER
		14'	10-7	(SM)				
	7D	14'-	9-10	BRN M-F SAND, SM SILT, TR GVL		15		
		16'	5-4	(SM)				
	8D	16'-	4-12	SOFT GRAY CLAY, SM VEGETATION	O			
130		18'	6-7	(OH)		18		EOB @ 18'

FORM NO. B-1

BORING NO. T4

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. T4
SHEET 2 OF 2
FILE NO. 9854
SURFACE ELEV. 10.5 ±
DATUM BROOKLYN HWY

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG
TRUCK X
SKID
BARGE
OTHER

TYPE OF FEED DURING CORING
MECHANICAL
HYDRAULIC
OTHER

CASING USED [X] YES [ ] NO
DIA., IN. 3 DEPTH, FT. FROM 0 TO 8
DIA., IN. 4 DEPTH, FT. FROM 0 TO 4
DIA., IN. DEPTH, FT. FROM TO

TYPE AND SIZE OF:
D-SAMPLER 2" OD S.S.
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3 7/8", 2 7/8"
TYPE OF DRILLING MUD QUIK GEL

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24"
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NONE MADE

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING LIN. FT. 18
3.5" DIA. U-SAMPLE BORING LIN. FT.
CORE DRILLING IN ROCK LIN. FT.

NO. OF 3" SHELBY TUBE SAMPLES
NO. OF 3" UNDISTURBED SAMPLES
OTHER: SPUN CASING THRU 12" CONCRETE

BORING CONTRACTOR ADT INC
DRILLER DAVID CARTER HELPERS LIONEL EDWARDS
REMARKS
RESIDENT ENGINEER A. Modica DATE 14 NOV 02

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

FIELD LOG

SHEET 1 OF 2
FILE NO. 9854
BORING NO. T5
SURFACE ELEV. 11.0 ±

PROJECT LOWE'S HOME CENTER

PROJECT LOCATION BROOKLYN, NY RES. ENGR. MODICA

DAILY PROGRESS	SAMPLE NO.	DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
TUES. NOV 02 SHOWERS/ CLOUDY ~50°F 1030	1D	0'-	4-6	BROWN C-M SAND, SM GVL, CONCRETE	F		4"	
		2'	11-24	TR SILT, BRICK, GLASS (FILL) (SP-SM)				
	2D	2'-	17-10	BROWN C-M SAND, SM CONCRETE, GVL, TR				
		4'	12-14	BRICK, GLASS, SILT (FILL) (SP-SM)				
	3NR	4'-	5-5	NO RECOVERY, SILT (FILL) (SP-SM)		5		CONCRETE JAMMED
		6'	4-2					IN TIP OF SPOON
	4D	6'-	2-3	CONCRETE, BROWN C-M SAND, SM				
		8'	12-3	GVL, TR WOOD, BRICK, GLASS (FILL) (SM)				
	5D	8'-	4-7	GRAVEL				
		10'	5-4			10		
	6D	10'-	4-3	CONCRETE, SM BROWN C-M SAND, TR				
		12'	3-5½"	GVL, SILT (SP-SM)		11.5		CONCRETE @ 11'-6"
	1C	12'-		SPUN CASING THRU 24" CONCRETE,	CONCRETE			
		14'		REC 13" IN BAG		13.5		ENDS @ 13'-6"
	7NR	14'-	4-3	NO RECOVERY	WOOD	15		WOOD JAMMED IN
		16'	3-3					TIP OF S.S.
	8D	16'-	5-2	WOOD				POOR RECOVERY
		18'	3-3					
	9D	18'-	2-2	WOOD, SM BLACK M-C SAND, TR GVL	O W/WOOD			POOR RECOVERY
1500		20'	2-2			20		
THURSDAY NOV 02 SUNNY ~45°F 0700	10D	20'-	2-2	WOOD				
		22'	2-3					POOR RECOVERY
	11D	22'-	3-4	TOP 4" - WOOD				24" RECOVERY
		24'	3-5	BOTTOM 20" - BLACK PEAT (PT)		24		
	12D	24'-	4-8	GRAY SILTY F-SAND W/ POCKETS		25		HIT EDGE OF TIMBER
		26'	11-13	OF ORG. BLACK CLAYEY SILT	S/O			PILE ½ OF S.S. IS
	13D	26'-	10-13	DO 12D				WOOD, OTHER ½ IS
		28'	16-16					SAND (24' → 28')
	14D	28'-	7-10	BROWN F-M SAND, TR SILT (SP-SM)				
		30'	14-13			30		
	15D	30'-	6-12	BRN SILTY F-SAND (SM)				
900		32'	9-9			32		EOB @ 32'

FORM NO. B-1 BORING NO. T5

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. T5
SHEET 2 OF 2
FILE NO. 9854
SURFACE ELEV. 11.0 ±
DATUM BROOKLYN HWY

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	X	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO
SKID		HYDRAULIC		DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" OD. SS.
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 2 7/8", 3 7/8"
TYPE OF DRILLING MUD QUIK GEL

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. — AVERAGE FALL, IN. —
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30
*AUTOMATIC HAMMER

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NONE MADE

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING LIN. FT. 32
3.5" DIA. U-SAMPLE BORING LIN. FT.
CORE DRILLING IN ROCK LIN. FT.
NO. OF 3" SHELBY TUBE SAMPLES
NO. OF 3" UNDISTURBED SAMPLES
OTHER: SPUN CASING THRU 24" CONCRETE

BORING CONTRACTOR ADT, INC
DRILLER DAVID CARTER HELPERS LIONEL EDWARDS
REMARKS
RESIDENT ENGINEER A. MODICA DATE

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

FIELD LOG

SHEET 1 OF 2
FILE NO. 9854
BORING NO. TO-1
SURFACE ELEV. 10.2 ft

PROJECT LOWE'S HOME CENTER

PROJECT LOCATION BROOKLYN, NY RES. ENGR. A. MODICA

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
DNES. NOV 02 ONERS/ CLOUDY ~58°F 1900	1D	0'-	7-10	BROWN M-C SAND, SM GVL, TR BRICK,				
		2'	12-13	SILT (FILL) (SP-SM)	F			
	2D	2'-	13-14	CONCRETE, BROWN M-C SAND, SM GVL,				
		4'	11-12	TR BRICK, GLASS, SILT (FILL) (SP-SM)				
	3D	4'-	3-1	BLACK M-F SAND, SM SILT, TR VEG.	F	5		PETROLEUM ODOR &
		6'	1-2	(SM)				PRESENSE
	4D	6'-	2-2	GRAY SILTY F-M SAND, TR MICA				
		8'	2-3	(SM)				
	5D	8'-	1-1	GRAY SILTY F-SAND, TR VEGETATION,		9		
		10'	1-3	MICA (SM)		10		
	6D	10'-	WH-2	GRAY SILTY F-SAND VVD/W POCKET PEAT	F/O			
		12'	3-2	(SM-Pt)				
	7D	12'-	5-2	GRAY SILTY-F-SAND, TR MICA (SM)				
		14'	4-5		S			
	8D	14'-	2-3	"DO 7D" (SM)		15		
100		16'	4-6			16		EOB @ 16'

FORM NO. B-1

BORING NO. TO-1

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. TO-1
SHEET 2 OF 2
FILE NO. 9854
SURFACE ELEV. 10.21
DATUM BROOKLYN HWY

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG
TRUCK X
SKID
BARGE
OTHER

TYPE OF FEED DURING CORING
MECHANICAL
HYDRAULIC
OTHER

CASING USED ☐ YES ☒ NO
DIA., IN. DEPTH, FT. FROM TO
DIA., IN. DEPTH, FT. FROM TO
DIA., IN. DEPTH, FT. FROM TO

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. S.S.
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS

DRILLING MUD USED ☒ YES ☐ NO
DIAMETER OF ROTARY BIT, IN. 2 7/8" 3 7/8
TYPE OF DRILLING MUD QUICK GEL

AUGER USED ☐ YES ☒ NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. — AVERAGE FALL, IN. —
SAMPLER HAMMER, LBS. AVERAGE FALL, IN.
* AUTOMATIC HAMMER

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NONE MADE

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING LIN. FT. 16
3.5" DIA. U-SAMPLE BORING LIN. FT.
CORE DRILLING IN ROCK LIN. FT.

NO. OF 3" SHELBY TUBE SAMPLES
NO. OF 3" UNDISTURBED SAMPLES
OTHER:

BORING CONTRACTOR A.D.T. INC
DRILLER DAVID CARTER HELPERS LIONEL EDWARDS
REMARKS
RESIDENT ENGINEER A. MODICA DATE 13 NOV 02

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

MUESER RUTLEDGE CONSULTING ENGINEERS

FIELD LOG

SHEET 1 OF 2
FILE NO. 9854
BORING NO. TO-2
SURFACE ELEV. 10.7±

PROJECT LOWE'S HOME CENTER

PROJECT LOCATION BROOKLYN, NY RES. ENGR. A. MODKA

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
INDAY NOV 02 CLOUDY/SHOWERS ~65°F 1930	1D	0'-	8-26	BROWN M-C SAND, SM GVL, BRICK,			4"	
		2'	27-29	TR GLASS, PORCALAIN (FILL)(SM)				
	2D	2'-	17-13	BLK M-C SAND, SM GVL, TR BRICK				
		4'	13-10	(FILL)(SM)				
	3D	4'-	7-17	GRY-BLK C-M SAND, SM GVL, TR		5		PETROLEUM ODOR
		6'	15-19	CONCRETE, BRICK, SILT (FILL) (SP-SM)		6		
	4D	6'-	6-10	BROWN C-M SAND, SM GVL	F			PETROLEUM ODOR
		8'	6-3	(SM)				
	5D	8'-	4-3	BROWN M-F SILTY SAND, TR				
		10'	2-4	C-SAND (SM)		10		
	6D	10'-	3-2	BROWN M-F SAND UVD/W BLACK				
		12'	3/12"	F-SAND POCKETS (SM)				
	7D	12'-	WH	GRY SILTY F-SAND, TR GVL (SM)				
		14'						
	8D	14'-	WR	BLK PT, TR GVL, GRY F-SAND, SILT		15		POOR RECOVERY
		16'	1-1	(PT)		16		
	9D	16'-	WR-1	BLK-BROWN PEAT (PT)	O			
		18'	1-2			18		
	10D	18'-	WH/12"	GRY SILTY F-SAND (SM)				
		20'	2-2		S_2	20		
	11D	20'-	2-3	"DO 10D" (SM)				
		22'	4-6					
	12D	22'-	5-5	"DO 10D" (SM)				
1230		24'	6-12			24		EOB @ 24'

FORM NO. B-1

BORING NO. TO-2

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. TO-2
SHEET 2 OF 2
FILE NO. 9854
SURFACE ELEV. 10.7±
DATUM BROOKLYN HWY.

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NY
BORING LOCATION

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	X	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM 0	TO 8
SKID		HYDRAULIC		DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. S.S.
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3 7/8"
TYPE OF DRILLING MUD QUICK GEL

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. — AVERAGE FALL, IN. —
* AUTOMATIC HAMMER

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NONE MADE

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING LIN. FT. 24'
3.5" DIA. U-SAMPLE BORING LIN. FT.
CORE DRILLING IN ROCK LIN. FT.
NO. OF 3" SHELBY TUBE SAMPLES
NO. OF 3" UNDISTURBED SAMPLES
OTHER:

BORING CONTRACTOR AQUIFER DRILLING & TESTING, INC
DRILLER DAVID CARTER HELPERS LIONEL EDWARDS
REMARKS
RESIDENT ENGINEER A. MODICA DATE 11 NOV 02

NOTES:
1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
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8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

Roux Associates Logs – 2002

LEGEND

RW-1	APROXIMATE LOCATION OF DEEP PRODUCT COLLECTION WELL
RW-1S	APROXIMATE LOCATION OF SHALLOW PRODUCT COLLECTION WELL
RW-24	WELL NOT INSTALLED
	APPROXIMATE EXTENT OF FORMER BUILDINGS

NOTE:
WELLS RW-24, RW-26 AND RW-28 WERE DETERMINED TO BE NOT NECESSARY BASED ON OBSERVATIONS DURING DRILLING OF WELLS RW-23, RW-25 AND RW-27.

50' 0 50'

Title:

APPROXIMATE LOCATIONS OF PRODUCT COLLECTION WELLS

124-136 SECOND AVENUE
BROOKLYN, NEW YORK

Prepared For:

FC GOWANUS LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: G.T.	Date: 30MAY02	FIGURE
Prepared by: G.M.	Scale: AS SHOWN	
Project Mgr: G.T.	Office: NY	1
File No: FCR0114001	Project: FCR924Y03	

N:\PROJECTS\FCR924Y\FCR01Y\140\FCR0114001.DWG

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SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
AN-3				
PROJECT NO./NAME: 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION: 124-136 2nd Avenue, Brooklyn, New York		
APPROVED BY: S. Glash	LOGGED BY: T. Mills			
DRILLING CONTRACTOR/DRILLER: Aquifer Drilling & Testing, Inc. /		GEOGRAPHIC AREA: Area A		
DRILL BIT DIAMETER/TYPE: 4.25-in. / Auger	BOREHOLE DIAMETER: 6-inches	DRILLING EQUIPMENT/METHOD: / HSA	SAMPLING METHOD: 2" Split Spoon	START-FINISH DATE: 1/21/02-1/21/02
LAND SURFACE ELEVATION: (FT.)	DEPTH TO WATER: (Feet BLS)	BACKFILL: Cuttings/Bentonite Pellets		

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to medium SAND, trace Gravel, trace Wood, trace Brick; dry (fill)	23		
		36		
		30		
		28		
	Brown to gray fine to medium Sand and Gravel, trace Brick, trace Concrete; dry (fill)	16	19.8	
		17		
		21		
		13		
	Brown to black stained fine to medium SAND, trace Silt; dry (fill)	10		
5		15	67.1	5
		10		Slight odor.
		9	101	
	Brown to black stained fine to medium SAND, trace Silt, trace Gravel; dry (fill)	8		
		8	58.2	
		5		
	Brown to reddish brown Silt and fine Sand; (fill)	12	40.2	
	Black stained fine to medium Sand and Silt; (fill)	5		
		6	30.1	
		5		Free product.
10		9	60.2	10
	Dark brown to reddish brown fine to medium Sand and Silt, trace Clay; (fill)	2		
		2	59.1	
		2		Sheen.
		2	24.9	
	Dark brown to black stained fine to medium Sand and Silt; (fill)	1		
		1	58.5	
		1		Sheen.
		1	55.9	
	Dark gray to black stained fine to medium Sand and Gravel; (fill)	2		
15		1	55.9	Free product. 15
	PEAT	3		
		3		

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
AN-4				
PROJECT NO./NAME: 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION: 124-136 2nd Avenue, Brooklyn, New York		
APPROVED BY: S. Glash	LOGGED BY: D.Moss			
DRILLING CONTRACTOR/DRILLER: Aquifer Drilling & Testing, Inc. / J. Philbin		GEOGRAPHIC AREA: Area A		
DRILL BIT DIAMETER/TYPE: 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER: 4-inches	DRILLING EQUIPMENT/METHOD: CME-45 / Drive and Wash	SAMPLING METHOD: 2" Split Spoon	START-FINISH DATE: 2/7/02-2/7/02
LAND SURFACE ELEVATION: (FT.)	DEPTH TO WATER: (Feet BLS)	BACKFILL: Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Dark brown to tan medium to coarse SAND, trace Gravel, trace Brick, trace Concrete; moist (fill)	15, 19, 18, 31		
		Dark brown to tan medium to coarse SAND, trace Gravel, trace Brick, trace Concrete; moist (fill)	15, 15, 30, 27	7.9	
		Black stained fine SAND, little Silt, trace Gravel, trace Coal Fragments; moist (fill)	6, 7, 6	55.2	
5					5
		Black stained fine SAND, some Coal Fragments, little Gravel, trace Silt; wet (fill)	10, 12, 10		
		Gray fine SAND, little Coal Fragments, little Silt, trace Gravel; wet (fill)	2, 2	52.3	Trace free product.
				12.8	Trace free product.
10					10
		Dark gray to black stained fine to coarse SAND, some Gravel, little Silt, trace Glass; wet (fill)		3.1	Odor.
		No recovery			
		Black stained medium to coarse SAND, little Silt, little Gravel; wet (fill)			Slight odor.
15					15
		PEAT		6.9	

Bottom of boring 16 feet below land surface

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SOIL BORING LOG

WELL NO. AN-6	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 2/19/02-2/19/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown to tan fine to coarse SAND, trace Silt, trace Brick, trace Concrete; dry (fill)	9, 17, 14, 21		
		7, 14, 21, 27	4.1	
	Brown fine to coarse SAND, little Silt, trace Gravel; moist to wet (fill)	9, 9, 10	4.3	
5				5
	Brown to black stained fine to medium SAND, little Silt, trace Gravel, trace coarse Sand; wet (fill)	6, 6, 5, 10	18.1	Odor and trace free product.
	Black stained medium SAND, little Silt, trace Gravel trace, Ashalt-like material; wet (fill)	10, 9, 9, 16	89.1	Odor and trace free product.
10				10
	Black stained medium to coarse SAND, some Gravel, trace Silt, trace Ashalt-like material; wet (fill)	17, 17, 22, 25	57.2	Odor and free product.
	CONCRETE	50/1		
	Black stained fine to medium SAND, little Silt, trace Gravel; wet (fill)		78.7	
15	No recovery			15
20	Peat and Clay; wet			20

Bottom of boring 20 feet below land surface.

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SOIL BORING LOG

WELL NO. AN-9	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue Brooklyn, New York		
APPROVED BY S. Glash	LOGGED BY D.Moss			
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / D. Pepe		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-75 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/12/02-3/13/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Tan to brown fine to coarse SAND, trace Gravel, trace Brick, trace Concrete, trace Wood; dry (fill)	18		
			20		
			23		
			20		
		Tan to brown fine to coarse SAND, trace Gravel, trace Brick, trace Concrete, trace Wood; wet at 4 ft. (fill)	23		
			18		
			30		
			46		
		Brown to red Sand and Gravel, little Concrete, trace Silt; wet (fill)	10		
5			50/5		5
		CONCRETE			
		Black fiine SAND, some Silt, trace coarse Sand, trace Gravel; wet (fill)			
					Odor and Free product.
		Brown to black stained fine SAND, some Silt; wet (fill)	5		
			3		
			1		Slight odor.
10			1		10
		Brown to green fine Sand and Silt; wet (fill)			
		Light brown fine SAND, some Silt, trace Gravel; wet (fill)	1		
			1		
			1		
			1		
		Light brown fine SAND and Silt, trace Clay, trace Gravel; wet (fill)	2		
15			1		15
		Brown PEAT, and green to grey Clay	1		
			1		

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. AN-9N	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue Brooklyn, New York		
APPROVED BY S. Glash	LOGGED BY D.Moss			
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. /		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-75 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/13/02-3/13/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Dark brown medium to coarse SAND, trace Gravel, trace brick, trace Concrete; moist (fill)	11, 14, 19, 17		
		Dark brown medium to coarse SAND, trace Gravel, trace brick, trace Concrete; wet at 4 (fill)	14, 12, 12, 8	8.9	
		Green to brown fine SAND, some Silt, trace Gravel; wet (fill)	6, 50/3	7.9	
5		CONCRETE			5
		Black stained fine SAND, some Silt, trace Gravel; wet (fill)	6, 6, 3, 7/12	160	Strong odor.
		Red to brown fine SAND, little Silt, trace coarse Sand; wet (fill)	8, 7, 6	4.9	
10		Red to black stained SILT, some fine to medium Sand; wet (fill)	3, 1, 1, 1	5.2	10
		Red to brown medium SAND, some Silt, trace Gravel; wet (fill)	1, 1, 1, 1	4.7	
15		PEAT; wet	1, 1, 1, 1/12		15

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. ANE-1	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 1/21/02-1/21/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Brick; dry (fill)	11		
			9		
			18	6.3	
			18		
		Gray fine to medium SAND, trace Gravel, trace Ash; moist (fill)	4		
			5		
		Black stained fine SAND, trace Gravel, trace Roots; moist (fill)	8	1735	Strong odor.
			20		
		CONCRETE			Slight odor.
5		Black stained fine to coarse SAND, little Silt, trace Gravel; wet (fill)	2		5
			1		
			2	81.3	Slight odor.
			1		
		No recovery			
		Black stained fine to coarse SAND, some Gravel, trace Silt, trace Shells, trace, Glass; wet (fill)	1		
			1		
			1	21.8	Slight odor.
10			1		10
		Black Coal Fragments, trace Silt; wet (fill)	2		
			2		
			1	7.8	Slight odor.
			1		
			1		
		PEAT	1	14.4	
			2		
			3		

Bottom of boring 14 feet below land surface.

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SOIL BORING LOG

WELL NO. ANW-1 (SB-3)	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/2/02-1/2/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to medium SAND, trace Silt, trace Gravel, trace Coal, trace Brick; dry (fill)		0.0	
				0.0	
5		Light brown to black stained fine to medium SAND, trace Silt, trace Gravel; dry (fill)		49.5	Slight odor.
		Black stained fine to coarse SAND, some Silt, trace Gravel, trace Coal; wet (fill)		91.5	
		Black stained fine to coarse Sand and Silt, trace Gravel; wet (fill)		7.2	Slight odor and sheen on water.
10					
		Black stained SILT, little fine to coarse Sand, trace Gravel; (fill)		35.2	Slight odor.
15					
		Black stained Silt and fine Sand; wet		0.0	
		PEAT, little green to gray Silt, trace Sand; wet (fill)			Sheen on water.
20					

Bottom of boring 20 feet below land surface.

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SOIL BORING LOG

WELL NO. AS-2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/8/02-1/8/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to black stained fine to coarse SAND, trace Gravel, trace Brick; dry (fill)			
				0.0	
		Black stained fine to medium SAND, trace Gravel; dry to wet (fill)		6.7	
5				4.9	
				58.8	Trace free product.
		Black stained fine to coarse SAND, little Gravel, trace Silt; wet (fill)			
10				22.3	
		No recovery			
15					

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. ASW-1 (SB-2)	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/2/02-1/2/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Fine to medium SAND, trace Silt, trace Gravel, trace Glass, trace Brick; dry (fill)		0.0	
				225	
		Black stained fine to coarse SAND, trace Brick; dry (fill)		71.2	Strong odor.
5				58.4	
		Black stained SILT, trace fine to medium Sand, trace brick; wet (fill)		201	
				221	Free product.
		Black stained coarse to fine Sand and Silt, trace Gravel, trace Brick; wet (fill)			
10		Brown coarse to fine Sand and Silt, trace Gravel; wet (fill)			
		Dark brown SILT, some fine to medium Sand, trace Gravel; wet			
15		PEAT			

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. ASW-2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/8/02-1/8/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to black stained fine to medium SAND, trace Gravel, trace Brick trace Coal Fragments; dry (fill)		3.5	
				3.5	Strong odor.
5		Brown to black stained SAND, some Silt, trace Gravel, trace Coal Fragments; dry to wet (fill)		148	
				237	Strong odor and free product.
		Gray to green Silt and fine Sand; wet (fill)			
10				32.9	
		No recovery			
15					

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. AN-11	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY C. Battista	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / S. Miller		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 4.25-in. / Auger	BOREHOLE DIAMETER 8-inches	DRILLING EQUIPMENT/METHOD Mobile Drill B-61 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/19/02-3/19/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Light brown medium to coarse SAND, trace Gravel, trace fine Sand, trace Coal Fragments; dry to moist (fill)	7		
		8	3.1	
		7		
		10	0.8	
	Dark brown fine to coarse SAND, trace Silt, trace Gravel, trace Coal Fragments, trace wood; moist (fill)	7		
		6	0.0	
		7		
		6	3.2	
	Light brown to dark brown fine to coarse SAND, little Silt, little Gravel; moist to wet (fill)	10		
5		2	0.0	5
		3		
		5	0.0	
	Dark brown fine to coarse SAND, some Wood, some Organic Material, trace Gravel; wet (fill)			
			2.4	
			4.7	
	Brown to dark brown fine to coarse Sand and Silt, little Organic Material, little Coal Fragments, trace Ash; wet (fill)	3		
		2		
		1	2.6	
10		1		10
	Dark brown to black stained SAND, some Gravel, some Silt; wet (fill)	3		
		2		
		4		
		6		
	Brown to black stained fine to coarse Sand and Cinders, and Ash, some Coal Fragments; wet (fill)			
			2.6	Organic odor.
15	Brown PEAT; moist			15
				Organic odor.

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
AN-12				
PROJECT NO./NAME: 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION: 124-136 2nd Avenue, Brooklyn, New York		
APPROVED BY: S. Glash	LOGGED BY: C. Battista			
DRILLING CONTRACTOR/DRILLER: Aquifer Drilling & Testing, Inc. / S. Miller		GEOGRAPHIC AREA: Area A		
DRILL BIT DIAMETER/TYPE: 4.25-in. / Auger	BOREHOLE DIAMETER: 8-inches	DRILLING EQUIPMENT/METHOD: Mobile Drill B-61 / HSA	SAMPLING METHOD: 2" Split Spoon	START-FINISH DATE: 3/19/02-3/19/02
LAND SURFACE ELEVATION: (FT.)	DEPTH TO WATER: (Feet BLS)	BACKFILL: Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Light brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; moist (fill)	11, 9, 8	0.0	
		Light brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; moist (fill)	12, 10, 6	0.0	
		Dark brown fine to coarse Sand and Gravel, trace Silt, trace Brick, trace Coal Fragments; moist (fill)	7, 3, 6	0.0	
5		Light brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; moist to wet (fill)	9, 4	0.0	5
		Light brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; wet (fill)		0.0	
		Light brown to dark gray fine to coarse SAND, little Silt, trace Gravel; wet (fill)		2.4	Odor.
10		Dark gray to brown and green Silt and fine Sand, some Organic Material; wet (fill)		3.6	Odor. 10
		Brown to black stained fine to coarse SAND, little Silt, little Organic Material, trace Gravel, trace Coal Fragments; wet (fill)		4.0	Odor.
		Black stained fine to coarse SAND, trace Gravel, trace Silt, trace Coal Fragments; wet (fill)			

Bottom of boring 14 feet below land surface.

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SOIL BORING LOG

WELL NO. BNE-E-2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / C. Battista		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/11/02-1/11/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Dark brown fine to coarse SAND, trace Silt, trace Gravel, trace Brick; dry (fill)		2.1	
		Brown to black stained fine to coarse SAND, some Brick, some Concrete; moist (fill)		7.0	
5					5
		Black stained fine to coarse SAND, trace Silt, trace Coal Fragments, trace Ash; moist to wet (fill)		96.3	
				26.7	
		Black stained fine SAND; little Silt, trace Gravel; wet (fill)		5.5	
					Trace free product.
10					10
		Green to gray Peat and Clay, trace Silt; wet			
		Green to gray Peat and Clay, trace Sand, trace Silt; wet			
15					15

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. BNW-2 (BOW-2)	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/10/02-1/10/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Dark brown fine to coarse SAND, trace Gravel, trace Brick; dry (fill)			
				3.2	
					Free product.
		Gray to brown fine to medium SAND, some Silt, trace Gravel, trace Coal Fragments, trace Ash, trace Brick; moist to wet (fill)			
5				61.4	5
				126	
		Black stained fine to coarse SAND, some Silt, trace Gravel, trace Ash; wet (fill)			
10				665	Free product. 10
		Black stained fine to medium Sand and Silt, trace Gravel; wet (fill)			Odor and free product.
				175	
					Refusal at 13 feet below land surface.

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SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
BS-1 (SB-9)				
PROJECT NO./NAME: 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION: 124-136 2nd Avenue, Brooklyn, New York		
APPROVED BY: S. Glash	LOGGED BY: D.Moss			
DRILLING CONTRACTOR/DRILLER: Zebra Environmental Inc / L. Davis		GEOGRAPHIC AREA: Area B		
DRILL BIT DIAMETER/TYPE: 2-in. / Drive Sampler	BOREHOLE DIAMETER: 2-inches	DRILLING EQUIPMENT/METHOD: / Geoprobe	SAMPLING METHOD: 2" Macro-Core	START-FINISH DATE: 1/4/02-1/4/02
LAND SURFACE ELEVATION: (FT.)	DEPTH TO WATER: (Feet BLS)	BACKFILL: Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Brick; dry (fill)			
				1.8	
		Black stained coarse Sand and Gravel, trace Silt, trace Brick; dry (fill)			
5				253	5
		Black stained fine to medium Sand, and Silt, trace Gravel; wet (fill)		125	Strong odor.
		Gray Silt and Peat; wet		12.1	
		Gray SILT, little Sand, Little Clay; wet		11.8	
		Brown Peat and gray Silt, some Sand; wet		12.7	
10				6.1	10
				13.2	
		Gray to brown SILT, little Clay, trace Sand; wet			Free product.
		Brown SILT, little Sand, trace Gravel; wet		234	
				12.1	
		Black stained Sand and Silt; wet		59.5	
		Brown to black stained Sand and Silt; wet			
15				28.7	15
				37.2	

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. BS-2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/10/02-1/10/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Orange to brown fine to coarse SAND, trace Silt, trace Gravel, trace Concrete, trace Brick; dry (fill)		3.4	
1					1
2					2
3					3
4		Green to grey Peat and Clay, some Sand, some Silt;		7.6	4
5					5
6					6
7					7
8					8

Bottom of boring 8 feet below land surface.

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SOIL BORING LOG

WELL NO. CB-1	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. /		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 4.25-in. / Auger	BOREHOLE DIAMETER 8-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 1/17/02-1/17/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Concrete, trace Brick; dry (fill)			
1					
2					
			13	62.4	
3			26		
			38		
4			34		
		Green to black stained fine to medium SAND, some Silt, trace Gravel, trace Brick trace Coal; moist (fill)	8		
5			8		
			8	650	Strong odor.
6			8		
		Brick and Gravel, trace Sand; moist to wet (fill)	16		
7			31		
			46	960	Strong odor and free product.
8			29		
					Refusal at 8 feet below land surface.

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SOIL BORING LOG

WELL NO. CN-10N	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 2/28/02-2/28/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to tan fine to medium SAND, trace Gravel, trace Brick, trace Concrete; dry (fill)	17, 32, 35, 42		
		Brown to tan fine to medium SAND, trace Gravel, trace Brick, trace Concrete; dry (fill)	48, 45, 39, 47	1.4	
		Brown and green to black stained SILT, trace Sand, trace Gravel; wet (fill)	6, 2, 2, 2	0.0	
5		No recovery	2, 3, 1, 1		5
		Gray SILT, trace fine Sand, trace Gravel; wet (fill)	4, 3, 1, 1	0.0	
10		Grey fine Sand and Silt, trace Gravel; wet (fill)		0.0	10
		No recovery	3, 2, 1/12		
15		Peat and Clay; wet			15

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. CN-12	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/1/02-3/1/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to tan fine to coarse SAND, trace Gravel, trace Brick; dry (fill)	12		
			15		
			25		
			31		
		Brown to tan fine to coarse SAND, trace Gravel, trace Brick; dry (fill)	24	4.5	
			30		
			36		
			42		
		Green and brown to black stained fine Sand and Silt, trace coarse Sand, trace Gravel, trace Wood; wet (fill)	1		
5			1		5
			1	55.1	Slight odor.
			1		
		Brown to green fine to coarse SAND, little Silt, trace Gravel; wet (fill)	2		
			1		
			1	17.6	Slight odor.
			1		
		Dark brown to black stained fine to medium SAND, little Silt, trace Gravel; wet (fill)			
				37.8	
10		No recovery			10
		No recovery			
		Brown fine to medium SAND, some Gravel; wet (fill)			
15					15
				2.8	
		Green and gray Clay and Silt, little Peat; wet			

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
CN-5				
PROJECT NO./NAME: 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION: 124-136 2nd Avenue, Brooklyn, New York		
APPROVED BY: S. Glash	LOGGED BY: D.Moss			
DRILLING CONTRACTOR/DRILLER: Aquifer Drilling & Testing, Inc. / J. Philbin		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE: 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER: 4-inches	DRILLING EQUIPMENT/METHOD: CME-45 / Drive and Wash	SAMPLING METHOD: 2" Split Spoon	START-FINISH DATE: 2/20/02-2/20/02
LAND SURFACE ELEVATION: (FT.)	DEPTH TO WATER: (Feet BLS)	BACKFILL: Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Tan to fine to coarse SAND, trace Gravel, trace Brick, trace Concrete; dry (fill).	8, 21, 23, 31		
		Tan to black stained fine to coarse SAND, trace Gravel, trace Brick, trace Concrete; dry (fill)	15, 17, 22, 37	5.2	Slight odor.
		Brown to black stained fine to medium SAND, some Silt, trace Gravel; wet (fill)	2, 2, 1, 1	33.0	
5				4.0	Slight odor.
		Black stained medium to coarse SAND, little Gravel, trace Silt, trace fine Sand; wet (fill)		5.7	Slight odor.
		Brown to green SILT, little Clay, trace fine to coarse Sand, trace Gravel; wet (fill)		2.3	
10		Black stained medium to coarse SAND, little Gravel, trace Silt, trace Brick; wet (fill)		4.7	
		No recovery			
		Dark brown to black stained coarse Sand and Gravel, trace fine Sand, trace Silt; wet (fill)		3.8	
15		Peat and Clay; wet			

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. CN-6	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Simmons		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 2/6/00-2/6/00
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		CONCRETE			
		Black stained fine to medium SAND, trace Silt, trace Gravel, trace Brick, trace Coal Fragments; moist (fill)	20		
			38		
			25	9.7	Slight odor.
			15		
		Dark brown to black stained fine to medium SAND, some Silt; moist (fill)	12		
			7		
		Dark brown to black stained fine SAND, some Silt; moist (fill)	2		
5			2	1.5	5
		Black stained coarse SAND, little Ash, trace Silt, trace Gravel; wet (fill)	3		
			1	2.1	
		No recovery	2		
			1		
			1		
			1		
		No recovery	1		
			1		
			1		
10			1		10
		Gray to black stained fine to coarse Sand and Gravel, trace Silt, trace Wood, trace Coal; wet (fill)			
				0.0	
		Black stained coarse Sand and Coal Fragments, trace Glass; wet (fill)	6		
			3		
			3	0.0	
			1		
		Black stained coarse SAND, some Coal Fragments, trace Silt, trace Glass; wet (fill)			
15				2.7	15
		PEAT			

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. CN-7	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 2/20/02-2/20/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		CONCRETE			
		GRAVEL			
		Dark brown medium SAND, trace Silt, trace Gravel, trace Brick; moist (fill)			
		Black stained to tan medium SAND, little green Silt, trace Brick; moist (fill)		2.6	
		Black stained medium to coarse SAND, little Silt, trace Gravel; wet (fill)	7		
5			2		5
			2	1.9	
			4		
		Gray to black stained coarse Sand and Gravel, some Coal Fragments, trace Silt; wet (fill)	5		
			1		
			1	0.8	
			1		
		Gray coarse Sand and Gravel, trace Silt, trace Coal Fragments, trace Shell Fragments; wet (fill)			
				2.9	
10					10
		Gray coarse Sand and Gravel, little Silt, trace Coal Fragments, trace Ash; wet (fill)	4		
			2		
			1	2.1	
			1		
		Gray Gravel, little Sand, trace Shell Fragments, trace Ceramic Fragments; wet (fill)	4		
			3		
			2	5.3	
			1		
		Peat and Clay; wet			
15					15

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. CN-8	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 2/8/02-2/8/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Gray to brown medium to coarse SAND, trace Gravel, trace Brick, trace Concrete; moist (fill)	8		
			16		
			17		
			26		
		Gray to brown medium to coarse SAND, trace Gravel, trace Brick, trace Concrete; moist (fill)	15		
			22		
			18		
			27		
		Grey coarse SAND, some Gravel, trace Silt; wet (fill)			
5					5
		Grey coarse SAND, some Gravel, some Silt, little Coal Fragments; wet (fill)			
		Grey coarse SAND, some Gravel, some Silt, little Coal Fragments; wet (fill)	1		
			1		
			1		
10			1		10
		No recovery			
		Grey medium to coarse Coal Fragments, little Silt; wet (fill)			
		Grey coarse Sand and Gravel, some Peat, little Clay; wet			
15					15

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. CNE-3	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / Kari Carli		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/22/02-1/22/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Brick; moist (fill)			
				2.1	
		Brown to black stained fine to coarse SAND, little Silt, trace Gravel; moist (fill)			
5				65.0	Slight odor.
		Black stained fine to coarse SAND, little Brick, little Concrete, trace Silt; moist (fill)		183	
					Trace free product.
		Black stained fine SAND, little Silt, trace Brick; wet (fill)		171	
				320	
10					Odor and trace free product.
				57.4	
		Black stained fine to coarse SAND, trace Silt, trace Gravel; wet (fill)			
				72.4	
		Red to black stained GRAVEL, little Sand, little Silt, trace Wood; wet (fill)			
15				121	Free product.
		No recovery			
20					Bottom of boring 20 feet below land surface.

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SOIL BORING LOG

WELL NO. CW-1 (SB-14)	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Zebra Environmental Inc / L. Davis		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/7/02-1/7/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to medium SAND, trace Gravel, trace Brick; dry (fill)			
				8.1	
		Light brown fine to medium SAND, dry (fill)			
5					5
		Black stained fine to medium SAND, trace Gravel, trace Silt; wet (fill)		272	
				63.2	Free product.
		Black stained Sand and Gravel, trace Silt; wet (fill)			
10					10
				37.1	Free product.
		Brown to green SILT, little Sand, trace Gravel; wet			
				75.2	
15					15
		PEAT			

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. SB-15-SW	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / Kari Carli		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/23/02-1/23/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to tan fine to coarse SAND, trace Gravel, trace Brick; moist (fill)			
				1.8	
		Brown to black stained fine to medium SAND, trace Gravel, trace Silt, trace Brick; moist (fill)			
5				44.7	
		Green to black stained fine SAND, trace Silt, trace Gravel, trace Brick; moist (fill)			
				134	Odor and trace free product.
		Black stained to green Silt and fine Sand; wet (fill)			Odor and trace free product.
				108	
		Black stained to brown fine SAND, trace Silt, trace Gravel; wet (fill)			
10				73.2	
		Brown to black stained fine Sand and Silt, trace Gravel; wet (fill)			
				127	
				138	Odor and free product.
15				58.0	
		Red to black stained fine SAND, some Gravel, trace Silt; wet			
				139	Odor and free product.
		Black stained fine Sand and Silt, trace Gravel; wet (fill)			
				102	
					Free product.
				180	
20					

Bottom of boring 20 feet below land surface.

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SOIL BORING LOG

WELL NO. DN-2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / Kari Carli		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/23/02-1/23/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to black stained fine to coarse SAND, trace Gravel, trace Brick; dry (fill)		23.4	
		Grey fine SAND, trace Silt; dry (fill)			
5		Tan to black stained fine SAND, trace Ash; moist (fill)		348	5
		Black stained fine SAND; wet (fill)			
		Black stained SILT, some fine Sand, trace Gravel; wet (fill)		291	Free product.
		Black stained fine SAND, trace Silt, trace Gravel; wet (fill)		452	
		Dark green to tan fine Silt and fine Sand, trace Clay, trace Gravel; wet (fill)		88.2	Strong odor and free product.
10				37.8	Free product. 10
		Green to black stained fine SAND, some Silt, trace Gravel; wet (fill)		21.2	
				78.8	Slight odor and free product.
		Green to tan fine SAND, little Silt; wet (fill)			
15				27.2	15
		Black stained fine SAND, some Silt; wet (fill)		237	Slight odor.
		Green to black stained Sand, and Silt; wet		522	
		Black stained fine SAND, trace Silt; wet		25.8	
20				179	Trace free product. 20
					Bottom of boring 20 feet below land surface.

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SOIL BORING LOG

WELL NO. DS-2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue Brooklyn, New York		
APPROVED BY S. Glash	LOGGED BY D.Moss			
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / Kari Carli		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/22/02-1/22/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to gray medium to coarse SAND, trace Gravel, trace Ash; moist (fill)			
				12.7	
		Brown to black stained fine SAND, some black fine to medium Sand, little Silt; moist (fill)			Strong odor.
5				12.7	
		Brown SILT, little Sand, trace Gravel; wet (fill)			
				38.7	Trace free product.
		Brown to dark green SILT, little fine Sand; wet (fill)			
10				6.1	Sheen.
		Dark brown to black stained fine SAND, little Silt, trace Gravel; wet (fill)			
				31.7	
15					
		Dark brown fine SAND, little Silt; wet (fill)			
					Trace free product.
20					

Bottom of boring 20 feet below land surface.

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SOIL BORING LOG

WELL NO. GH-21 (SB-8)	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Zebra Environmental Inc / L. Davis		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/4/02-1/4/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown medium to coarse SAND, trace Silt, trace Gravel, trace Brick; dry (fill)		0.4	
		Black stained fine stained to coarse Sand and Silt, trace Gravel, trace Roots; moist (fill)		13.3	
5				32.2	
				20.1	Strong odor.
				59.9	
		Brown fine to medium Sand and Silt, trace Gravel, trace Brick; wet (fill)		19.4	
				38.3	
10		Black stained fine to medium Sand and Silt, trace Gravel, trace Coal Fragments, trace Brick; wet (fill)		10.2	Free product.
				55.8	
		Black stained fine to medium Sand and Silt, trace Gravel, trace Coal, trace Brick; wet (fill)		26.5	
				62.5	
				29.9	
15				49.4	
		PEAT			

Bottom of boring 16 feet below land surface.

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SOIL BORING LOG

WELL NO. SB7-N2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue Brooklyn, New York		
APPROVED BY S. Glash	LOGGED BY D.Moss			
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/9/02-1/9/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Brick; dry (fill)		1.9	
1					1
2					2
3		Black stained fine SAND, some Silt; moist (fill)			3
4		Black stained fine to coarse SAND, some Silt, little Gravel, trace Wood; moist (fill)		19.5	Slight odor. 4
5					Slight odor. 5

Refusal at 5 feet below land surface.

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SOIL BORING LOG

WELL NO. SB7-S2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/9/02-1/9/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Brick; dry (fill)			
		Black stained fine SAND, some Silt; moist (fill)		9.4	
		Black stained fine to medium SAND, trace Silt, trace Gravel, trace Brick; dry (fill)			
5				140	Strong odor.
		Brown fine Sand and Silt, trace Gravel; wet (fill)		56.8	
		Gravel and Brick, some gray Silt, some Sand; wet (fill)			
10					
		Brown to green Peat and Clay; wet			
15					

Bottom of boring 18 feet below land surface.

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SOIL BORING LOG

WELL NO. GH-1A	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY R. Kovacs	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / D. Pepe		GEOGRAPHIC AREA Gas Holder 1		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/15/02-3/20/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to dark brown fine to coarse SAND, little Brick; dry (fill)		13.1	
		Brown to dark brown fine to medium SAND, some Brick; dry (fill)		27.7	
		Brown to dark brown fine to medium Sand; dry (fill)		9.8	Odor.
5					5
		Light brown to dark brown fine to medium Sand, some Brick, little Ash; dry (fill)		11.7	
		Brown to reddish brown fine to medium SAND, some Brick, trace Gravel; dry (fill)		12.1	
10		Brown medium SAND, some Brick; dry (fill)		7.3	10
		Brown medium SAND, trace Cobbles; dry (fill)		9.2	
		Brown fine to medium SAND, trace Brick; dry (fill)		9.1	
15					15
		Brown fine to medium SAND, some Gravel, some Brick; dry (fill)		10.3	
		CONCRETE			
		Grey fine Sand and Silt, trace Gravel, trace Concrete; wet			
20		Black stained fine SAND, trace Gravel, trace Concrete; wet		179	20
					Free product.
		Black stained fine SAND, some Concrete; wet			

Bottom of holder at 24 feet below land surface.

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SOIL BORING LOG

WELL NO. GH-1B	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue Brooklyn, New York		
APPROVED BY S. Glash	LOGGED BY C. Battista			
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / S. Miller		GEOGRAPHIC AREA Gas Holder 1		
DRILL BIT DIAMETER/TYPE 4.25-in. / Auger	BOREHOLE DIAMETER 8-inches	DRILLING EQUIPMENT/METHOD Mobile Drill B-61 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/18/02-3/18/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, some Gravel, little Brick, little Concrete; dry (fill)			
		Brown fine to coarse SAND, some Gravel, little Brick, little Concrete; dry (fill)			
		Brown fine to coarse SAND, some Gravel, trace Brick, trace Concrete; dry (fill)		6.5	
5					5
		Brown fine to coarse SAND, little Brick, trace Coal Fragments, trace Concrete, trace Gravel; dry (fill)		2.9	
		Brown fine to coarse SAND, little Brick, little Gavel, trace Coal Fragments; dry (fill)		5.2	
10					10
		Brown fine to coarse SAND, little Brick, little Gravel, trace Concrete, trace Coal Fragments; dry (fill)		8.7	
		Brown fine to coarse SAND, some Gravel, little Brick, trace Coal Fragments; dry (fill)		12.3	
		Brown fine to coarse SAND, some Gravel, little Brick, trace Coal Fragments; dry (fill)			
15					15
					Bottom of boring 15 feet below land surface.

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SOIL BORING LOG

WELL NO. GH-1C	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D.Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA Gas Holder 1		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/18/02-3/18/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Brick, trace Gravel, trace Concrete; moist (fill)			
		Brown fine to coarse SAND, trace Brick, trace Gravel, trace Concrete; moist (fill)			
5		Brown fine to coarse SAND, trace Brick, trace Gravel, trace Concrete; moist (fill)		2.3	
		Brown medium to coarse SAND, trace Gravel, trace Brick, trace Silt; moist (fill)		0.0	
		Brown medium to coarse SAND, trace Gravel, trace Brick; moist (fill)		0.0	
10		Brown medium to coarse SAND, trace Silt, trace Gravel, trace Brick, trace Coal Fragments; wet (fill)		0.0	
		Brown medium to coarse SAND, trace Silt, trace Gravel, trace Brick, trace Coal Fragments; wet (fill)		15.2	
15		Brown to tan fine to coarse SAND, trace Gravel, trace Brick, trace Concrete; wet (fill)		3.7	
		Tan to black stained fine to coarse SAND, trace Gravel, trace Concrete, trace Brick; wet (fill)		43.1	Odor.

Bottom of soil boring 17.5 feet below land surface.

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SOIL BORING LOG

WELL NO. GH-3B	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA Gas Holder 3		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-75 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/15/02-3/19/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
1		Brown coarse to fine SAND, trace Silt, trace Gravel, trace Brick; dry to wet (fill)			Lithology from 0 to 5 feet interpreted from previous Site investigation.
2					
3					
4					
5		Black stained fine to coarse SAND, some Gravel, little Silt; wet (fill)	4		Odor and free product.
6			4		
7		Concrete and 1.5 inches of steel	50/1		
8		Wood and Concrete fragments; wet	80		Odor and trace free product.
			38		
			25		
9			21		
10		Peat			Free product in groundwater around sample in split spoon; no product observed within the sample.
11					Bottom of boring 11 feet below land surface.

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WELL CONSTRUCTION LOG

WELL NO. **RW-1**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / S. Miller**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **Mobile Drill B-61 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/18/02-4/1/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, some Gravel, trace Brick; dry to wet (fill)			
5				Strong odor
	Brown fine to coarse SAND, some Silt, little Gravel, trace Brick; dry to wet (fill)		21.8	Sheen and strong odor
	No recovery			
10				
	Brown to dark brown fine to coarse Sand, and Gravel, little Silt, little Wood; wet (fill)		29.3	Sheen and strong odor
	Brown to red fine to coarse SAND, some Silt, little Gravel, trace Brick, trace Concrete; wet (fill)		13.7	
15	Green to grey PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
	Dark gray Silt and fine Sand; wet		4.5	Strong odor
20				
	Dark gray Silt and fine Sand; wet		5.8	
25				
	Dark gray Silt and fine Sand, trace Gravel; wet		10.4	
30				
	Brown Silt and fine Sand; wet			Sheen and strong odor
35				
	Brown Silt and fine Sand; wet		79.4	Sheen and strong odor
40				
	Brown Silt and fine Sand; wet			Trace free product
45				
	Brown Silt and fine Sand; wet		30.1	Bottom of well 47.5 feet below land surface
50				

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WELL CONSTRUCTION LOG

WELL NO. **RW-2**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / S. Miller**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **Mobile Drill B-61 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/21/02-3/29/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, little Gravel, trace Silt, trace Brick, trace Coal Fragments; dry to wet (fill)			
5					
10					
		Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		0.3	
		Brown fine to medium SAND, trace Silt, trace Gravel; wet (fill)		0.3	
15		Brown fine to medium SAND, trace Silt, trace Gravel; wet (fill)		0.6	
		Brown fine to medium SAND, trace Silt, trace Gravel, trace Wood; wet (fill)		0.1	
		Brown fine to medium SAND, trace Silt, trace Gravel, trace Wood; wet (fill)		0.1	
20		Brown Silt and fine Sand, little coarse Gravel; wet			Strong odor
				126	
25		Brown Silt and fine Sand, little Gravel; wet			Strong odor
				303	
30		Brown Silt and fine Sand, little Gravel; wet			Trace free product
				493	
				274	
35		Brown Silt and fine Sand, little Gravel; wet			Free product
				311	
40		Brown Silt and fine Sand, little Gravel; wet			Free product
				893	
45		Dark gray to brown fine SAND, little Silt; wet			Free product
				>2000	
					Bottom of well 47.5 feet below land surface
50					

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WELL CONSTRUCTION LOG

WELL NO. **RW-3**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/21/02-3/28/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **35.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Gravel, trace Brick; wet at 5 (fill)			
5				
10				
	Brown fine to coarse SAND, little Gravel, little Brick, trace Silt; wet (fill)		0.0	
	Brown fine to coarse SAND, little Gravel, little Brick, trace Silt; wet (fill)		0.0	
15	Brown fine to coarse SAND, trace Gravel, trace Silt; wet (fill)		1.4	
	Brown fine to medium SAND, trace Silt, trace Gravel; wet (fill)		5.7	Strong odor and trace free product
	Brown fine to medium SAND, trace Silt, trace Gravel; wet (fill)		1.4	Trace free product
20	Brown fine to coarse SAND, little Silt; wet		27.4	Odor
25	Brown fine to coarse SAND, little Silt, trace Gravel; wet		15.1	Odor
30	Brown fine to coarse SAND, little Silt, trace Gravel; wet		152	Free product
35	Brown SILT, some fine Sand, trace coarse Sand; wet		98.1	Odor and free product
40	Brown fine SAND, little Silt, trace Gravel; wet		237	Odor and free product
45	Brown fine SAND, little Silt, trace Gravel; wet		1681	Free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-4**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/21/02-3/28/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **35.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet at 5 (fill)			
5				
10				
	Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet (fill)		0.1	
	Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet (fill)		1.6	Odor
15	Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet (fill)		1.6	Odor
	Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet (fill)		0.9	Slight odor
	Brown fine to medium SAND, trace Gravel, trace Silt; wet		1.9	
20				
	Brown fine to medium SAND, trace Gravel; wet (fill)		4.7	
	Gray fine SAND, little Wood; wet (fill)			Black staining and strong Odor
	Brown fine to coarse SAND, little Silt, trace Gravel; wet		26.8	
25				
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		7.2	Odor and trace free product
30				
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		5.6	Odor and trace free product
35				
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		14.9	Odor and trace free product
40				
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		35.1	Free product
45				
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		87.4	Free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-5**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / S. Miller**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **Mobile Drill B-61 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/21/02-3/27/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown coarse to fine SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5				5
10				10
	Brown fine SAND, trace Silt, trace Gravel; wet (fill)		0.0	
	Brown fine SAND, trace Silt, trace Gravel; wet (fill)		3.3	
15	Brown fine SAND, little Silt, trace Gravel; wet (fill)		9.5	Black staining 15
	No recovery			
	Green to gray Peat and Clay, trace Sand; wet		14.6	Thickness of peat interval interpreted from previous Site investigation
20				20
	Brown fine to coarse SAND, little Silt, little Gravel; wet		2.6	Strong odor
25				25
	Brown fine to coarse SAND, some Silt; wet		1.7	Strong odor
30				30
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		106	Strong odor
35				35
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		134	Trace free product
40				40
	Brown fine to coarse SAND, some Silt; wet		281	Free product
45				45
	Brown Silt and fine Sand; wet		375	Odor and free product
50				50
				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-6**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/21/02-3/25/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5		Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
10		Brown fine SAND, little Silt, trace Brick; wet (fill)		1.6	Odor and Black Staining
		Green to gray Peat and Clay, trace brown Sand; moist		7.3	
15		Fine SAND, trace Gravel, trace Silt; wet		5.9	Thickness of peat interval interpreted from previous Site investigation Black staining Odor
20		Gray fine SAND, little Silt, trace Gravel; wet		1.9	Black staining Odor
25		Gray fine SAND, little Silt, trace Gravel; wet		4.7	Slight Odor
30		Grey SILT, Some fine Send; wet		156	Odor
35		Brown to green fine SAND, some Silt; wet		350	Odor
40		Brown to green fine SAND, some Silt; wet		1254	Odor
45		Brown to green fine SAND, some Silt; wet		1824	Odor
50					Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-7**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / S. Miller**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **Mobile Drill B-61 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/21/02-3/25/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5				5
	No recovery			
10	Fine SAND, some Gravel, trace Silt; wet (fill)		0.7	10 Black staining
	Brown fine SAND, little Silt; wet (fill)		1.4	Black staining
15	Brown fine SAND, little Silt; wet (fill)		1.9	15 Odor and black staining
	Green to gray Peat and Clay; wet		7.3	Odor Thickness of peat interval interpreted from previous Site Investigation
20	Brown fine to coarse SAND, some Silt, trace Gravel; wet		10.2	20 Odor
25	Brown fine to coarse SAND, some Silt, trace Gravel; wet		11.7	25 Odor
30	No recovery			30
35	Dark Gray fine to medium SAND, some Silt; wet		27.1	35
40	Dark Gray fine to medium SAND, some Silt, little Gravel; wet		21.0	40 Odor
45	Dark gray Silt and fine Sand; wet		30.6	45 Sheen and odor
50				50 Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-8**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / S. Miller**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **Mobile Drill B-61 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-4/2/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse fine SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5					5
10		Brown fine to coarse SAND, trace silt, trace concrete; wet (fill)			10
		Brown fine to medium SAND, trace Silt; wet (fill)			Black staining and trace free product
15		Brown PEAT; wet			Thickness of peat interval interpreted from previous Site investigation 15
		Brown fine to coarse SAND, little Silt, trace Gravel; wet		38.5	
20		Brown fine to coarse SAND, little Silt; wet		17.1	Strong odor and trace free product Slight odor and Sheen 20
25		Brown fine to coarse SAND, little Silt, trace Gravel; wet		0.0	Slight odor and Sheen 25
30		Brown to dark gray fine to medium SAND, some Silt, little Clay; wet		333	Odor 30
35		Brown to dark gray fine to medium SAND, some Silt, little Clay; wet		235	Odor 35
40		Dark gray to brown fine SAND, little Silt; wet		427	Odor 40
45		Dark gray to brown fine SAND, little Silt; wet		236	Odor 45
50					Bottom of well 49.5 feet below land surface 50

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WELL CONSTRUCTION LOG

WELL NO. **RW-9**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-4/2/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5				5
10	Brown WOOD; wet (fill)		120	Free product
	Brown fine SAND, little Silt, trace Gravel; wet (fill)		180	Black staining Odor and free product
15	Green to tan fine to medium SAND, little Silt; wet (fill)		109	Trace free product
	Green to brown fine SAND, some Silt, trace Peat; wet (fill)		57.6	
20	Brown PEAT; moist			
	Black fine to coarse SAND, little Gravel; wet		84.9	Thickness of peat interval interpreted from previous Site Investigation Odor and free product
25	Black fine to coarse SAND, some Silt, trace Gravel; wet		28.5	Black staining Trace free product
30	Black to gray SILT, little fine Sand; wet		66.8	Black staining Odor and trace free product
35	Brown Silt and fine Sand, trace coarse Sand; wet		28.2	Odor and sheen
40	Brown Silt and fine Sand, trace coarse Sand; wet		19.7	Odor and sheen
45	Brown Silt and fine Sand, trace coarse Sand; wet		27.1	Odor and sheen
50				Bottom of well 49.5 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-10**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **R. Kovacs**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-4/1/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; dry to wet (fill)			
5				5
10	Green to brown fine SAND, little Silt, trace Gravel; wet (fill)		8.2	Black staining
	Green to brown fine SAND, little Silt; wet (fill)		8.1	Black staining Slight Odor
15	Green to brown fine SAND, little Silt; wet (fill)		6.0	Black staining
	Green to brown fine to coarse SAND, little Silt, little Peat at 18; wet (fill)		8.7	Black staining
	Brown PEAT; moist		54.0	Thickness of peat interval interpreted from previous Site investigation
20				20
	Brown to light brown fine SAND, some Silt; wet		59.0	Odor and sheen
25	Brown to reddish brown fine to medium SAND, some Silt; wet		96.5	Free product
30	Brown to light brown fine to medium SAND, some Silt; wet		219	Odor and free product
35	Brown fine to medium SAND, some Silt; wet		110	Odor and free product
40	Brown SILT, some medium Sand; wet		172	Odor and free product
45	Brown SILT, some fine to medium Sand; wet		162	Odor and free product
50				50
				Bottom of well 50 feet below land surface

BORING/WELL RECOVE-1.GPJ ROUX.GDT 6/11/02

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WELL CONSTRUCTION LOG

WELL NO. **RW-11**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-3/29/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, little Gravel, trace Brick, trace Silt; wet at 6 (fill)			
5				5
10				10
	Brown fine to coarse SAND, little Gravel, trace Brick, trace Silt; wet (fill)		50.0	Black staining
	Brown fine to coarse SAND, little Gravel, trace Brick, trace Silt; wet (fill)		71.9	Black staining
15	Brown fine to medium SAND, little Gravel, little Silt; wet (fill)		43.9	15
	Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; wet (fill)		31.2	
	Brown PEAT; moist		138	
20				Thickness of peat interval interpreted from previous Site investigation 20
	Brown fine to coarse SAND, little Silt, trace Gravel; wet		7.2	
25				25
	Brown fine to coarse SAND, some Silt; wet		7.2	Odor and trace free product
30				30
	Brown fine to coarse SAND, some Silt; wet		23.2	Trace free product
35				35
	Brown fine to coarse SAND, some Silt; wet		17.6	Trace free product
40				40
	Brown Silt and fine Sand, trace coarse Sand, trace Gravel; wet		1124	Trace free product
45				45
	Brown Silt and fine Sand, trace coarse Sand, trace Gravel; wet		280	
50				50
				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-12**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-3/27/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC**	TOTAL LENGTH **25.0**	DIA. **4-inch** SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; dry to moist (fill)			
5	BRICK; dry (fill)			
	Brown fine to coarse SAND, some Gravel, trace Brick, trace Silt; wet at 7 (fill)			
10	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)			Sheen and odor
	Brown fine to coarse SAND, little Silt, little Gravel; wet (fill)		55.3	Slight odor
15	Brown fine to coarse SAND, little Silt, little Gravel; wet (fill)		72.2	Slight odor
	Brown fine to coarse SAND, some Gravel, little Silt; wet (fill)		74.9	
	Brown PEAT; moist		1.7	Thickness of peat interval interpreted from previous Site Investigation
20	Brown fine to coarse SAND, some Silt, trace Gravel; wet		11.7	
25	Brown fine to coarse SAND, some Silt, trace Gravel; wet		19.3	
30	Brown fine to coarse SAND, some Silt, trace Gravel; wet		4.1	
35	Brown fine to coarse SAND, some Silt, trace Gravel; wet		35.1	Odor
40	Brown fine to coarse SAND, some Silt, trace Gravel; wet		174	Odor and trace free product
45	Brown fine to coarse SAND, some Silt, trace Gravel; wet		294	Odor and trace free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-13**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-3/26/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; dry to moist (fill)			
5	Brick and Concrete; dry (fill)			
	Brown fine to coarse Sand and Brick; wet (fill)		80.8	Black staining
	Brown PEAT; moist			
	Brown PEAT; moist			
10	Brown PEAT; moist		73.9	
	Fine SAND, some Silt, trace Gravel; wet			Black staining
15			21.7	Odor
	Brown to green fine SAND, some Silt; wet			Odor
			17.1	
20	Brown fine SAND, little Silt; wet			Slight odor
			9.7	
25	Brown SILT, little fine Sand, trace Gravel; wet			Odor and trace free product
			118	
30	Brown SILT, little fine Sand, trace Gravel; wet			Odor and trace free product
			15.6	
35	Brown fine SAND, some Silt; wet			Odor
			5.3	
40	Brown to green SILT, little fine Sand; wet			Odor and trace free product
			459	
45	Brown SILT, some Sand; wet			Odor
			154	
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-14**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / S. Miller**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **Mobile Drill B-61 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-3/26/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, little Gravel, trace Silt; dry (fill)			
5	Brown fine to coarse SAND, little Gravel, trace Silt; dry to moist (fill)		49.5	5
	Brown fine to coarse SAND, little Gravel, trace Silt; wet (fill)		45.9	
	Brown PEAT; moist			
10	Brown PEAT; moist to wet			10
			1.3	
15	Dark brown SAND, some Silt, trace Peat; wet			15
			2.7	
20	Dark brown PEAT; moist to wet			20
			125	
25	Dark brown fine SAND, little Silt; wet			25 Odor and trace free product
			147	
30	Dark brown fine SAND, little Silt; wet			30 Sheen
			413	
35	Dark brown fine SAND, little Silt; wet			35 Trace free product
			475	
40	Dark brown fine SAND, little Silt; wet		>2000	40 Sheen
45	Dark brown fine SAND, little Silt; wet			45
			524	
50				50 Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-15**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/4/02-4/4/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	CONCRETE			
	Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5				5
	Brown to green fine SAND, little Silt, trace Gravel, trace Brick, trace Concrete; wet (fill)		73.7	Odor and sheen
10	Brown fine SAND, little Silt, trace coarse SAND, trace Gravel; wet (fill)		147	10
	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		51.8	
	Brown fine SAND, some Silt, trace coarse SAND; wet (fill)		7.1	
15	Brown PEAT; moist			15
				Thickness of peat interval interpreted from previous Site investigation
	Brown fine SAND, little Silt, trace coarse Sand; wet		29.2	
20				20
	Brown fine Sand and Silt, trace coarse Sand; wet		89.7	Slight odor
25				25
	Brown fine SAND, little Silt, trace coarse Sand; wet		154	Slight odor
30				30
	Brown fine SAND, little Silt, trace Coarse Sand; wet		243	
35				35
	Brown fine SAND, little Silt, trace Coarse Sand; wet		172	Trace free product
40				40
	Brown fine SAND, little Silt, trace Coarse Sand; wet		612	Trace free product
45				45
	Brown fine Sand and Silt; wet		684	Odor and trace free product
50				50
				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-16**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/5/02-4/5/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	CONCRETE			
	Brown to dark brown fine to coarse SAND, some Gravel, trace Silt; wet at 4 (fill)			
5	Dark gray fine to coarse Sand and Gravel, little Silt; wet (fill)		7.9	Slight odor
10	Brown to dark gray GRAVEL, some fine to coarse Sand, trace Silt, trace Ash, trace Cinders; wet (fill)		5.8	
	Brown to dark gray fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		4.1	
15	Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		26.4	
	Brown PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
20	Brown Silt and fine Sand, little Gravel; wet			
25	Brown Silt and fine Sand, little Gravel; wet		11.5	odor
30	Brown Silt and fine Sand, little Gravel; wet		6.1	odor
35	Brown Silt and fine Sand, little Gravel; wet		10.0	odor
40	Dark gray fine SAND, some Silt, little Clay; wet		62.3	
45	Dark gray fine SAND, some Silt, little Clay, little Gravel; wet		4.4	Trace free product
50				Bottom of well 49 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-17**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **R. Kovacs**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/9/02-4/9/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	CONCRETE			
	Brown to dark brown fine to coarse SAND, some Silt; wet (fill)		13.0	Slight odor
5				
	Brown to dark brown fine to medium SAND, some Silt; wet (fill)		14.0	Slight odor
10				
	Brown to dark brown fine Sand and Silt; wet (fill)		22.3	Slight odor
	Brown fine to medium SAND; wet (fill)		12.7	
	Brown fine Sand and Silt; wet (fill)		12.3	Slight odor
15	Brown to reddish brown fine to medium SAND; wet (fill)		10.7	Slight odor
	Brown PEAT; moist		7.4	Thickness of peat interval interpreted from previous Site investigation
	Brown fine to medium SAND; wet			Slight odor
20				
	Brown to dark brown fine SAND; wet		10.7	Slight odor
25				
	Brown to dark brown fine SAND; wet		11.9	Slight odor
30				
	Brown to dark brown fine SAND; wet		14.9	Slight odor
35				
	Brown fine to medium SAND; wet		9.7	Slight odor
40				
	Brown fine to medium SAND; wet		47.3	Odor and trace free product
45				
	Brown fine to medium SAND; wet		59.9	Odor and trace free product
50				Bottom of well 50 feet below land surface

BORING/WELL RECOVE-1.GPJ ROUX.GDT 6/11/02

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WELL CONSTRUCTION LOG

WELL NO. **RW-18**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/19/02-4/19/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
CONCRETE			
Brown fine to coarse SAND, little Silt, trace Brick, trace Gravel; wet at 4 (fill)			
Brown fine to coarse SAND, little Silt, trace Brick, traco Gravel; wet (fill)		0.0	
Brown fine to coarse SAND, little Silt, trace Brick, trace Gravel; wet (fill)		0.0	
Brown PEAT; moist		8.3	Strong organic odor Thickness of peat interval interpreted from previous Site investigation
Brown fine to coarse SAND, some Peat, little Silt, trace Gravel; wet		0.0	
Brown fine to coarse SAND, some Peat, some Silt, trace Gravel; wet		0.0	
Brown fine to coarse SAND, some Silt, trace Peat, trace Gravel; wet		0.0	
Brown fine to coarse SAND, some Silt, trace Peat, trace Gravel; wet		0.5	
Brown to dark gray fine SAND, little Silt, trace Gravel; wet			
Brown to dark gray fine SAND, little Silt, trace Gravel; wet		5.8	
Brown to dark gray fine SAND, little Silt, trace Gravel; wet		0.0	
			Bottom of well 50 feet below land surface

BORING/WELL RECOVE~1.GPJ ROUX.GDT 6/11/02

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WELL CONSTRUCTION LOG

WELL NO. **RW-19**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D.Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/18/02-4/18/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			
	Brown fine to coarse SAND, little Silt, trace Brick, trace Gravel; wet at 4 (fill)			
5				5
10				10
	Brown fine SAND, trace Silt, trace coarse Sand, trace Gravel; moist (fill)		0.9	
	Brown fine SAND, trace Silt; wet (fill)		0.7	
15	Peat and green-grey CLAY; moist			Thickness of peat interval intrepreted from previous Site investigation 15
	Brown fine SAND, little Silt, trace Gravel; wet		1.8	
20	Brown fine SAND, little Silt; wet		0.0	20
25	Brown fine SAND, little Silt; wet		0.0	Odor 25
30	Brown fine SAND, little Silt, trace coarse Sand; wet		0.7	Odor 30
35	Brown fine SAND, little Silt, trace coarse Sand; wet		0.0	Odor 35
40	Brown fine SAND, little Silt; wet		0.0	Odor 40
45	Brown fine SAND, little Silt; wet		0.0	Odor 45
50				50 Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-20**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/17/02-4/17/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	CONCRETE			
	Dark brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5				5
				Odor
			13.3	
10				10
	Brown to dark green fine to coarse SAND, little Gravel, trace Silt, trace Brick; wet (fill)		11.4	
	Brown fine to coarse SAND, little Gravel, trace Silt, trace Brick; wet (fill)		12.0	
15	Brown PEAT; moist			15
				Thickness of peat interval interpreted from previous Site investigation
	Brown medium to coarse SAND, little Silt, trace Gravel, trace Peat; wet		10.5	
				Slight odor
20				20
	Brown fine SAND, little Silt; wet			
			6.5	
25				25
	Brown fine SAND, little Silt; wet			Odor
			21.9	
30				30
	Brown fine SAND, little Silt; wet			
			3.8	
35				35
	Brown fine SAND, little Silt, trace Gravel; wet			
			6.4	
40				40
	Dark gray to light brown fine to medium SAND; wet			
			4.3	
45				45
	Dark gray to light brown fine to medium SAND, trace Silt, trace Gravel; wet			
			5.2	
50				50
				Bottom of well 49.5 feet below land surface.

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WELL CONSTRUCTION LOG

WELL NO. **RW-21**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/16/02-4/16/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		CONCRETE			
		Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5					5
10		Brown fine SAND, little Silt, trace coarse Sand; wet (fill)		32.1	10
		Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		11.6	
15		Brown Peat and green to gray Silt and Clay; moist			15
				5.0	Thickness of peat interval interpreted from previous Site investigation
		Brown fine SAND, little Silt; wet			
20					20
		Brown fine SAND, little Silt, trace coarse Sand; wet		10.8	
25		Brown fine SAND, little Silt; wet			25
				52.9	Strong odor
30		Brown fine SAND, little Silt; wet			30
				87.4	Strong odor
35		Brown fine SAND, little Silt; wet			35
				28.6	Slight odor
40		Brown fine SAND, little Silt; wet			40
				18.8	Slight odor
45		Brown fine SAND, little Silt; wet			45
				16.4	Slight odor
50					50
					Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-22**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/15/02-4/15/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			
	Brown fine to coarse SAND, trace silt, trace Brick, trace Concrete, trace Gravel; dry to wet (fill)			
5				5
10	Brown fine SAND, trace Silt; wet (fill)		699	10
	Brown fine to coarse SAND, trace Silt; wet (fill)		>2000	Odor and black staining
15	Brown fine to coarse SAND, little silt; wet (fill)		5.7	15
	Brown fine SAND, little Silt; wet (fill)		3.7	
	PEAT, Green-Gray Clay and fine Sand		27.8	Thickness of peat interval interpreted from previous Site investigation
20	Brown to gray fine SAND, little Silt, trace coarse Sand, trace Gravel; wet		0.0	20
25	Brown to gray fine SAND, little Silt, trace coarse Sand, trace Gravel; wet		11.9	25
30	Brown to gray fine SAND, little Silt, trace coarse Sand, trace Gravel; wet		0.0	30
35	Brown to gray fine SAND, little Silt, trace coarse Sand, trace Gravel; wet		0.0	35
40	Brown fine SAND, little silt; wet		2.1	40
45	Brown fine SAND, little silt; wet		0.0	45
50				50

Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-23**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/10/02-4/10/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			
	Brown fine to coarse SAND, trace Brick, trace Concrete, trace Gravel; dry to wet (fill)			
5				5
10	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		1354	Odor and trace free product
	Brown fine Sand and Silt, trace coarse Sand; wet (fill)		72.8	Odor
15	Brown fine SAND, little Silt, trace Gravel; wet (fill)		352	Odor
	PEAT and Green-Gray CLAY, trace Shells; moist			Thickness of peat interval interpreted from previous Site investigation
	Brown fine to coarse SAND, little Silt, trace Gravel; wet		92.5	Odor
20	Brown fine to coarse SAND, little Silt, trace Gravel; wet		50.7	Odor
25	Brown fine to coarse SAND, little Silt, trace Gravel; wet		25.2	Odor
30	Brown fine to coarse SAND, little Silt; wet		40.1	Odor
35	Brown fine to coarse SAND, little Silt; wet		13.7	Odor
40	Brown fine to coarse SAND, little Silt; wet		9.6	Odor
45	Brown fine to coarse SAND, some Silt; wet		12.7	Odor
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-25**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/11/02-4/11/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Concrete			
		Brown fine to coarse SAND, trace Brick, trace Concrete, trace Gravel; dry to wet (fill)			
5					5
10		Brown fine SAND, little Silt, trace Gravel; wet (fill)		8.1	10
		Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		198	Odor
15		Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		478	Odor 15
		PEAT and Green-Gray CLAY; moist			Odor
					Thickness of peat interval interpreted from previous Site investigation
20		Brown fine to coarse SAND, little Silt, trace Gravel; wet		518	20
		Brown fine to coarse SAND, little Silt, trace Gravel; wet			Odor
				610	
25		Brown fine to coarse SAND, little Silt; wet			25
				31.4	
30		Brown fine to coarse SAND, little Silt; wet			30 Odor
				231	
35		Brown fine SAND, little Silt, trace coarse Sand; wet			35 Odor
				315	
40		Brown fine SAND, some Silt, trace coarse Sand; wet			40 Odor
				136	
45		Brown fine Sand and Silt; wet			45 Odor
				246	
50					50 Bottom of well at 50 feet below land surface

BORING/WELL RECOVE~1.GPJ ROUX.GDT 6/11/02

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WELL CONSTRUCTION LOG

WELL NO. **RW-27**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/12/02-4/12/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			
	Brown fine to coarse SAND, trace Brick, trace Concrete, trace Gravel; dry to wet (fill)			
5				5
10				10
	Brown fine to coarse SAND, little Gravel; wet (fill)		1.7	
	Brown fine to coarse SAND, little Gravel; wet (fill)		6.9	
	Brown fine to coarse SAND, little Gravel, trace Silt; wet (fill)		3.1	
15				15
	PEAT and Green-Gray CLAY; moist		2.7	Thickness of peat interval interpreted from previous Site investigation
	Brown fine SAND, little Silt, trace Gravel, trace coarse Sand; wet			
20				20
	Brown fine to coarse SAND, little Silt, trace Gravel; wet		17.7	
25				25
	Brown fine SAND, little Silt; wet		32.4	
30				30
	Brown fine SAND, little Silt, trace coarse Sand; wet		3.8	
35				35
	Brown fine SAND, little Silt, trace coarse Sand; wet		5.2	
40				40
	Brown fine SAND, some Silt; wet		3.8	
45				45
	Brown fine SAND, some Silt; wet		7.1	
50				50
				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-29**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/25/02-4/25/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
5		Black fine to coarse SAND, little Wood, trace Gravel; moist to wet (fill)		301	Odor and black staining
10		CONCRETE and WOOD; wet (fill)			Black staining
		Brown fine to medium SAND, little Silt, trace Gravel, wet (fill)		12.8	Black staining
15		Green to gray CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
		Gray fine SAND, little Silt, little Wood; wet		44.4	Black staining
20		Gray fine to coarse SAND, little Silt, trace Wood; wet		17.6	Odor and black staining
25		Gray fine SAND, some Silt, trace coarse SAND; wet		12.5	Odor and black staining
30		Gray to brown fine SAND, little Silt; wet		6.0	Odor
35		Gray to brown fine SAND, little Silt; wet		459	Odor
40		Brown fine to medium SAND, some Silt; wet		762	Odor and trace free product
45		Brown fine SAND, little Silt; wet		314	Odor
50					Bottom of well 50.5 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-30**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/26/02-4/26/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
5	Brown coarse to fine SAND, little Gravel; moist (fill)		228	Odor and black staining
10	Brown fine to coarse SAND, little Gravel, trace Wood, trace Brick; wet (fill)		5.7	
	Brown fine to medium SAND, trace Gravel, trece Silt; wet (fill)		6.2	
15	Brown fine SAND, little Silt, trace Gravel; wet (fill)		8.9	Odor and black staining
	Brown fine SAND, little Silt, trace Gravel; wet (fill)		8.7	Odor and black staining
	Gray fine to medium SAND, trace Silt, trace Peat; wet		10.4	Odor and black staining
20	Fine SAND, trace Silt; wet		22.2	Black staining
	Brown PEAT; moist			
	Brown fine SAND, little Silt; wet		13.3	Odor and black staining
25	Gray fine SAND, trace Silt; wet		12.7	Odor and black staining
30	Brown fine SAND, little Silt; wet		17.1	Odor and trace free product
35	Fine SAND, little Silt; wet		728	Odor, black staining, and free product
40	Fine SAND, little Silt; wet		1067	Odor, black staining, and free product
45	Fine SAND, little Silt; wet		840	Odor, black staining, and free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-31**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/29/02-4/29/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted** MAT. **SCH 40 PVC** TOTAL LENGTH **35.0** DIA. **4-inch** SLOT SIZE **20-Slot**			
ELEVATION OF: (FT.) GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE	GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
5	Fine SAND, trace Silt; wet (fill)		945	Odor, black staining, and sheen
10				
	Brown fine to medium SAND, trace Silt, trace Brick, trace Gravel, trace Wood, trace Coal Fragments; wet (fill)		35.9	
15	Brown fine to medium SAND, some Silt, trace Gravel; wet (fill)		26.3	
	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		>2000	Odor
	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		886	Odor, black staining, and trace free product
20	Brown PEAT; moist		>2000	Odor and free product
	Brown fine to coarse SAND, little Silt, trace Gravel; wet			
	Brown fine SAND, little Silt; wet		1349	
25	Gray to brown fine SAND, little Silt, trace coarse SAND; wet		257	Odor and trace free product
30	Gray to brown fine SAND, little Silt, trace coarse SAND; wet		192	Odor and trace free product
35	Gray to brown fine SAND, little Silt, trace coarse SAND; wet		254	Odor and trace free product
40	Gray to brown fine SAND, little Silt, trace coarse SAND; wet		415	Odor and trace free product
45	Gray to brown fine SAND, some Silt; wet		785	Odor and trace free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-32**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/30/02-4/30/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **35.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
5		Gray-brown fine to coarse SAND, trace Silt, trace Gravel; moist (fill)		21.1	
10		Gray-brown medium SAND, trace Silt, trace Gravel, trace coarse Sand; moist (fill)		13.8	Odor, sheen
15		Brown coarse to fine Sand, little Silt, trace Gravel; moist (fill)		6.5	Odor, trace black staining
		Brown fine to medium SAND, little Silt, trace coarse Sand; wet (fill)		7.3	Odor
		Brown fine to coarse SAND, little Silt; wet		15.3	
20		Gray-brown fine SAND, little Silt, trace coarse Sand; wet		36.0	Odor, sheen
25		Gray-brown fine SAND, little Silt, trace coarse Sand; wet		87.4	Odor, sheen
30		Gray-brown fine SAND, little Silt, trace coarse Sand; wet		118	Odor, sheen
35		Brown fine SAND, some Silt; wet		67.4	Odor
40		Brown fine to medium SAND, little Silt; wet		107	Odor
45		Brown fine SAND, some Silt; wet		68.9	Odor
50					Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-33**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/1/02-5/1/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
5		Brown fine to coarse SAND, little Silt; wet (fill)		0.0	
10		Brown fine SAND, some Silt; wet (fill)		1.3	
15		Brown fine SAND, some Silt, trace coarse Sand, trace Gravel; wet (fill)		8.3	
		Brown to Black stained fine to coarse SAND, trace Gravel; wet (fill)		0.0	Trace free product
20		Gray-brown fine to medium SAND, little Silt, trace Gravel; Wet		0.0	
25		Brown fine SAND, little Silt, trace coarse Sand; wet		439	Odor
30		Brown fine SAND, little Silt, trace coarse Sand; wet		7.2	Odor
35		Brown fine SAND, some Silt; wet		18.4	
40		Brown fine SAND, some Silt; wet		79.5	Odor
45		Brown fine SAND, some Silt, trace coarse Sand; wet		194	Odor
50					Bottom of well 49.5 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-34**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/3/02-5/3/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, little Silt, trace Gravel; moist to wet at appoximately 7 ft bls (fill)			
5				31.2	
10		Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		10.3	
		Brown fine sand, little Silt, trace coarse Sand; wet (fill)		17.1	
15		Green-gray CLAY and PEAT; moist		47.4	Thickness of peat interval interpreted from previous Site investigation
		Brown fine SAND, little Silt, trace coarse Sand; wet			Odor
20		Gray-brown fine SAND, little Silt, trace Gravel; wet		26.9	Odor, sheen
25		Gray-brown fine SAND, some Silt; wet		16.6	Odor
30		Gray-brown fine SAND, some Silt; wet		24.3	Odor
35		Gray-brown fine SAND, some Silt, trace coarse Sand; wet		107	Odor, sheen
40		Brown fine SAND, little Silt; wet		126	Odor
45		Brown fine SAND, little Silt; wet		134	Odor
50					Bottom of well 49 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO.	NORTHING	EASTING		
RW-35				
PROJECT NO./NAME: 92401Y03 / FC Gowanus former MGP Site		LOCATION: 124-136 2nd Avenue		
APPROVED BY: G. Tyers	LOGGED BY: D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER: Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA: On Site Along 12th Street		
DRILL BIT DIAMETER/TYPE: 6.25-in. / Auger	BOREHOLE DIAMETER: 10-inches	DRILLING EQUIPMENT/METHOD: CME-75 / HSA	SAMPLING METHOD: 2" Split Spoon	START-FINISH DATE: 5/6/02-5/8/02
CASING MAT./DIA.: SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK #2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace silt, trace gravel, trace brick; moist (fill)			
5		Black fine SAND, trace Silt; moist to wet at approximately 5.5 ft bls (fill)		>2000	Odor, trace free product
		Black fine SAND, little Silt; wet (fill)		>2000	Odor, free product
		Green-gray CLAY and PEAT; moist			
		Black to brown fine SAND and SILT; wet		872	Odor, free product
10					
		Brown to black fine SAND, some Silt, trace coarse Sand; wet			
15				272	Odor
20		Gray-brown fine SAND, little Silt, trace Clay, trace Peat; wet		311	
25		Brown fine SAND, little Silt; wet		182	Odor
30		Brown fine SAND, little Silt; wet		158	Odor
35		Brown fine SAND, little Silt, trace coarse Sand; wet		552	Odor, trace free product
40		Gray-brown fine to medium SAND, little Silt; wet		918	Trace free product
45		Gray-brown fine to medium SAND, little Silt; wet		723	Trace free product
50					Bottom of well 49 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-36**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/6/02-5/7/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace silt, trace gravel, trace brick; moist (fill)			
5		Black fine SAND, some Silt; wet (fill)		94.3	Odor
		Brown to black fine SAND, some Silt, trace Clay, trace Coal, trace Shells, trace Gravel; wet (fill)		199	Odor
		Black fine SAND, little silt; wet(fill)		8.7	Odor, trace free product
10					
		Brown to black fine to coarse SAND, little Silt, trace Gravel; wet (fill)		35.0	Odor, trace free product, sheen
		Brown to black fine SAND, little Silt, trace Wood; wet (fill)		51.2	
15		Brown to black fine to medium SAND, little Silt; wet (fill)		109	Odor
		Grey-brown fine SAND, some Silt; wet (fill)		22.9	Odor
20		Brown fine to coarse SAND; wet (fill)		5.0	
		Green-grey CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
		Grey to black fine to coarse SAND, little Silt, trace Gravel; wet		>2000	Odor, trace free product
25		Grey to black fine to coarse SAND, little Silt, trace Gravel; wet		111	Odor, trace free product
30		Grey-brown fine to coarse SAND, little Silt, trace Gravel; wet		>2000	Odor, trace free product
35		Grey-brown fine to coarse SAND, little Silt, trace Gravel; wet		>2000	Odor, trace free product
40		Brown fine SAND, little Silt, trace coarse Sand; wet		1785	Odor, trace free product
45		Brown to light brown fine SAND, some Silt; wet		708	Odor, free Product
50					Bottom of well 50 feet below land surface

BORING/WELL RECOVE-1.GPJ ROUX.GDT 6/11/02

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WELL CONSTRUCTION LOG

WELL NO. **RW-37**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/9/02-5/9/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; moist to wet (fill)			
5					5
		Brown to black fine to medium SAND, little Silt, trace Gravel, trace Coal; wet (fill)		1271	Odor
10		Brown-green to black fine SAND, little Silt, trace Gravel, trace Wood; wet (fill)		1197	Odor 10
		Brown fine to medium SAND, trace Gravel, trace Silt; wet (fill)		380	
15		Brown-green fine SAND, some Silt; wet (fill)		158	15
		Green-grey CLAY and PEAT; moist		252	Thickness of peat interval interpreted from previous Site investigation
20		Brown fine SAND, little Silt, trace coarse SAND, trace Gravel; wet			20
		Brown fine SAND, little Silt, trace coarse SAND; wet		207	Odor
25		Brown fine SAND, little Silt, trace coarse SAND; wet		664	Odor 25
30		Brown fine SAND, little Silt; wet		775	Odor 30
35		Brown fine SAND, little Silt; wet		1345	Odor 35
40		Brown fine SAND, little Silt; wet		1489	Odor, trace free product 40
45		Brown fine SAND, little Silt; wet		1183	Odor, trace free product 45
50					Bottom of well at 50 ft bls 50

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WELL CONSTRUCTION LOG

WELL NO. **RW-38**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/10/02-5/10/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; moist (fill)			
5					
10		Brown fine to coarse SAND, little Silt, trace Gravel; moist (fill)		35.4	Odor
		Brown fine to coarse SAND, little Silt, trace Gravel; moist (fill)		867	Odor
15		Brown fine SAND, little Silt, trace coarse Sand; wet (fill)		>2000	Odor
		Brown fine SAND, little Silt, trace coarse Sand; wet (fill)		6.9	
		Green-gray CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
20		Gray-brown fine to coarse SAND, little Silt, trace Gravel; wet		96.6	Odor
25		Gray-brown fine to coarse SAND, little Silt, trace Gravel; wet		381	Odor
30		Gray-brown fine to coarse SAND, little Silt, trace Gravel; wet		874	Odor
35		Gray-brown fine to medium SAND, little Silt; wet		1341	Odor
40		Brown fine SAND, some Silt; wet		1033	Odor, trace free product
45		Gray-brown fine to medium SAND, little Silt; wet		1271	Odor, trace free product
50					Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-39**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **R. Kovacks**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/13/02-5/13/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown coarse to fine SAND, trace Gravel, trace Silt, trace Brick, trace Cobbles; moist (fill)			
5				5
10	Brown medium to fine SAND, trace Silt, trace Gravel; moist (fill)		19.9	Slight odor
	Brown to reddish brown fine SAND, some Silt; moist (fill)		762	Slight odor
15	Brown to reddish brown fine SAND, some Silt; wet (fill)		659	Odor
	Brown to reddish brown fine SAND, some Silt, trace coarse SAND; wet (fill)			Odor
	Peat			Thickness of peat interval interpreted from previous Site investigation
20	Gray to brown medium SAND, some Silt; wet			Odor
25	Gray-brown fine SAND, some Silt; wet		129	Odor
30	Gray-brown fine SAND, some Silt; wet		421	Odor
35	Gray-brown fine SAND, some Silt; wet		>2000	Odor
40	Gray-brown fine SAND, some Silt; wet		1200	Odor, trace free product
45	Gray-brown fine SAND, trace Silt, trace Gravel; wet		1421	Trace free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-40**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/14/02-5/14/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown to black stained fine to medium SAND, little Silt, trace coarse SAND, trace Gravel; wet (fill)		17.1	
5				Odor
10	Gray-brown fine SAND, some Silt; wet (fill)		10.1	Odor
15	Brown fine to medium SAND, little Silt; wet (fill)		22.8	Odor
	Brown fine to coarse SAND, little Silt; wet (fill)		21.3	Odor
	Green-gray CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
20	Gray-brown fine to medium SAND, little Silt; wet		29.2	Odor
25	Gray-brown fine SAND, some Silt; wet		35.1	
30	Grey-brown fine SAND, some Silt; wet		65.2	Odor
35	Grey-brown fine SAND, some Silt; wet		149	Odor
40	Grey-brown fine SAND, some Silt; wet		78.1	Odor, trace free product
45	Brown fine SAND, little Silt; wet		522	Odor, trace free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-41**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/16/02-5/16/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC**	TOTAL LENGTH **25.0**	DIA. **4-inch** SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown to black stained fine to medium SAND, little Silt, trace coarse SAND, trace Gravel; wet (fill)			
5				5
10	Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		166	Odor
	Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		1526	Odor
15	Brown fine to coarse SAND, trace Silt; wet (fill)		713	Odor
	Green-gray CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site Investigation
20	Brown fine SAND, little Silt, trace coarse Sand; wet		23.5	Odor
25	Brown to black fine SAND, little Silt, trace coarse Sand; wet		1029	Odor
30	Brown fine SAND, little Silt, trace coarse Sand; wet		1785	Odor, trace free product
35	Brown fine SAND, little Silt, trace coarse Sand; wet		>2000	Odor, trace free product
40	Brown fine to medium SAND, little Silt; wet		1527	Odor, trace free product
45	Brown fine to medium SAND, little Silt; wet		>2000	Odor, trace free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-42**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/17/02-5/17/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC**	TOTAL LENGTH **25.0**	DIA. **4-inch** SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown to black stained fine to medium SAND, little Silt, trace coarse SAND, trace Gravel; wet (fill)			
5				5
10				10
	Brown to black fine to medium SAND, trace Gravel, trace Silt, trace Coarse Sand; wet (fill)		>2000	Odor
15	PEAT; moist			Thickness of peat interval interpreted from previous Site investigation 15
	Brown fine to coarse SAND, trace Silt, trace Gravel; wet		>2000	
20	Gray-brown fine to medium SAND, little Silt, trace coarse Sand; wet		>2000	Odor 20
25	Gray-brown fine to medium SAND, little Silt, trace coarse Sand; wet		520	Odor 25
30	Gray-brown fine to medium SAND, little Silt, trace coarse Sand; wet		54.9	Odor, free product 30
35	Gray-brown fine SAND, little Silt, trace coarse Sand; wet		280	Odor, free product 35
40	Gray-brown fine to coarse SAND, little Silt; wet		>2000	Odor, free product 40
45	Gray-brown fine to coarse SAND, little Silt; wet		>2000	Odor, free product 45
50				Bottom of well 50 feet below land surface 50

BORING/WELL RECOVE-1.GPJ ROUX.GDT 6/11/02

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WELL CONSTRUCTION LOG

WELL NO. **RW-43**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **M. Kroll**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/20/02-5/20/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5		Brown to black stained fine to medium SAND, little Silt, trace coarse SAND, trace Gravel; wet (fill)			
10					
		Grey to light brown fine to medium SAND, some Silt, little Clay; wet		268	Slight odor, some staining
15		PEAT		>2000	Slight odor, some staining
		Brown fine to coarse SAND, some Silt; wet		>2000	
20		Brown fine to medium Sand and Silt, some Clay, trace Gravel; wet		907	Odor
25		Brown fine to medium Sand and Silt, some Clay, trace Gravel; moist		1235	Odor
30		Brown fine to coarse SAND, some Silt and Clay; wet		>2000	Odor
35		Brown fine to coarse SAND, some Silt and Clay; wet		1226	Odor
40		Brown fine to coarse SAND, some Silt and Clay; wet		>2000	Odor
45		Brown fine to coarse SAND, some Silt and Clay; wet		>2000	Odor
50					Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-44**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/21/02-5/21/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Silt and Gravel; wet (fill)		32.7	
5					
10					
		Brown gray fine to medium SAND, little Silt; wet		0.0	
15		Brown PEAT and green-gray Clay			
		Brown fine SAND, some Silt, trace coarse Sand and Gravel; wet		3.7	
20					
25		Brown fine SAND, some Silt, trace coarse Sand and Gravel; wet		41.7	
30		Brown fine SAND, some Silt; wet		45.3	Organic odor
35		Brown fine SAND, little silt, trace coarse Sand; wet		77.2	Odor
40		Brown fine SAND, some Silt; wet		137	Odor
45		Brown fine SAND, some Silt; wet		87.6	Odor, free product
50					Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-1S**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/22/02-4/22/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **10.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			
	Brown fine to coarse SAND, little Silt, trace Gravel, trace Concrete; dry to wet at 3 feet (fill)			
5	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		12.1	Odor
10	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		23.8	Odor
15	PEAT and green-grey CLAY; moist			

Bottom of well at 16 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-2S**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/22/02-4/22/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **10.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			
	Brown fine to coarse SAND, little Silt, little Gravel, trace Concrete; dry to wet at 3 feet (fill)			
5	Brown fine to coarse SAND, little Silt, little Gravel; wet (fill)		28.6	
10	Brown fine to coarse SAND, little Silt, little Gravel; wet (fill)		27.2	Odor and sheen
15	PEAT and green-grey CLAY; moist			

Bottom of well at 16 feet below land surface

AKRF Engineering Logs – 2001

LEGEND

- PROPOSED CLUSTER WELLS
- SOILGAS SAMPLING LOCATIONS
- SOIL SAMPLING LOCATIONS
- SOIL & GROUNDWATER SAMPLING LOCATIONS
- METAL SAMPLING LOCATIONS
- EXISTING MONITORING WELLS

Not to Scale

SAMPLING LOCATION SITE PLAN

prepared by:

AKRF Engineering, P.C.

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124-136 SECOND AVENUE
New York, New York

DATE: 1/11/01

FIGURE NUMBER: 4

Figure 4: Geoprobe Locations

prepared by:
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124 - 136 SECOND AVENUE
Brooklyn, New York

GRAPHIC SCALE
25 15 5 0 25 50 100
(IN FEET)

DATE 07/10/01
PROJECT No. 80031-0002
FIGURE No. 4

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: MW-2/DP-1

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	28 Feet
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	HOLLOW STEM AUGER/GEOPROB		
FIELD PARTY:	CHRIS BOSS		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/14/2000 DATE COMPLETED: 12/14/2000		

STATIC WATER LEVEL (BLS)		
Depth (ft)	5.3	
Time	12:35	
Date	12/22/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		ND		FILL: concrete and red brick fragments, ash, gray silty sand.		
	2		ND		FILL: concrete and red brick fragments, ash, gray silty sand.		
10.0	3		ND		SILTY SAND		
	4		ND		SILTY SAND		
	5		ND		SILTY SAND		
20.0					PEAT: clay		
	6		ND		SILT		
	7		ND		SILTY SAND		

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: DP-2

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	28 Feet
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	GEOPROBE		
FIELD PARTY:	CHRIS BOSS/JAY SEALE		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/14/2000 DATE COMPLETED: 12/14/2000		

STATIC WATER LEVEL (BLS)		
Depth (ft)	5.0	
Time	10:10	
Date	12/14/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		ND		FILL: concrete and red brick fragments, ash, black silty sand.		
	2		83	Strong odor			
10.0	3		4				
	4		ND				
					PEAT: With Clay		
	5		36				
20.0	6		40		SILT: Brownish gray to gray SILT		
	7		ND				
					SAND: Fine to medium SAND		

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: MW-4/DP-3

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	28 Feet
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	HOLLOW STEM AUGER/ GEOPROBE		
FIELD PARTY:	CHRIS MIGLIORE/JAY SEAL		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/13/2000 DATE COMPLETED: 12/13/2000		

STATIC WATER LEVEL (BLS)		
Depth (ft)	3.0	
Time	12:15	
Date	12/23/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		ND		FILL: Coal and red brick fragments, ash, gray silty sand.		
	2		14	Strong odor	SILTY SAND: Black		
10.0	3				PEAT: CLAY		
			17	Free Product	SILTY SAND: Black		
	4		2	Strong odor	SILTY SAND: Brown		
					PEAT: CLAY		
	5		20		CLAY: Very dense		
20.0	6		45		SILTY SAND: Dark gray		
			452	Free product			
	7						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER DP- 4

PROJECT NUMBER: 80030-0002
PROJECT NAME: 124-136 SECOND AVENUE
LOCATION: BROOKLYN, NEW YORK
DRILLING CO: FENLEY & NICOL
DRILLING METHOD: HOLLOW STEM AUGER
FIELD PARTY: CHARLIE GUZZARDO
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 12/1/2000 DATE COMPLETED: 12/1/2000

FIELD BOOK NO: 301
TOTAL DEPTH: 18 Feet
GROUND SURFACE ELEVATION: 0.0

STATIC WATER LEVEL (BLS)		
Depth (ft)	6.0	
Time	1:30	
Date	12/1/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0							
	1				FILL: Red brick fragments, ash, woo black silty sand.		
	2		250	Strong odor			
	3		200	Strong odor			
	4		50		CLAY: Little ash		
10.0	5		10		No Recovery		
	6		ND				
	7		ND		CLAY: With little Silt		
	8		20		PEAT		

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: DP-6

PROJECT NUMBER: 80030-0002
PROJECT NAME: 124-136 SECOND AVENUE
LOCATION: BROOKLYN, NEW YORK
DRILLING CO: FENLEY & NICOL
DRILLING METHOD: HOLLOW STEM AUGER
FIELD PARTY: CHARLIE GUZZARDO
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 11/30/2000 DATE COMPLETED: 11/30/2000

FIELD BOOK NO: 301
TOTAL DEPTH: 18 Feet
GROUND SURFACE ELEVATION: 0.0

STATIC WATER LEVEL (BLS)		
Depth (ft)	6.0	
Time	10:40	
Date	11/30/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0							
	1		ND		FILL: Red brick and concrete fragments, ash, wood, black silty sand.		
▼	2		25	Strong odor			
	3		389	Strong odor			
	4		243		SILTY SAND		
10.0	5		97				
	6		20				
	7		24				
	8		24	Bottom of the gas holder (Refusal) @18 Feet			

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: DP-7

PROJECT NUMBER: 80030-0002
PROJECT NAME: 124-136 SECOND AVENUE
LOCATION: BROOKLYN, NEW YORK
DRILLING CO: FENLEY & NICOL
DRILLING METHOD: HOLLOW STEM AUGER
FIELD PARTY: CHARLIE GUZZARDO
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 11/30/2000 DATE COMPLETED: 11/30/2000

FIELD BOOK NO: 301
TOTAL DEPTH: 18 Feet
GROUND SURFACE ELEVATION: 0.0

STATIC WATER LEVEL (BLS)		
Depth (ft)	6.0	
Time	10:40	
Date	11/30/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0							
	1		ND		FILL: Red brick and concrete fragments, ash, wood, black silty sand.		
	2		ND		SILTY SAND: With some Gravel an Wood		
	3		ND				
	4		75	Strong odor			
10.0	5		161	Strong odor			
	6		82	Strong odor			
	7		166	Free product			
	8		84	Free product			

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FIELD BOREHOLE LOG

BOREHOLE NUMBER
MW-3/DP-9

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	40 FEET
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	HOLLOW STEM AUGER/GEOPROBE		
FIELD PARTY:	JAY SALE		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/12/2000 DATE COMPLETED: 12/12/2000		

STATIC WATER LEVEL (BLS)		
Depth (ft)	5.15	
Time	11:20	
Date	12/23/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		9		FILL: red brick and coal fragments, ash, black silty sand.		
	2		7		SILTY SAND: dark black		
10.0	3		ND		CLAY		
	4		ND		PEAT: Clay		
	5		ND		SILTY SAND		
20.0	6		ND		CLAY		
	7		43	Strong odor, free product	SILTY SAND		
30.0	8		94				
	9		10	slight petroleum odor			
	10		13	slight petroleum odor	SILT: Dense reddish brown silt		
40.0							

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: DP- 10

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	28 Feet
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	GEOPROBE		
FIELD PARTY:	JAY SEALE		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/13/2000 DATE COMPLETED: 12/13/2000		

STATIC WATER LEVEL (BLS)		
Depth (ft)	5.0	
Time	10:10	
Date	12/13/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		ND		FILL: concrete and red brick fragments, ash, black silty sand.		
	2		89	Strong odor	SILTY SAND: Gray Silty Sand changed to reddish brown Silty SAnd		
	3		26	Strong odor	SILY SAND: Reddish brown Silty Sand with some pebbles		
10.0	4				SILTY SAND: Black		
			40	Free product	CLAY: Dense		
	5				CLAY: With little SAND		
			27	Free product	CLAY: Dense		
20.0	6		45	Free product	Refusal: Location moved 15 feet north		
	7				CLAY: Dense		
			189	Free Product	SILT: Reddish Brown SILT		
					SAND: Fine to medium SAND		

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: MW-5/DP-11

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	32 Feet
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	HOLLOW STEM AUGER/GEOPROBE		
FIELD PARTY:	CHRIS MIGLIORE/JAY SEAL		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/08/200	DATE COMPLETED:	12/08/2000

STATIC WATER LEVEL (BLS)		
Depth (ft)	5.3	
Time	2:45	
Date	12/22/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		202	strong odor	FILL: Coal and red brick fragments, ash, black silty sand.		
	2		ND				
10.0	3		ND				
	4		ND		CLAY: With little Silt		
	5		ND				
20.0					CLAY: With little Peat		
	6		ND		CLAY		
			ND		SANDY CLAY		
	7				SAND		
30.0							

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: MW-6/DP-12

PROJECT NUMBER: 80030-0002
PROJECT NAME: 124-136 SECOND AVENUE
LOCATION: BROOKLYN, NEW YORK
DRILLING CO: FENLEY & NICOL
DRILLING METHOD: HOLLOW STEM AUGER/GEOPROBE
FIELD PARTY: CHRIS MIGLIORE/JAY SEAL
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 12/6/2000 DATE COMPLETED: 12/6/2000

FIELD BOOK NO: 301
TOTAL DEPTH: 32 Feet
GROUND SURFACE ELEVATION: 0.0

STATIC WATER LEVEL (BLS)		
Depth (ft)	4.95	
Time	10:30	
Date	12/23/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		ND		FILL: Coal and red brick fragments, ash, black silty sand.		
	2		ND				
10.0	3						
			ND		CLAY: With little Silt		
	4		ND				
	5		ND				
20.0	6		ND		GLAY: Shell fragments		
			ND				
	7				CLAY: With little Silt		
30.0			ND		PEAT: With Clay		
			200	Free product	SILTY SAND		

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: MW-7/DP-13

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	32 Feet
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	HOLLOW STEM AUGER/GEOPROBE		
FIELD PARTY:	CHRIS MIGLIORE/JAY SEAL		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/06/2000 DATE COMPLETED: 12/06/2000		

STATIC WATER LEVEL (BLS)		
Depth (ft)	2.8	
Time	1:15	
Date	12/22/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		ND		FILL: Coal and red brick fragments, ash, black silty sand.		
	2		ND				
10.0	3		ND		CLAY		
	4		ND				
					PEAT		
	5		ND		No Recovery		
20.0	6		ND		CLAY: With Peat		
	7		ND		SILTY SAND		
30.0	8		ND		SAND: Medium to coarse brown SAND with some Gravel		

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-1

PROJECT NUMBER:	80030-0003	START TIME	0930
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1045
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/16/01	DATE COMPLETED:	02/16/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/42	ND		fill: red bricks and concrete fragments; brownish red silty sand	
8.0	GP1	48/48	17		silt: dark gray to reddish brown silt; wet at -8ft.	
12.0		48/36	ND		clay: dark gray clay	
					peat	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-2

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/16/01 DATE COMPLETED: 02/16/01

START TIME 1115
END TIME 1125
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0				refusal at -8 ft.; location moved two times; third attempt was 20 ft towards 11th St.	fill, not sampled	
4.0	GP2	48/24	197	FREE PRODUCT	fill: free product, fill, brick fragments, black silty sand	
8.0						
12.0						
16.0						

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-3

PROJECT NUMBER:	80030-0003	START TIME	1130
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1220
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/16/01	DATE COMPLETED:	02/16/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0				refusal at -12 ft.; location moved 12 ft. towards 11th St.	fill, not sampled	
4.0		48/24	15.3		fill: black sandy silt, odor	
8.0	GP3	48/15	218	FREE PRODUCT	silty sand: dark black silty sand, free product	
12.0		48/30	36	FREE PRODUCT		
					peat	
16.0						

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-6

PROJECT NUMBER:	80030-0003	START TIME	0850
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	0925
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/21/01	DATE COMPLETED:	02/21/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0				refusal at -11 ft.; three attempts made; refusal at 7 ft. and 4 ft.; sampling location 5 ft. SE of flag	fill: light brown medium coarse sand and gravel	
4.0						
			0.5		sand: black/dark brown medium sand and silt; wet at -6 ft.	
8.0	GP6				silt: black/dark brown silt and medium coarse sand with small cobbles	
					silt: brown/tan silt and medium coarse sand with small cobbles	
12.0			1.9		silt: black silt and medium coarse sand with small cobbles	
16.0						

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-15

PROJECT NUMBER:	80030-0003	START TIME	0900
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	0930
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/22/01	DATE COMPLETED:	02/22/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/36	8.0	FREE PRODUCT	fill: coal fragments, loose, stained with free product	
8.0	GP15	48/12	21.0	FREE PRODUCT	fill: coal fragments, loose, stained with free product	
12.0		48/24	9.0	FREE PRODUCT	silty sand: fill, black silty sand, loose, free product	
					peat: dark brown peat	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-16

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/22/01 DATE COMPLETED: 02/22/01

START TIME 0945
END TIME 1030
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/32	3.5	stained with FREE PRODUCT	fill: dark black silty sand, stained with free product	
8.0	GP16	48/48	12.5	FREE PRODUCT	silty sand: black silty sand, dense free product	
12.0		48/24	63.0	FREE PRODUCT	silty sand: black silty sand, free product	
16.0					peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-17

PROJECT NUMBER:	80030-0003	START TIME	1045
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1130
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/22/01	DATE COMPLETED:	

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/4	8		fill: ash, brick fragments	
8.0		48/0		no recovery	(no recovery)	
12.0	GP17	48/36			peat: dark brown peat	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-18

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/22/01 DATE COMPLETED: 02/22/01

START TIME 1135
END TIME 1215
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/42	16.0		fill: red bricks, coal fragments, ash, black silty sand	
8.0	GP18	48/20	2.5	FREE PRODUCT	silty sand: black silty sand, free product	
12.0		48/24	7.0	FREE PRODUCT	silty sand: brownish gray silty sand	
16.0					peat	

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FIELD BOREHOLE LOG

BOREHOLE NUMBER
GP-19

PROJECT NUMBER:	80030-0003	START TIME	1330
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1415
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/22/01	DATE COMPLETED:	02/22/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/40	3.0		fill: ash, coal fragments, red bricks, black to brownish gray silty sand	
8.0		48/36	2.5			
12.0	GP19	48/36	3.0			
16.0					peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-20

PROJECT NUMBER:	80030-0003	START TIME	1420
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1515
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/22/01	DATE COMPLETED:	02/22/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY (in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0						
4.0		48/48			fill: coal fragments, ash, red bricks, black silty sand	
8.0		48/36			silty sand: brownish gray silty sand, dense, peat at tip of sampler	
12.0	GP20	48/48			clay and peat: dense peat and clay	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-21

PROJECT NUMBER:	80030-0003	START TIME	0815
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	0830
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/27/01	DATE COMPLETED:	02/27/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/46	2		fill: red brick fragments, ash, coal fragments	
8.0		48/24	12		fill: red brick fragments, ash, coal fragments, free product in lower 6 in.	
	GP21			FREE PRODUCT		
12.0		48/42	9		clay: very dense gray clay	
					silt: dense brownish grey silt, peat at tip of liner	
16.0						

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-22

PROJECT NUMBER:	80030-0003	START TIME	0835
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	0850
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/27/01	DATE COMPLETED:	02/27/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0	GP22	48/42	65	FREE PRODUCT	fill: ash, coal fragments, black silty sand, loose, free product	
8.0		48/36	11	FREE PRODUCT	fill: ash, coal fragments, black silty sand, loose, free product	
12.0		48/48	ND		clay and peat: very dense clay and peat	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-23

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/27/01 DATE COMPLETED: 02/27/01

START TIME 0852
END TIME 0905
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0	GP23	48/44	173		fill: brick and concrete fragments	
				FREE PRODUCT		
8.0		48/46	118	FREE PRODUCT	silt: brownish gray dense silty sand with free product	
					silt: light gray dense silt with free product	
12.0		48/48	60		clay and peat: dense clay and peat	
16.0					clay: dense clay	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-24

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/27/01 DATE COMPLETED: 02/27/01

START TIME 0915
END TIME 0950
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill; not sampled	
4.0		48/46	36	FREE PRODUCT	fill: red bricks, wood, silty sand, free product	
8.0	GP24	48/10	57	FREE PRODUCT	fill: red bricks, wood, silty sand, free product	
12.0		48/0		no recovery		
16.0				refusal		

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-25

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/27/01 DATE COMPLETED: 02/27/01

START TIME 1000
END TIME 1045
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/46	55	FREE PRODUCT	fill: ash, coal fragments, wood, black silty sand stained with free product	
8.0		48/36	22	FREE PRODUCT	fill: ash, coal fragments, wood, black silty sand stained with free product	
12.0	GP25	48/48	76		silt: brownish gray dense silt	
				FREE PRODUCT	clay and peat: dense clay and peat	
16.0					silty sand: black silty sand with free product	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-26

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/27/01 DATE COMPLETED: 02/27/01

START TIME 1050
END TIME 1120
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/40	61	FREE PRODUCT	fill: ash, wood, black silty sand with free product	
8.0		48/47	14	FREE PRODUCT	silt: dense dark black silt with free product	
12.0		48/48	109		clay and peat: dense clay and peat	
	GP26			FREE PRODUCT	silty sand: black silty sand with free product	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-27

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/27/01 DATE COMPLETED: 02/2701

START TIME 1130
END TIME 1215
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/24	ND		fill: red bricks, concrete [and] coal fragments, ash	
8.0		48/0		no recovery	(no recovery, void)	
12.0		48/48	ND		silt: light gray dense silt; peat at tip of sampler	
16.0					peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-28

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/27/01 DATE COMPLETED: 02/27/01

START TIME 1230
END TIME 1255
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/46	ND		fill: red brick, concrete, ash, wood;	
8.0		48/48	ND		silt: brownish gray to light gray dense silt	
12.0		48/48	14			
	GP28				clay and peat: dense clay and peat	
16.0						

AKRF, INC.
Environmental Consultants

FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-29

PROJECT NUMBER:	80030-0003	START TIME	1330
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1345
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/27/01	DATE COMPLETED:	02/27/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0	GP29	48/48	25		fill: ash, concrete fragments, wood	
					silt: dark black to gray silt	
8.0		48/48	ND		peat: dense layer of peat	
					clay: dense clay	
12.0				end of boring		
16.0						

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-30

PROJECT NUMBER:	80030-0003	START TIME	1305
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1320
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/27/01	DATE COMPLETED:	02/27/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/48	ND		fill: brick, concrete, wood	
					clay and peat: dense clay and peat	
8.0		48/46	ND		clay and peat	
12.0				end of boring		
16.0						

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-31

PROJECT NUMBER:	80030-0003	START TIME	1345
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1425
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/21/01	DATE COMPLETED:	02/21/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/30	1.8		sand: medium coarse brown sand	
					sand and silt: fine to medium sand [with] some silt; lt. red/tan/brown	
8.0	GP31	48/24	74.1	odor, staining	sand: black fine to medium sand some silt; odor staining	
					sand and silt: dark brown fine to medium sand some silt	
12.0		48/42	0.3		sand and silt: dark brown sand and silt	
16.0					peat: dark brown tan peat	

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-32

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/21/01 DATE COMPLETED: 02/21/01

START TIME: 1255
END TIME: 1345
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0				2 ft. NW of flag--refusal at -4 ft.; [sampling location] 3 ft. SW of flag	fill, not sampled	
4.0	GP32	48/42	382	odor; sheen on liner	sand: black sand--strong odor, some dark brown sand and silt at -4 ft., fine gravel at -8 ft.; sheen on liner	
8.0		48/12	63.8	odor	sand: black sand--odor	
12.0		48/48	0		sand and silt: silt and fine to medium sand, black	
16.0					peat: tan peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-33

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/21/01 DATE COMPLETED: 02/21/01

START TIME 1215
END TIME 1250
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0				[sampling location] 3 ft. SE of flag	fill, not sampled	
4.0	GP33	48/48	14	staining	sand: dark brown sand; some staining at 6 ft.; 2 in of wet peat or other organic at -6 ft.	
					sand: medium coarse sand and fine gravel	
8.0		48/12	4.4		gravel: gray/black fine gravel and sand	
12.0		48/30	1.9			
					peat: brown/tan peat	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-41

PROJECT NUMBER:	80030-0003	START TIME	1300
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1345
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	03/01/01	DATE COMPLETED:	03/01/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/36	ND		fill: red brick, gray silty sand	
					fill: cinders, ash, coal fragments, black silty sand	
8.0		48/48	ND			
					silt: reddish briown dense silt	
12.0		48/24	ND			
16.0		48/40	ND			
					clay and peat: dense clay and peat	
					peat	
20.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-42

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/01/01 DATE COMPLETED: 03/01/01

START TIME 1400
END TIME 1405
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/24	ND		fill: cinders, ash, coal fragments	
8.0		48/24	ND		fill: black silty sand, red bricks	
12.0		48/10	ND		silt: reddish brown loose silt	
16.0		48/40	ND		clay and peat	
20.0					peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-44

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/01/01 DATE COMPLETED: 03/01/01

START TIME 1440
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/20	9.0		fill: red brick, glass, ash, gray silty sand	
				FREE PRODUCT	silty sand: black silty sand, free product	
8.0	GP44	48/46		FREE PRODUCT		
			30		silt: gray loose silt	
12.0		48/46	1.6	FREE PRODUCT	silt: reddish brown silt, free product; peat at tip of liner	
16.0					peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-45

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/02/01 DATE COMPLETED: 03/02/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/44	ND		fill: ash, red bricks, gray silty sand	
8.0		48/42	ND		silt: reddish brown loose silt	
12.0		48/48	ND			
16.0		48/48	ND			
					clay and peat	
20.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-46

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/01/01 DATE COMPLETED: 03/01/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0	GP46	48/46	46		fill: concrete, ash , red bricks	
					sand: black to reddish gray silty sand	
8.0		48/42	ND		silt: reddish brown loose silt; peat at lower 3 in.	
12.0		48/24	ND			
16.0		48/24	ND			
20.0					peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-47

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/02/01 DATE COMPLETED: 03/02/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/42	ND		fill: concrete, ash, red brick, yellow silt	
8.0		48/30	ND		silt: gray loose silt	
12.0		48/15	ND		silt: reddish brown loose silt	
16.0		48/48	ND		clay and peat	
20.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-48

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/02/01 DATE COMPLETED: 03/02/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/46	ND		fill: cinders, ash, wood, red bricks, concrete chips	
8.0		48/46	ND		silt: reddish brown loose silt	
12.0		48/44	ND		clay and peat	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-49

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/02/01 DATE COMPLETED: 03/02/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/48	ND		fill: concrete chips, ash, gray silty sand	
					clay: dense clay; peat at tip of sampler	
8.0		48/48	ND		clay and peat	
12.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-50

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: DATE COMPLETED:

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/30	ND		fill: concrete, red brick, black silty sand	
8.0		48/36	ND			
12.0		48/36	ND		silt: reddish/brown loose silt	
16.0		48/40	ND		clay and peat	
20.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-51

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/02/01 DATE COMPLETED: 03/02/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/36	ND		fill: concrete, red brick, ash, gray silty sand	
8.0		48/48	ND		silt: reddish brown loose silt	
12.0		48/24	ND			
16.0		48/48	ND		clay: dense clay	
					clay and peat	
20.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-53

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: DATE COMPLETED:

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/48	ND		fill: concrete chips, cinder, ash, gray silty sand	
8.0		48/48	ND			
12.0					clay and peat	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-54

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/02/01 DATE COMPLETED: 03/02/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0	GP54	48/46	324	FREE PRODUCT	silty sand: dark black silty sand, fill, red brick, free product	
8.0		48/24	159	FREE PRODUCT	silty sand: dark black silty sand, fill, red brick, free product	
12.0		48/24	227	FREE PRODUCT	silty sand: dark black silty sand, fill, red brick, free product	
16.0						

Nelson, Pope and Voorhis Logs – 1999

FIGURE 2

SAMPLE LOCATION MAP

i.e. Impact Environmental 1 Village Plaza Kings Park, New York 11754	99-240 Plate 2: Sample Acquisition Plan *Brooklyn, New York*	Legend: ▲ groundwater probe locale scale: 1" = 30'

TEST BORING / PROBE LOG

CODE: SP-1

Site Location:	Brooklyn Commons	**Installer:**	Impact Environmental
Job Number:	99.001	**Installation Method:**	Geoprobe
Client:	Nelson, Pope & Voorhis	**Date Begin/End:**	06/10/1999
Client Contact:	C. Voorhis	**Surface Elevation:**	
Boring Code:		**Depth to Water:**	~10 feet BEG
Location Description:	DMU-	**Total Depth:**	
Geologist:	R. Parrish, P.G./Franzen	**Page #:**	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	PID Reading [ppm]	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0							CONCRETE	
3	Very dark grayish-brown 10YR 3/2		1.0		SM		Poorly sorted fine sand & silt with some gravel Some solid waste debris noted	
6			12.4					
9	Gley Greenish-black 2.5/10Y		9.1		OH		Organic clay; high plasticity Presence of coal fragments mixed with clam/oyster shell	99-240-SP-1 @ 8-10
10	End Probe							
12								
15								

TEST BORING / PROBE LOG

CODE: SP-2

Site Location:	Brooklyn Commons	**Installer:**	Impact Environmental
Job Number:	99.001	**Installation Method:**	Geoprobe
Client:	Nelson, Pope & Voorhis	**Date Begin/End:**	06/10/1999
Client Contact:	C. Voorhis	**Surface Elevation:**	
Boring Code:		**Depth to Water:**	~10 feet BEG
Location Description:	DMU-	**Total Depth:**	
Geologist:	R. Parrish, P.G./Franzen	**Page #:**	2

Depth Below Grade [feet]	Color [Munsell]	Recovery	PID Reading [ppm]	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0								
3	Very dark grayish-brown 10 YR 3/2		1.1		SM		Poorly sorted fine sand + silt with some gravel Some solid waste debris noted	
6			3.9					
9	Gley Greenish-black 2.5/10Y		2.1		SC		Sand- clay mixture Clayey Soil some debris	99-240-SP-1 @ 8-10
10	End Probe							
12								
15								

TEST BORING / PROBE LOG

CODE: SP-3

Site Location:	Brooklyn Commons	**Installer:**	Impact Environmental
Job Number:	99.001	**Installation Method:**	Geoprobe
Client:	Nelson, Pope & Voorhis	**Date Begin/End:**	06/10/1999
Client Contact:	C. Voorhis	**Surface Elevation:**	
Boring Code:		**Depth to Water:**	~10 feet BEG
Location Description:	DMU-	**Total Depth:**	
Geologist:	R. Parrish, P.G./Franzen	**Page #:**	3

Depth Below Grade [feet]	Color [Munsell]	Recovery	PID Reading [ppm]	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0							CONCRETE	
3	Very dark grayish-brown 10YR 3/2		1.0		SM		Poorly sorted fine sand + silt with some gravel Some solid waste debris noted	
			13.2					
6								
9	Gley Greenish-black 2.5/10Y		5.4		SC		Sand- clay mixture Clayey Soil some debris	99-240-SP-1 @ 8-10
10	End Probe							
12								
15								

TEST BORING / PROBE LOG

CODE: SP-4

Site Location:	Brooklyn Commons	**Installer:**	Impact Environmental
Job Number:	99.001	**Installation Method:**	Geoprobe
Client:	Nelson, Pope & Voorhis	**Date Begin/End:**	06/10/1999
Client Contact:	C. Voorhis	**Surface Elevation:**	
Boring Code:		**Depth to Water:**	~10 feet BEG
Location Description:	DMU-	**Total Depth:**	
Geologist:	R. Parrish, P.G./Franzen	**Page #:**	

Depth Below Grade [feet]	Color [Munsell]	Recovery	PID Reading [ppm]	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0							CONCRETE	
3	Very dark grayish-brown 10YR 3/2		2.1		SM		Poorly sorted fine sand & silt with some gravel Some solid waste debris noted	
6								
9	Gley Greenish-black 2.5/10Y				SC		Clayey sand Large chips of coal, High volume of clam/oyster shells	99-240-SP-1 @ 8-10
10	End Probe							
12								
15								

TEST BORING / PROBE LOG

CODE: SP-5

Site Location:	Brooklyn Commons	**Installer:**	Impact Environmental
Job Number:	99.001	**Installation Method:**	Geoprobe
Client:	Nelson, Pope & Voorhis	**Date Begin/End:**	06/10/1999
Client Contact:	C. Voorhis	**Surface Elevation:**	
Boring Code:		**Depth to Water:**	~10 feet BEG
Location Description:	DMU-	**Total Depth:**	
Geologist:	R. Parrish, P.G./Franzen	**Page #:**	5

Depth Below Grade [feet]	Color [Munsell]	Recovery	PID Reading [ppm]	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0							CONCRETE	
3	Very dark grayish-brown 10 YR 3/2		1.1		SM		Poorly sorted fine sand & silt with some gravel Some solid waste debris noted	
6								
9	Gley Greenish-black 2.5/10Y		0.0		OH		Organic clay Coalchips	99-240-SP-1 @ 8-10
10	End Probe							
12								
15								

TEST BORING / PROBE LOG

CODE: SP-6

Site Location:	Brooklyn Commons	**Installer:**	Impact Environmental
Job Number:	99.001	**Installation Method:**	Geoprobe
Client:	Nelson, Pope & Voorhis	**Date Begin/End:**	06/10/1999
Client Contact:	C. Voorhis	**Surface Elevation:**	
Boring Code:		**Depth to Water:**	~10 feet BEG
Location Description:	DMU-	**Total Depth:**	
Geologist:	R. Parrish, P.G./Franzen	**Page #:**	6

Depth Below Grade [feet]	Color [Munsell]	Recovery	PID Reading [ppm]	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0							CONCRETE	
3	Very dark grayish-brown 10YR 3/2		1.1		SM		Poorly sorted fine sand & silt with some gravel Some solid waste debris noted	
6								
9	2.5Y Olive brown 4/3		6.0		SP		Petroleum scent Poorly graded sand with some gravel	99-240-SP-1 @ 8-10
10	End Probe							
12								
15								

Langan Engineering and Environmental Services Logs – 1998

GRAPHIC SCALE

30' 20' 10' 0 30' 60'

NOTES:

1. FOR GENERAL NOTES SEE DRAWING NO. GS-1.
2. FOR GEOLOGIC SECTIONS SEE DRAWINGS NOS. GS-1, GS-2, AND GS-3.

LEGEND:

PROJECT MRCE BORINGS:

- B-1 – BUILDING BORING, 82 FEET DEEP
- B-2 – BUILDING BORING, 102 FEET DEEP
- PB-1 – PARKING LOT BORING, 82 FEET DEEP
- B-1S – UNDISTURBED SAMPLE TAKEN IN BORING
- B-20P – 30 FOOT DEEP OBSERVATION WELL INSTALLED IN BORING

2002 SUPPLEMENTAL BORINGS:

- T1 – BORING TO INVESTIGATE REMNANTS OF FORMER GAS HOLDERS AND OIL TANKS

PREVIOUS BORINGS:

- LB-1 – 1998 BORING
- RB-1 – 1998 BORING
- BB-1 – 1998 BORING
- GB-1 – 1998 BORING

REV.	DATE	BY	DESCRIPTION
1	12-12-02	J.C.	ADDED SUPPLEMENTAL BORINGS AND UNDERGROUND TANK LOCATIONS MODIFIED LOCATIONS OF PREVIOUS BORINGS

LOWE'S HOME CENTER

BROOKLYN NEW YORK

AKRF ENGINEERING, P.C.

NEW YORK NEW YORK

MUESER RUTLEDGE CONSULTING ENGINEERS

225 WEST 34th STREET, NEW YORK, NY 10122

SCALE	MADE BY J.C.	DATE 1-14-01	FILE NO.
GRAPHIC	CH'KD BY	DATE	9446

BORING LOCATION PLAN

DRAWING NO. B-1

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LOG OF BORING RB1

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 7.4 [BBHDD]
DRILLING EQUIPMENT: Mobile B61 Truck Mounted Rig	DATE STARTED: 10/20/98 / DATE FINISHED: 10/20/98 / COMPLETION DEPTH: 80 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 16 / UNDIST. -------- / CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID / CASING DEPTH(ft): 18	WATER LEVEL (ft.): FIRST ▽ 8 / COMPL. ▼ ----- / 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Ernest Thomas/Desmond Williams
SAMPLER HAMMER / WEIGHT(lbs): 140 / DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
pprox. el. 7.4	Surficial ASPHALT								* New York City BC Classification numbers in parenthesis Added water D = 0'
	Brown f.-c. SAND, trace silt and red brick (11-65)*		5	S1	SS	14	4 3 3 2	6	PID = 0 ppm
	Brown f.-c. SAND, trace f.-m. gravel/coal, silt, and red brick (11-65)		10	S2	SS	4	1 6 2 2	8	PID = 196 ppm, visible "Copper" brown petroleum like material Trace wood in wash
	Brown f.-c. SAND, trace silt, f.-m gravel, and wood (11-65)		15	S3	SS	13	8 5 3 2	8	PID = 290 ppm, visible petroleum like material Added mud D = 15'
	Inferred WOOD FIBERS and brown clayey SILT, trace f. sand (11-65)		20	S4	SS	0	6 2 2 1	4	PID = 25 ppm Sample S4 spoon tip material
	WOOD FIBERS, trace brown silt and f. sand (11-65)		25	S5	SS	9	21 29 38 41	67	PID = 52 ppm Very slow/hard drilling and wood fibers in wash D = 23' - 28'
	Green brown SILT, trace clay, wood fibers, and f.-m. sand (11-65)		30	S6	SS	16	8 10 11 12	21	PID = 9.6 ppm
	Brown/gray f.-m SAND, some silt and clay (7-65)		35	S7	SS	19	4 7 15 13	22	PID = 168 ppm, slightly visible petroleum like material
	Brown silty f. SAND (8-65)		40	S8	SS	14.5	10 13 10 10	23	PID = 20 ppm

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LOG OF BORING RB1

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 7.4 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Gray/brown f.-m SAND (7-65)		45	S9	SS	13	9 12 15 21	27	PID = 410 ppm, petroleum like material very visible
	Gray/brown f.-m. SAND, trace silt (8-65)		50	S10	SS	15	12 15 18 20	33	PID = 188 ppm, visible petroleum like material
	Brown f.-m. SAND (7-65)		55	S11	SS	12	6 9 11 11	20	PID = 7.1 ppm, visible petroleum like material
	Brown f.-m. SAND, trace silt (7-65)		60	S12	SS	16	11 14 16 18	30	PID = 330 ppm, very visible petroleum like material
									Rig chatter D = 62'
	Red/gray f.-c. GRAVEL and f.-c. SAND, trace silt (6-65)		65	S13	SS	4	77 62 22 18	84	Slow/hard drilling D = 62' - 63' PID = 25 ppm Minor rig chatter D = 63' to 68'
	Inferred Gray f.-c. GRAVEL, some red/brown silty clay and f.-c. sand (6-65)		70	S14	SS	0	21 28 22 26	50	Petroleum like material floating on the surface of wash tub PID = 19.8 ppm Sample S14 spooon tip material
	Red brown f.-c. SAND, trace silt, f.-m. gravel, and clay (6-65)		75	S15	SS	12	33 27 19 19	46	PID = 3 ppm
									Rig chatter D = 77'
	Red brown f.-c. SAND, some clay, trace silt and f.-m. gravel (6-65)		80	S16	SS	9.5	14 12 14 12	26	PID = 5.1 ppm
	Boring terminated D = 80'		85 90						Borehole grouted upon completion

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LOG OF BORING RB2

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 9.0 [BBHDD]
DRILLING EQUIPMENT: CME 75 Truck Mounted Rig	DATE STARTED: 10/19/98 · DATE FINISHED: 10/20/98 · COMPLETION DEPTH: 85 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 16 · UNDIST. -------- · CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH(ft): 14	WATER LEVEL (ft.): FIRST ▽ 10 · COMPL. ▼ ----- · 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Tommy Gregorey/Chris Mitchell
SAMPLER HAMMER · WEIGHT(lbs): 140 · DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
Approx. el. 9.0	Surficial ASPHALT								*New York City BC Classification numbers in parenthesis Added water D = 2'
	Brown f.-c. GRAVEL, trace f.-c. sand, silt, and red brick (11-65)*		5	S1	SS	4	4 4 5 5	9	PID = 0.1 ppm
	Brown/black f.-m. SAND, trace silt, coarse sand, and f. gravel/coal (11-65)	▽	10	S2	SS	3.5	4 2 5 2	7	PID = 14 ppm
	Gray silty CLAY, trace roots and shell (11-65)		15	S3	SS	24	2 1 1 1	2	PID = 0.4 ppm
	Gray silty CLAY, some roots/wood (11-65)		20	S4	SS	24	WOH WOH 2 1	2	WOH: Weight of hammer Added mud D = 20' PID = 0.2 ppm
	Brown f.-m. SAND, trace silt and m. gravel (7-65)		25	S5	SS	13	9 14 18 19	32	PID = 17.2 ppm, visible petroleum like material sheen
	Brown f.-m. SAND (7-65)		30	S6	SS	24	19 29 38 30	67	PID = 250 ppm, visible petroleum like material
	Brown silty f. SAND (8-65)		35	S7	SS	17	10 16 13 14	29	PID = 40 ppm, visible petroleum like material
	Brown SILT, trace f. sand and clay (10-65)		40	S8	SS	15	20 17 17 18	34	PID = 32 ppm

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LOG OF BORING RB2

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 9.0 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG.	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Gray/brown f.-m. SAND, trace silt (7-65)		45	S9	SS	17	7 6 12 14	18	PID = 8 ppm, visible petroleum like material Minor rig chatter
	Gray/brown f.-m. SAND (7-65)		50	S10	SS	20	12 13 13 15	26	PID = 20 ppm, slightly visible petroleum like material
	Gray/brown f.-m. SAND (7-65)		55	S11	SS	20	9 7 8 10	15	PID = 10.8 ppm
	Brown f.-m. SAND, some silt, trace clay (7-65)		60	S12	SS	18	9 12 10 11	22	PID = 5.9 ppm
	Red brown f.-c. sandy SILT, some clay, trace f. gravel (10-65)		65	S13	SS	15	31 16 19 27	35	Rig chatter D = 63.5' - 65' "Copper" brown petroleum like material floating on the surface of wash tub PID = 6.2 ppm Major rig chatter D = 65' - 70'
	Red brown f.-m. SAND,trace silt, clay, and m. gravel (7-65)		70	S14	SS	14	24 29 27 21	56	PID = 8.6 ppm Minor rig chatter D = 70' - 75'
	Red brown f.-m. SAND, trace silt, clay, and f. gravel (7-65)		75	S15	SS	14	23 22 21 28	43	PID = 43 ppm Rig chatter D = 75' - 83'
	Red brown f.-m. SAND, trace silt, clay, and c. sand (7-65)		80	S16	SS		43 30 39 38	69	PID = 6 ppm
	Boring terminated D = 85'		85 90						Borehole grouted upon completion

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LOG OF BORING RB3A

SHEET 1 OF 1

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx el. 10.1 [BBHDD]
DRILLING EQUIPMENT: Mobile B61 Truck Mounted Rig	DATE STARTED: 10/19/98 / DATE FINISHED: 10/19/98 / COMPLETION DEPTH: 1 ft.
SIZE AND TYPE OF BIT: 4 7/8" Tri-Cone Roller Bits w/water	NUMBER OF SAMPLES: DIST. -------- / UNDIST. ------- / CORE --------
CASING DIAMETER (in): ----- / CASING DEPTH(ft):	WATER LEVEL (ft.): FIRST ----- / COMPL. ----- / 24 HR. -----
SAMPLER: --------	DRILLING FOREMAN: Ernest Thomas/Desmond Williams
SAMPLER HAMMER / WEIGHT(lbs): ----- / DROP(in): -----	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
pprox el. 10.1	2.5" ASPHALT 6.5" Black f.-c. SAND and GRAVEL (11-65)* 3" COBBLE/BOULDER (6-65)								*New York City BC Classification numbers in parenthesis Added water D = 0.5' Hard/slow drilling D = 0.75' - 1' Drill equiptment refusal D = 1'
	Boring terminated D = 1'		5						
			10						
			15						
			20						
			25						
			30						
			35						
			40						

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LOG OF BORING RB3B

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 10.1 [BBHDD]
DRILLING EQUIPMENT: Mobile B61 Truck Mounted Rig	DATE STARTED: 10/19/98; DATE FINISHED: 10/19/98; COMPLETION DEPTH: 80 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 13; UNDIST. --------; CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID; CASING DEPTH(ft): 13	WATER LEVEL (ft.): FIRST ▽ 8; COMPL. ▼ -----; 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Ernest Thomas/Desmond Williams
SAMPLER HAMMER; WEIGHT(lbs): 140; DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
Approx. el. 10.1	Surficial ASPAHLT								*New York City BC Classification numbers in parenthesis Rig chatter D = 0' - 3'
	Black f.-c. SAND, trace silt, f. gravel, and red brick (11-65)*		5	S1	SS	13	10 6 9 8	15	PID = 5 ppm, petroleum like material oder
	Inferred miscellaneous FILL (11-65)		10	-	SS	0	2 1 1 1	2	Added mud D = 10'
	Gray/brown organic SILT/PEAT, trace f. gravel (11-65)		15	S2	SS	10	2 2 2 1	4	PID = 0.1 ppm, petroleum like material oder
	Gray silty CLAY, trace shell and organics/root (11-65)		20	S3	SS	21	WOH WOH WOH WOH	WOH	WOH: Weight of hammer PID = 0 ppm
	Gray silty CLAY, trace shell and organics (11-65)		25	S4	SS	15	2 2 2 2	4	PID = 0 ppm
	Brown silty f. SAND, trace clay (8-65)		30	S5	SS	15	3 4 7 8	11	PID = 0.5 ppm, slight pertroleum like material oder
	Gray f.-m. SAND (7-65)		35	S6	SS	20	13 18 18 15	36	PID = 95 ppm, visible petroleum like material w/oder
	Brown/gray f. sandy SILT, trace clay (10-65)		40	S7	SS	15	9 12 9 16	21	PID = 8 ppm, petroleum like material oder

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LOG OF BORING RB3B

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 10.1 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown silty f. SAND, trace clay (8-65)		45	S8	SS	14	8 11 13 14	24	PID = 5.2 ppm, petroleum like material oder
	Brown silty f.-m. SAND, trace clay (7-65)		50	S9	SS	17	12 13 18 24	31	PID = 6.5 ppm, petroleum like material oder
	Brown/gray f.-c. SAND, trace f. gravel (7-65)		55	S10	SS	13	9 12 14 15	26	PID = 0.6 ppm, slight petroleum like material oder
	Gray/brown f.-c. SAND (7-65)		60	S11	SS	14	13 18 18 20	36	PID = 1.2 ppm, petroleum like material oder
	Gray/brown SILT, some clay, trace f. sand (10-65)		65	S12	SS	15	10 9 18 20	27	PID = 0.2 ppm
	Red brown f.-c. SAND, trace silt and f. gravel (6-65)		70	S13	SS	7	21 24 80 100/3"	104	PID = 0.7 ppm, petroleum like material oder Spoon refusal D = 69.5' Rig chatter D = 69.5' and 73'
	Red brown f.-c. SAND, some silt and clay, trace f. gravel (7-65)		75	S14	SS	7	28 21 15 18	36	PID = 0.1 ppm Minor rig chatter D = 73' - 78'
	Red brown clayey SILT, trace f. sand, trace m. gravel (10-65)		80	S15	SS	18	18 19 13	32	PID = 0.3 ppm, petroleum like material oder
	Boring terminated D = 80'		85 90						Borehole grouted upon completion

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LOG OF BORING RB4

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 10.4 [BBHDD]
DRILLING EQUIPMENT: CME 75 Truck Mounted Rig	DATE STARTED: 10/16/98 / DATE FINISHED: 10/19/98 / COMPLETION DEPTH: 73 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 14 / UNDIST. -------- / CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID / CASING DEPTH(ft): 10	WATER LEVEL (ft.): FIRST ----- / COMPL. ----- / 24 HR. 6.5
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Tommy Gregorey/Chris Mitchell
SAMPLER HAMMER / WEIGHT(lbs): 140 / DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
prox. el. 10.4	Surficial ASPHALT								*New York City BC Classification numbers in parenthesis Black drill water w/ petroleum like material oder D = 1.5' - 5'
	Black/brown f.-c. SAND, some silt, trace f. gravel/coal, wood/organics, and red brick (11-65)*		5	S1	SS	5	2 8 6 8	14	PID = 0.2 ppm, petroleum like material oder
	Black and white f. GRAVEL/COAL, trace m.-c. sand (11-65)		10	S2	SS	TRACE	1 1 WOH WOH	1	WOH: Weight of hammer PID = 3 ppm, petroleum like material oder Over drove spoon to aid in Sample recovery
	Black and white f. GRAVEL/COAL, trace m.-c. sand and glass (11-65)		15	S3	SS	TRACE	1 2 1 1	3	PID = 4 ppm, petroleum like material oder Added mud D = 15'
	Gray silty CLAY, trace shell and f. gravel (11-65)		20	S4	SS	14	1 WOH WOH WOH	WOH	PID = 0.4 ppm, petroleum like material oder
	Gray silty CLAY, trace shell (11-65)		25	S5	SS	8	1 WOH WOH WOH	WOH	PID = 7.2 ppm, petroleum like material oder
	Gray SILT, trace clay, f.-m. sand, f.-m. gravel/coal, and shell (10-65)		30	S6	SS	22	9 12 12 9	24	PID = 8 ppm, slight petroleum like material odor
	Brown f.-m. SAND (7-65)		35	S7	SS	16	22 23 22 13	45	PID = 190 ppm, visible petroleum like material w/ oder
	Brown f.-m. SAND, trace silt and coal (7-65)		40	S8	SS	19	20 15 15 20	30	PID = 2.5 ppm, petroleum like material

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LOG OF BORING RB4

SHEET 2 OF 2

PROJECT	Gowanus Development	PROJECT NO.	1503701
LOCATION	Brooklyn, NY	ELEVATION AND DATUM	Approx. el. 10.4 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
			45	S9	SS	15	16 14 18 16	32	PID = 5 ppm, petroleum like material oder Added mud D = 46'
	Brown f. SAND, trace silt (8-65)		50	S10	SS	12	18 20 26 28	46	PID = 1.6 ppm, petroleum like material oder
	Gray f.-m. SAND (7-65)		55	S11	SS	24	17 14 15 21	29	PID = 1 ppm, petroleum like material oder
	Brown f.-c. SAND (7-65)		60	S12	SS	13	29 32 25 21	57	PID = 9 ppm, petroleum like material oder
	Gray/brown f.-c. SAND, trace f.-m. gravel (6-65)		65	S13	SS	13	28 41 59 63	100	PID = 0.6 ppm, slight petroleum like material oder Rig chatter D = 66.5' - 68.5'
	Red brown SILT, some f. sand, trace clay (10-65)								
	Red brown f.-c. SAND, trace silt, f.-m. gravel, and clay (6-65)		70	S14	SS	10	30 37 47 50	84	Rig chatter D = 70' - 73' PID = 0.9 ppm, slight petroleum like material odor Very hard/slow drilling D = 72' - 73' Drilling equiptment refusal D = 73'
	Boring terminated D = 73'		75						Bore hole grouted upon completion
			80						
			85						
			90						

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LOG OF BORING RB5

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 10.6 [BBHDD]
DRILLING EQUIPMENT: Mobile B61 Truck Mounted Rig	DATE STARTED: 10/15/98 · DATE FINISHED: 10/16/98 · COMPLETION DEPTH: 79.5 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-1') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 16 · UNDIST. -------- · CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH (ft): 13	WATER LEVEL (ft.): FIRST ▽ 9 · COMPL. ▼ ----- · 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Ernest Thomas/Desmond Williams
SAMPLER HAMMER · WEIGHT (lbs): 140 · DROP (in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
prox. el. 10.6	Surficial ASPHALT								*New York City BC Classification numbers in parenthesis Added water D = 0.5' Rig chatter D = 1' Petroleum like material/oder and color in drill water D = 1' to 3'
	Black/gray f.-c. SAND, some f-c. gravel/coal, trace silt and red brick (11-65)*		5	S1	SS	10	13 14 4 3	18	PID = 6 ppm, petroleum like material odor Trace wood in wash WOH: Weight of hammer
	Inferred Black/gray f.-c. GRAVEL, trace f.-c. sand, silt, and metal (11-65)	▽	10	S2	SS	0	2 1 WOH 1	1	PID = 3 ppm, petroleum like material oder Sample S2 spoon tip material
	Gray silty CLAY, some woody roots, trace shell (11-65)		15	S3	SS	17	2 2 2 2	4	PID = 1 ppm, petroleum like material oder WOR: Weight of rods
	Gray silty CLAY, trace organics/root (11-65)		20	S4	SS	14	WOR WOR WOR WOR	WOR	PID = 0.2 ppm, petroleum like material oder
	Brown f. SAND, trace silt and wood (8-65)		25	S5	SS	18	5 8 12 13	20	PID = 6.5 ppm, petroleum like material oder
	Brown/gray f.-c. SAND (7-65)		30	S6	SS	18	13 14 10 6	24	PID = 4 ppm, visible petroleum like material and odor
	Gray/brown f. SAND (8-65)		35	S7	SS	13	9 18 21 20	39	PID = 13 ppm, petroleum like material oder
	Brown/gray f.-m. SAND (7-65)		40	S8	SS	17	11 14 8 13	22	PID = 0.4 ppm, petroleum like material oder

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LOG OF BORING RB5

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 10.6 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT.	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Gray/brown f. SAND, trace silt (8-65)		45	S9	SS	18	13 13 14 15	27	PID = 3.9 ppm, petroleum like material oder
	Brown f.-m. SAND, trace silt (7-65)		50	S10	SS	18	10 12 15 18	27	PID = 0.5 ppm, slight petroleum like material oder
	Brown SILT, trace f. sand and clay (10-65)		55	S11	SS	18	11 14 18 20	32	PID = 0.3 ppm, slight petroleum like material oder
	Brown f.-m. SAND, trace silt (7-65)		60	S12	SS	14	17 21 100/3"	121/9"	PID = 0.4 ppm, petroleum like material oder Spoon refusal D = 59' Major rig chatter D = 60'
	Red brown f.-c. SAND, some f.-m. gravel, trace silt and clay (6-65)		65	S13	SS	14	35 51 62 24	113	Rig chatter D = 60' - 63' PID = 0.2 ppm, slight petroleum like material oder Rig chatter D = 63' - 68'
	Red brown f.-c. SAND, trace f.-m. gravel, silt, and clay (7-65)		70	S14	SS	14	41 40 66 100	106	Rig chatter D = 68' - 73' PID = 0.4 ppm, slight petroleum like material oder
	Red brown f.-c. SAND, trace silt, f.-m. gravel, and clay (6-65)		75	S15	SS	16	56 35 50 35	85	PID = 0.1 ppm Major rig chatter D = 76' - 77'
	Red brown f.-c. SAND, trace silt, f. gravel, and clay (6-65)		80	S16	SS	10	41 89 100/5"	189/11"	Spoon refusal D = 79.5' PID = 0 ppm, slight petroleum like material oder
	Boring terminated D = 79.5'		85 90						Borehole grouted upon completion

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LOG OF BORING RB6

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 10.6 [BBHDD]
DRILLING EQUIPMENT: CME 75 Truck Mounted Rig	DATE STARTED: 10/15/98; DATE FINISHED: 10/16/98; COMPLETION DEPTH: 82 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 16; UNDIST. --------; CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID; CASING DEPTH(ft):	WATER LEVEL (ft.): FIRST ----- ; COMPL. ----- ; 24 HR. 8
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Robert Danielson/Tommy Gregorey/Chris Mitchell
SAMPLER HAMMER; WEIGHT(lbs): 140; DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
prox. el. 10.6	Surficial ASPHALT								*New York City BC Classification numbers in parenthesis Added water D = 3'
	Inferred miscellaneous FILL with coal (11-65)*		5	S1	SS	0	3 1 1 1	2	Sample S1 spoon tip material
									WOH: Weight of hammer
	Black/gray f.-m. GRAVEL/COAL, trace f.-c. sand and wood (11-65)		10	S2	SS	2	1 1 WOH WOH	1	PID = 40 ppm, petroleum light material odor
	Gray silty CLAY, some wood/root, trace shell (11-65)		15	S3	SS	24	1 WOH 1 1	1	PID = 0.1 ppm, petroleum like material odor
	Gray silty CLAY, trace root (11-65)		20	S4	SS	22	1 1 1 1	2	PID = 0 ppm
	Brown/gray f.-m. SAND, trace silt (7-65)		25	S5	SS	20	16 20 19 18	39	PID = 0.2 ppm Added mud D = 27'
	Gray/brown clayey SILT, trace f.-m. sand (10-65)		30	S6	SS	12	6 9 8 13	17	PID = 0.2 ppm
	Gray f.-m. SAND (7-65)		35	S7	SS	12	20 22 18 19	40	PID = 0.1 ppm, slight petroleum like material odor
	Gray f.-m. SAND (7-65)		40	S8	SS	14	11 13 12 12	25	PID = 0.5 ppm, petroleum like material odor

NG 1503701.GPJ LANGANFL.GDT 24/11/98

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LOG OF BORING RB6

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 10.6 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Gray/brown f.-m. SAND, trace silt (7-65)		45	S9	SS	14	S13 12 8 7	20	PID = 0.2 ppm, slight petroleum like material odor
	Brown f. SAND (8-65)		50	S10	SS	15	12 15 25 27	40	PID = 0.4 ppm, petroleum like material odor
	Brown f.-m. SAND, trace silt (8-65)		55	S11	SS	18	18 30 34 41	64	PID = 0.2 ppm
	Brown SILT, trace f. sand and clay (10-65)		60	S12	SS	15	25 34 31 44	65	PID = 0.8 ppm, petroleum like material odor Rig chatter D = 63.5'
	Red brown c.-f. SAND, some f.-c. gravel, trace silt and clay (6-65)		65	S13	SS	12	82 64 50 54	114	PID = 0.6 ppm Rig chatter D = 65' - 70'
	Red brown silty f.-m. SAND, trace f.-m. gravel and clay (6-65)		70	S14	SS	8	34 50 100/5"	150/11"	PID = 0 ppm Spoon refusal D = 71.5' Rig chatter and slow drilling D = 70' - 75'
	Red brown f.-c. SAND and GRAVEL, trace silt and clay (6-65)		75	S15	SS	3	100/3"	R"	PID = 0.7 ppm Major rig chatter Slow drilling
	Red brown fine GRAVEL and f.-c. SAND, some silt, trace clay (6-65)		80	S16	SS	7	38 72 100	172	PID = 0.6 ppm, slight petroleum like material odor
	Boring terminated D = 82'		85						Borehole grouted upon completion
			90						

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LOG OF BORING RB7

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 10.6 [BBHDD]
DRILLING EQUIPMENT: Mobile B61 Truck Mounted Rig	DATE STARTED: 10/15/98; DATE FINISHED: 10/15/98; COMPLETION DEPTH: 80 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 17; UNDIST. --------; CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID; CASING DEPTH (ft): 13	WATER LEVEL (ft.): FIRST ▽ 8; COMPL. ▼ -----; 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon	DRILLING FOREMAN: Ernest Thomas/Desmond Williams
SAMPLER HAMMER; WEIGHT (lbs): 140; DROP (in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in.	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
Approx. el. 10.6	Surficial ASPHALT								*New York City BC Classification numbers in parenthesis Added water D = 0'
	Brown/black f.-c. SAND, trace silt, m. gravel/coal, and red brick (11-65)*		5	S1	SS	5	2 3 3 2	6	PID = 0.1 ppm
	Gray/black f.-c. SAND, trace silt, f. gravel/coal, and glass (11-65)		10	S2	SS	5	4 3 2 2	5	PID = 0 ppm
	Brown/black PEAT (11-65)		15	S3	SS	0	4 1 1 1	2	PID = 0.9 ppm, organic odor Sample S3 from second recovery attempt WOH: Weight of hammer
	Gray/brown/black f.-m. sandy PEAT, trace silt (11-65)		20	S4	SS	24	WOH 4 3 6	7	PID = 0 ppm PID = 0 ppm
	Gray/brown f. SAND, trace silt (8-65)								Sample S5 6" Lense of Gray/brown SILT, trace clay and f. sand in top of sample
	Brown f.-m. SAND, trace silt (7-65)		25	S6	SS	18	12 16 18 17	34	PID = 0 ppm PID = 0 ppm
	Brown f.-m. SAND (7-65)		30	S7	SS	15	9 10 10 5	20	
	Gray f.-m. SAND, some clay, trace silt (7-65)		35	S8	SS	19	3 3 8 14	11	
	Brown/gray f.-m. SAND (7-65)		40	S9	SS	16	8 14 18 18	32	

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LOG OF BORING RB7

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 10.6 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Gray f.-m. SAND (7-65)			S10	SS	16	12 14 19 16	33	
			45						
	Gray/brown f.-m. SAND, trace silt (7-65)			S11	SS	24	10 9 7 8	16	Sample S11 12" Lense of Gray/brown silty CLAY, trace f. sand in bottom of sample
			50						
	Brown/gray f.-m. SAND, trace silt (7-65)			S12	SS	16	17 21 27 30	48	
			55						
	Brown/gray f.-c. SAND, trace f.-m. gravel and silt (6-65)			S13	SS	15	27 40 31 33	71	
			60						
	Red brown silty f.-c. SAND, trace f.-m. gravel (6-65)			S14	SS	8	19 29 38 30	67	
			65						
	Red brown f.-c. SAND, trace f.-m. gravel, silt, and clay (6-65)			S15	SS	8	50 95 28 37	123	
			70						Rig chatter
	Red brown f.-c. SAND, trace silt, clay, and f.-c. gravel (6-65)			S16	SS	12	37 48 33 40	81	
			75						Rig chatter
	Red brown f.-c. SAND, trace f.-c. gravel, silt, and clay (6-65)			S17	SS	9	21 37 62 48	99	
			80						
	Boring terminated D = 80'								Borehole grouted upon completion
			85						
			90						

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LOG OF BORING RB8

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 10.9 [BBHDD]
DRILLING EQUIPMENT: CME 75 Truck Mounted Rig	DATE STARTED: 10/14/98 · DATE FINISHED: 10/15/98 · COMPLETION DEPTH: 82 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-4') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 19 · UNDIST. -------- · CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH(ft): 8	WATER LEVEL (ft.): FIRST ▽ 8 · COMPL. ▼ ----- · 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon	DRILLING FOREMAN: Greg Marney/Robert Danielson/Tommy Gregorey
SAMPLER HAMMER · WEIGHT(lbs): 140 · DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
prox. el. 10.9	2" ASPHALT								
	Black f.-c. SAND, some f.-m. gravel/coal and red brick, trace silt (11-65)*			S1	SS	6	25 26 39	65	*New York City BC Classification numbers in parenthesis PID = 21 ppm, petroleum like material odor
	Black f.-c. SAND, trace f.-m. gravel/coal, red brick, silt, and wood (11-65)			S2	SS	7	80 85 42 47	127	PID = 4.5 ppm, petroleum like material odor Added water/mud D = 4'
	Black/brown f.-m. GRAVEL/COAL, some f.-c. sand, trace silt and glass (11-65)		5	S3	SS	7	8 11 2 2	13	PID = 4.5 ppm, petroleum like material odor
	Black/brown f.-c. silty SAND, trace f. gravel/coal (11-65)			S4	SS	3.5	3 3 2 3	5	PID = 1.5 ppm, petroleum like material odor
	Black/gray f.-c. SAND, some silt and wood, trace f. gravel/coal (11-65)			S5	SS	3	4 3 3 3	6	PID = 0 ppm, petroleum like material odor
			10						
	WOOD, some black/gray f.-c. sand and f. gravel/coal, trace silt and glass (11-65)		15	S6	SS	2	6 3 3 2	6	PID = 2 ppm, petroleum like material odor
	Gray/brown f. sandy SILT, trace roots, shell, and clay (11-65)		20	S7	SS	18	2 3 6 6	9	PID = 0 ppm
	Brown f.-m. SAND (7-65)		25	S8	SS	22	20 19 17 17	36	PID = 0 ppm
									Sample S9 6" Lense brown clayey SILT, trace f. sand (10-65) in bottom of sample
	Brown f.-m. SAND (7-65)		30	S9	SS	11	10 5 7 8	12	PID = 0.1 ppm
	Gray f.-m. SAND, trace silt and clay (7-65)		35	S10	SS	20	8 11 13 13	24	PID = 0.1 ppm
	Brown/gray f.-m. SAND (7-65)		40	S11	SS	16	8 8 7 6	15	PID = 0.3 ppm

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LOG OF BORING RB8

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 10.9 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown/gray silty f. SAND sand, trace clay (8-65)		45	S12	SS	19	6 7 8 8	15	PID = 0.2 ppm PID = 0.3 ppm
	Brown/gray f.-m. SAND, trace silt (7-65)								
	Brown/gray clayey SILT, trace f.-m. sand (10-65)		50	S13	SS	19	3 3 4 5	7	PID = 0.1 ppm Rig chatter D = 53'
	Inferred Red brown f.-c. SAND, some f.-m. gravel, trace silt and clay (6-65)		55	S14	SS	0	40 39 39 35	78	Sample S14 spoon tip material Rig chatter D = 55' - 60'
	Red brown f.-c. SAND, some silt, trace f.-m. gravel and clay (6-65)		60	S15	SS	4	27 43 37 39	80	PID = 0 ppm Rig chatter D = 60' - 65'
	Red brown silty f.-c. SAND, some f.-c. gravel, trace clay (6-65)		65	S16	SS	4	26 33 34 41	67	
	Red brown f.-m. GRAVEL, some f.-c. sand, trace silt (6-65)		70	S17	SS	3	29 65 54 76	119	
	Red brown f.-m. GRAVEL, trace f.-c. sand, silt, and clay (6-65)		75	S18	SS	2	29 58 52 73	110	
	Red brown f.-c. GRAVEL, some f.-c. sand, trace silt and clay (6-65)		80	S19	SS	3	31 32 47 36	79	
	Boring terminated D = 82'		85						Borehole grouted upon completion
			90						

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LOG OF BORING RB9

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 11.2 [BBHDD]
DRILLING EQUIPMENT: Mobile B61 Truck Mounted Rig	DATE STARTED: 10/14/98 · DATE FINISHED: 10/15/98 · COMPLETION DEPTH: 82 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-4') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 19 · UNDIST. -------- · CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH(ft): 14	WATER LEVEL (ft.): FIRST ▽ 6 · COMPL. ▼ ----- · 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon	DRILLING FOREMAN: Ernest Thomas/Desmond Williams
SAMPLER HAMMER · WEIGHT(lbs): 140 · DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
Approx. el. 11.2	3" ASPHALT			S2	SS	7	28 21 100	121	"New York City BC Classification numbers in parenthesis Added water D = 0.5'
	Black/brown f.-c. GRAVEL/COAL, some f.-c. sand, trace silt (11-65)*								PID = 11 ppm, petroleum like material odor
	Black/brown f.-c. SAND, trace f.-m. gravel/coal, silt, and metal (11-65)			S2	SS	10	7 8 2 2	10	PID = 0.2 ppm, petroleum like material odor
	Black/brown f.-m. GRAVEL/COAL and f.-c. SAND, trace silt (11-65)		5	S3	SS	6	3 4 2 3	6	PID = 0.3 ppm, petroleum like material odor
	Gray/brown f.-c. SAND, some silt, trace f.-m. gravel/coal, one seed (11-65)			S4	SS	0.5	4 3 3 4	6	PID = 0 ppm
	Inferred miscellaneous FILL (11-65)			-	SS	0	4 2 2 2	4	
			10						
									Very hard drilling Added mud D = 14' - 15'
	Brown f.-c. SAND, trace f. gravel and silt (11-65)		15	S6 S5	SS	14	5 4 3 4	7	PID = 0.1 ppm, petroleum like material odor
	Brown/black PEAT (11-65)								PID = 1 ppm, petroleum like material odor
			20						
	Brown-silty f. SAND, trace clay (8-65)			S7	SS	10	2 2 5 7	7	PID = 0 ppm, petroleum like material odor
	Brown f. SAND, trace silt (8-65)		25	S8	SS	20	13 14 15 17	29	PID = 0.1 ppm
	Gray/brown f. SAND, some silt (8-65)		30	S9	SS	21	5 3 2 4	5	PID = 0 ppm Sample S9 10" Lense Gray clayey SILT, trace f. sand (10-65) w/ PID = 0 ppm in bottom of sample
	Gray clayey f.-m. SAND, trace silt (7-65)		35	S10	SS	19	12 15 19 20	34	PID = 0 ppm
	Brown/gray f.-m. SAND (7-65)								PID = 0 ppm
	Brown/gray f.-m. SAND (7-65)		40	S11	SS	17	5 7 8 9	15	PID = 0 ppm

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LOG OF BORING RB9

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 11.2 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
			45						
	Brown/gray f.-m. sandy SILT (10-65)			S12	SS	11119	2 3 5 7	8	PID = 0 ppm
			50						
	Brown/gray SILT, trace clay and f.-m. sand (10-65)			S13	SS	24	2 1 2 3	3	PID = 0 ppm
			55						
	Red brown silty f.-c. SAND, trace clay and f. gravel (7-65)			S14	SS	12	10 13 19 16	32	PID = 0 ppm PID = 0 ppm
									Slow/hard drilling D = 59'
	Red brown silty f.-c. SAND, some f.-m. gravel, trace clay (6-65)		60	S15	SS	16	17 25 26 28	51	PID = 0 ppm
	Red brown silty f.-c. SAND, some f.-m. gravel, trace clay (6-65)		65	S16	SS	16	21 49 67 100/5"	116	Spoon refusal D = 67'
	Red brown f.-c. SAND, some f.-m. gravel and silt, trace clay (6-65)		70	S17	SS	5	21 100/6"	100/6"	Spoon refusal 100/6" D = 71'
									Rig chatter
	Red brown f.-c. SAND, some f.-m. gravel, trace silt and clay (6-65)		75	S18	SS	14	40 53 58 38	111	
	Gray f.-c. GRAVEL and red brown f.-c. SAND, trace silt and clay (6-65)		80	S19	SS		66 83 100/5"	183/11"	Spoon refusal D = 81.5'
	Boring terminated D = 82'								Borehole grouted upon completion
			85						
			90						

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LOG OF BORING LB1

SHEET 1 OF 2

PROJECT	Loews @ Gowanus
LOCATION	Brooklyn, NY
DRILLING EQUIPMENT	Davey Kent DK50RA Track Rig
SIZE AND TYPE OF BIT	4 7/8" and 3 7/8" Tri-Cone Roller Bits
CASING DIAMETER (in)	4 1/2" OD 4" ID
CASING DEPTH (ft)	18.5
SAMPLER	Standard Split Spoon (SS) or Shelby Tube (ST)
SAMPLER HAMMER	WEIGHT (lbs) 140 / DROP (in) 30
PROJECT NO.	1531601
ELEVATION AND DATUM	approx. el 11 [BBHDD]
DATE STARTED	12/9/98
DATE FINISHED	12/11/98
COMPLETION DEPTH	81 ft.
NUMBER OF SAMPLES	DIST. 21 / UNDIST. ---- / CORE ----
WATER LEVEL (ft.)	FIRST ---- / COMPL. ---- / 24 HR. 8.5
DRILLING FOREMAN	Tom Gregory/Kurt Conlon
INSPECTING ENGINEER	Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
el 11	Inferred 4.5" CONCRETE								*New York City BC Classification numbers in parenthesis
	Brown f.-m. SAND, trace c. sand, f. gravel, and silt (11-65)*			S1	SS	4.5	10 24 24 100/3"	48	Hard slow drilling on concrete first 4.5' S1 SS Tip plugged with rocklike material (in S1 jar) PID = 580 ppm Added water D=0.25' Spoon refusal D=2' Rig chatter D=2'
	Brown f.-m. SAND, trace c. sand (11-65)		5	S2	SS	8	10 11 7 8	18	Petroleum like material floating in wash tub D=5' PID = 820 ppm
	Brown f.-m. SAND, trace c. sand (11-65)		10	S3 S4	SS	11	2 3 3 2	6	Started casing D=10' PID = 320 ppm PID = 420 ppm
0.0	Brown f.-m. SAND, trace organics/root, f.-m. gravel, clay, silt, and c. sand (11-65)								Advanced casing D=10'-13.5'
	Gray silty CLAY, some organics/root (11-65)		15	S5	SS	16	2 1 1 2	2	PP = 0.3-0.6 tsf PID = 150 ppm
	Gray silty CLAY, trace organics/root (11-65)			T1	ST	30	PUSH PUSH PUSH PUSH WOH		PP = 0.2-0.3 tsf TV = 0.23 tsf WOH : Weight of Hammer
	Gray silty CLAY, trace organics/root (11-65)		20	S6	SS	24	2 3 2	5	PP = 0.2-0.3 tsf PID = 480 ppm
	Brown SILT, trace f. sand and clay (10-65)		25	S7	SS	17	8 7 14 21	21	PID = 860 ppm
	Brown/gray CLAY and SILT, trace f. sand (10-65)		30	S8 S9	SS	18	8 8 7 10	15	S8 4" Lense of Brown f. SAND, trace silt and clay (8-65) w/ PID = 580 ppm in top of SS PP = 1.2-2.1 tsf PID = 720 ppm S10 2" Gray f. SAND, trace clay and silt w/ PID = 850 ppm in bottom of SS Visible petroleum like material D=30'-32'
	Brown f. SAND, trace silt and clay (8-65)		35	S11	SS	15	14 20 22 18	42	PID = 380 ppm
	Brown f. SAND, trace silt and clay (8-65)		40	S12	SS	16	12 13 12 13	25	Brown f. sandy SILT, trace clay in SS tip PID = 330 ppm Trace visible petroleum like material

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LOG OF BORING LB1

SHEET 2 OF 2

PROJECT	Loews @ Gowanus
LOCATION	Brooklyn, NY
PROJECT NO.	1531601
ELEVATION AND DATUM	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE (ft)	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. Bl./6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown f. sandy SILT, trace clay (10-65)		45	S13	SS	17	17 17 15 20	32	PID = 570 ppm
	Brown SILT, trace clay and f. sand (10-65)		50	S14 S15	SS	15	14 15 22 26	37	PID = 540 ppm PID = 650 ppm Trace visible petroleum like material
	Brown f. SAND, trace silt (8-65)								
	Brown f. SAND, trace m. sand (7-65)		55	S16	SS	14.5	11 16 16 17	32	PID = 710 ppm
	Gray f. SAND, trace m.-c. sand (7-65)		60	S17	SS	13.5	15 22 20 23	42	Brown/gray SILT, trace f. sand and clay in SS tip PID = 530 ppm Trace visible petroleum like material near bottom of SS tip Minor on/off rig chatter D=60.5'-63'
	Brown f. sandy SILT, trace clay (10-65)		65	S18	SS	13	19 23 23 26	46	PID = 1240 ppm
	Red brown f. sandy SILT, some f. sand, trace clay (10-65)		70	S19	SS	15.5	20 29 28 28	57	PID = 950 ppm
	Inferred Red brown f.-c. SAND, trace f.-m. gravel (7-65)								On/off rig chatter D=73'-74.5' Slow/hard drilling D=74.5'-75.5' w/ rig chatter
	Inferred BOULDER (6-65)		75						
	Red brown f. SAND, trace silt, f. gravel, m.-c. sand, and clay (6-65)			S20	SS	13	51 55 100/5"	155/11"	PID = 900 ppm Spoon refusal D=77.5' Slow/hard drilling D=77.5'-78.75'
	Inferred BOULDER (6-65)								
	Red brown and brown f.-m. SAND, trace f.-m. gravel, c. sand, silt, and clay		80	S21	SS	24	19 41 36 36	77	PID = 1200 ppm
	Boring terminated D=81'		85						
			90						

BORING 1531601 GPJ LANGANFL.GDT 22/12/08

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LOG OF BORING LB2

SHEET 1 OF 2

PROJECT	Loews @ Gowanus
LOCATION	Brooklyn, NY
DRILLING EQUIPMENT	Davey Kent DK50RA Track Rig
SIZE AND TYPE OF BIT	4 7/8" and 3 7/8" Tri-Cone Roller Bits
CASING DIAMETER (in)	4 1/2" OD 4" ID
CASING DEPTH (ft)	13.5
SAMPLER	2" OD 1 3/4" ID Split Spoon (SS)
SAMPLER HAMMER	WEIGHT (lbs) 140 / DROP (in) 30
PROJECT NO.	1531601
ELEVATION AND DATUM	approx. el 11 [BBHDD]
DATE STARTED	12/8/98
DATE FINISHED	12/9/98
COMPLETION DEPTH	80 ft.
NUMBER OF SAMPLES	DIST. 20 / UNDIST. ---- / CORE ----
WATER LEVEL (ft.)	FIRST ---- / COMPL. ---- / 24 HR. 6.5
DRILLING FOREMAN	Tom Gregory/Kurt Conlon
INSPECTING ENGINEER	Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
								*New York City BC Classification numbers in parenthesis
approx. el 11	4" CONCRETE							Started drilling w/ water
	Brown and black f. SAND, trace silt, f.-c. sand, f. gravel, and coal (11-65)*		S1	SS	13.5	32 28 24 24	52	PID = 650 ppm On/off rig chatter D = 0.75'-5'
	Black and brown c. SAND and f. GRAVEL/COAL, trace f.-m. sand and silt (11-65)	5	S2	SS	13	10 7 9 7	16	PID = 102 ppm
0.0	Gray silty CLAY, some brown peat, trace f. sand (11-65)	10	S3 S4	SS	8	2 1 4 8	5	PID = 9 ppm PID = 10.2 ppm
	Brown/black f. SAND, some silt, trace clay (11-65)							
	Brown f. sandy SILT, trace clay (11-65)	15	S5 S6	SS	18	3 3 3 4	6	PID = 19.6 ppm PID = 400 ppm Added mud D = .15'
	Gray/brown PEAT, trace f. sand, silt, and clay (11-65)							
	Gray silty CLAY, trace organics/root (11-65)	20	S7 S8	SS	24	1 3 5 5	8	PP = 0.6 - 1.25 tsf PID = 19.7 ppm PID = 40 ppm
	Gray f. SAND, some clay, trace silt (8-65)							
	Brown/gray f. SAND, some silt, trace clay (8-65)	25	S9	SS	15	4 4 5 7	9	PID = 9 ppm
	Brown f.-m. sandy SILT, trace clay (10-65)	30	S10	SS	19.5	11 10 8 7	18	PID = 330 ppm Visible petroleum like material
	Brown f. SAND, trace m. sand (7-65)	35	S11	SS	16	14 16 22 24	38	PID = 800 ppm
	Brown/gray f. SAND, trace m. sand, clay, and silt (8-65)	40	S12	SS	18	5 7 12 18	19	PID = 20 ppm

BORING 1531601.GPJ LANGANFL.GDT 22/12/98

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LOG OF BORING LB2

SHEET 2 OF 2

PROJECT	Loews @ Gowanus	PROJECT NO.	1531601
LOCATION	Brooklyn, NY	ELEVATION AND DATUM	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BLOWS/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown f. sandy SILT, trace clay (10-65)		45	S13	SS	18	8 10 11 13	21	PID – 500 ppm
	Brown f. sandy SILT, trace clay (10-65)		50	S14	SS	14	16 19 22 28	41	PID = 1020 ppm
	Brown SILT, trace f. sand and clay (10-65)		55	S15	SS	17	19 24 24 25	48	PID – 830 ppm Gray/brown f. SAND, trace silt in S15 SS tip
	Brown f. SAND, trace m. sand and silt (7-65)		60	S16	SS	18	11 17 17 17	34	PID = 50 ppm Slightly visible petroleum like material
	Brown f. SAND, trace m.-c. sand, f. gravel, and silt (7-65)		65	S17	SS	14	17 44 44 24	88	PID = 600 ppm Visible petroleum like material
	Brown f.-m. SAND, trace c. sand, f. gravel, and silt (7-65)		70	S18	SS	5.5	14 13 16 22	29	PID = 880 ppm Rig chatter D = 72.5' - 75' Very slow/hard drilling D = 72.5' - 73.5'
	Inferred boulder (6-65)								
	Red brown f. SAND, some m.-c. gravel, trace silt, m.-c. sand, f. gravel, and clay (6-65)		75	S19	SS	11	22 26 32 23	58	PID = 500 ppm
	Red brown f. SAND, trace silt and clay (8-65)			S20	SS	6	32 32 25 25	57	PID > 2000 ppm
	Boring terminated D = 80'		80						Borehole grouted upon completion
			85						
			90						

BORING 1531601.GPJ LANGANFL.GDT 22/12/98

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LOG OF BORING LB3

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 12/8/98 · DATE FINISHED: 12/9/98 · COMPLETION DEPTH: 80.5 ft.
SIZE AND TYPE OF BIT: HW Rock Core and Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 18 · UNDIST. ---- · CORE ----
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH (ft): 19.5	WATER LEVEL (ft.): FIRST ---- · COMPL. ---- · 24 HR. 2.6
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Gus Suri/Mike Chizmar
SAMPLER HAMMER: WEIGHT (lbs) 140 · DROP (in) 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	6" CONCRETE w/ wire mesh								*New York City BC Classification numbers in parenthesis
	Inferred miscellaneous FILL (11-65)*								Started coring w/ water
	Black/gray f.-m. SAND, trace silt, c. sand, f. gravel, and coal (11-65)			S1	SS	8	25 33 44 93	77	PID = 125 ppm Slightly visible petroleum like material On/off rig charter D = 1' - 5'
	Brown f.-m. SAND, trace red brick and silt (11-65)		5	S2	SS	3	21 28 20 12	48	Petroleum like material floating in wash tub D = 5' PID = 84 ppm
	Brown c. SAND, some f. gravel, trace clay, silt, and f.-m. sand (11-65)		10	S3	SS	8	15 4 4 7	8	PID = 155 ppm Slightly visible petroleum like material
	Brown f.-c. SAND, some gravel, trace clay and silt (11-65)		15	S4	SS	4	5 2 3 4	5	Added mud D = 15' PID = 55 ppm Slightly visible petroleum like material
	Brown f.-c. SAND and f. GRAVEL, some clay, trace silt (11-65)		20	S5	SS	2.5	102/2.5	Refusal	Refusal D = 20' Hard drilling D = 20.25' - 20.75' PID = 340 ppm Visible petroleum like material Added mud D = 20'
	Inferred CONCRETE								
	Brown SILT, trace clay, f. sand, and f. gravel (10-65)		25	S6	SS	7	6 10 8 13	18	PID = 220 ppm
	Brown/gray SILT, trace clay and f. sand (10-65)		30	S7	SS	11	5 8 7 7	15	Hole too tight D = 23' to get rods down so removed existing casing and drilled to D = 30' w/ 4 7/8" bit, then spun/cored casing to D = 19.5' PID = 45 ppm Slightly visible petroleum like material
	Brown f. SAND, trace silt and clay (8-65)		35	S8	SS	10	3 4 4 12	8	PID = 460 ppm
	Brown f. sandy SILT, trace clay (10-65)		40	S9	SS	14	7 12 12 14	24	PID = 640 ppm

BORING 1531601.GPJ LANGAKFL.GDT 22/12/93

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LOG OF BORING LB3

SHEET 2 OF 2

PROJECT	Loews @ Gowanus	PROJECT NO.	1531601
LOCATION	Brooklyn, NY	ELEVATION AND DATUM	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST Bl./6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown f. SAND, trace silt (8-65)		45	S10 S11	SS	12	11 10 10 10	20	PID 25 ppm S11 4" Lense of brown SILT, trace clay and f. sand (10-65) w/ PID = 55 ppm in bottom of SS
	Brown f.-m. SAND (7-65)		50	S12	SS	14	10 11 12 17	23	PID = 90 ppm
	Brown f. SAND, trace m.-c. sand (7-65)		55	S13	SS	8.5	11 14 19 17	33	PID = 9.8 ppm
	Brown f. SAND, trace m.-c. sand and silt (7-65)		60	S14 S15	SS	11.5	15 17 17 19	34	PID = 280 ppm PID = 210 ppm
	Brown/gray SILT, trace clay and f. sand (10-65)								
	Red brown f. SAND, some silt, trace f. gravel, m.-c. sand, and clay (7-65)		65	S16	SS	5	23 100/3"	100/3"	Spoon refusal D = 66' w/ bouncing Rig chatter D = 68' PID = 95 ppm
	Red brown f.-m. SAND, trace c. sand and f. gravel (7-65)		70	S17 S18	SS	8	17 40 22 21	62	PID = 510 ppm PID = 800 ppm
	Red brown SILT, trace f. gravel, f.-c. sand, and clay (10-65)								Minor on/off rig chatter D = 72' - 76.5'
	Inferred BOULDER		75						Slow/hard drilling D = 76.5' - 79' w/ minor rig chatter
	Inferred Red brown f.-c. SAND, trace f. gravel, silt, and clay (7-65)		80		SS	0	58 53 100/3"	53/11"	Spoon refusal D = 80.5' Borehole grouted upon completion
	Boring terminated D=80.5'		85						
			90						

BORING 1531601.GPJ LANGANFLGDT 2/11/2/98

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LOG OF BORING LB4

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 12/3/98 / DATE FINISHED: 12/7/98 / COMPLETION DEPTH: 80 ft.
SIZE AND TYPE OF BIT: HW and NQ Rock Cores and Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 16 / UNDIST. ---- / CORE ----
CASING DIAMETER (in): 4 1/2" OD 4" ID / CASING DEPTH (ft): 24	WATER LEVEL (ft.): FIRST ---- / COMPL. ---- / 24 HR. 6.7
SAMPLER: Standard Split Spoon (SS) or Shelby Tube (ST)	DRILLING FOREMAN: Gus Suri/Mike Chizmar
SAMPLER HAMMER: WEIGHT (lbs) 140 / DROP (in) 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS/6in	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	5.5" CONCRETE w/ wire mesh								"New York City BC Classification numbers in parenthesis
	Inferred miscellaneous FILL (11-65)*								Started coring with water
0.0	Black/brown f.-c. SAND, trace silt, red brick, f.-c. gravel/coal (11-65)			S1	SS	8	17 92 85/1.5"	57/7.5	Spoon refusal D=2'
									PID = 400 ppm
	Very c. CONCRETE								COBBLE fragment in D=1'-3' SS tip
			5						Lost majority of water D=2'-12'
			10						
	Inferred CONCRETE								Hard/slow drilling D=12'-13.5'
									Broke through concrete D=13.5'
	Inferred WOOD (11-65)		15						WOOD in wash D=13.5'-25' w/ slow drilling
									One bend/dent in end of tube D=17'-19'
	WOOD FIBERS, trace gray f. sand (11-65)			S2	ST	5	PUSH PUSH PUSH PUSH		PID = 58 ppm
									Petroleum like material odor
			20						Added mud D=20'
	WOOD FIBERS (11-65)			S3	SS	3	12 10 10 11	20	PID = 7.2 ppm
									Petroleum like material odor
			25						Petroleum like material odor D=25'-25.5'
	WOOD FIBERS (11-65)			S4	SS	14	19 22 23 24	45	PID = 5.4 ppm
	Brown f. SAND, trace silt and clay (8-65)								
			30						
	Brown f. SAND, trace silt (8-65)			S5	SS	10	13 20 20 15	40	PID = 148 ppm Visible petroleum like material
									Visible petroleum like material
			35						
	Brown f. SAND, trace silt (8-65)			S6	SS	7	9 8 8 7	16	PID = 90 ppm Visible petroleum like material
									Visible petroleum like material
			40						
	Brown f. SAND, trace m. sand, silt, and clay (7-65)			S7	SS	14.5	10 10 12 12	22	PID = 9.2 ppm

BORING 1531601 GPJ LANGANFL.GDT 22/1/98

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LOG OF BORING LB4

SHEET 2 OF 2

PROJECT	Loews @ Gowanus	PROJECT NO.	1531601
LOCATION	Brooklyn, NY	ELEVATION AND DATUM	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown f. SAND, trace silt and clay (8-65)		45	S8	SS	16	9 12 17 12	29	PID = 1.8 ppm
	Brown SILT, some f. sand, trace m. sand and clay (10-65)		50	S9	SS	15.5	13 15 21 21	36	PID = 368 ppm
	Brown f. sandy SILT, trace m. sand (10-65)		55	S10 S11	SS	11	13 19 18 18	36	PID = 7 ppm PID = 13.5 ppm
	Brown f. SAND, trace m. sand and silt (7-65)								
	Brown/gray f. SAND, trace m. sand and silt (7-65)		60	S12	SS	11	12 16 16 15	32	PID = 5.2 ppm Slightly visible petroleum like material Rig chatter D=64.5'-65'
	Red brown f.-m. SAND, trace f. gravel, c. sand, silt, and clay (7-65)		65	S13	SS	11	25 39 33 45	72	PID = 780 ppm On/off rig chatter D=65'-70'
	Red brown f.-m. SAND, trace f.-m. gravel, c. sand, and silt (7-65)		70	S14	SS	12	32 55 56 87	111	Added mud D = 70' PID = 1 ppm On/off rig chatter D=70'-75'
	Red brown c. SAND, some f.-m. sand and f.-m. gravel, trace silt (6-65)		75	S15	SS	2.5	100/4.5	R*	*Spoon refusal D=75.5' PID = 4.6 ppm On/off rig chatter D=75'-78'
	Red brown f.-m. gravelly f.-m. SAND, trace c. sand and silt (6-65)			S16	SS	14.5	40 53 87 102	140	C. GRAVEL in S16 SS tip PID = 0.4 ppm Borehole grouted upon completion
	Boring terminated D=80'		80						
			85						
			90						

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LOG OF BORING LB5

SHEET 1 OF 2

PROJECT	Loews @ Gowanus
PROJECT NO.	1531601
LOCATION	Brooklyn, NY
ELEVATION AND DATUM	approx. el 11 [BBHDD]
DRILLING EQUIPMENT	Davey Kent DK50RA Track Rig
DATE STARTED	12/4/98
DATE FINISHED	12/8/98
COMPLETION DEPTH	80 ft.
SIZE AND TYPE OF BIT	4 7/8" and 3 7/8" Tri-Cone Roller Bits
NUMBER OF SAMPLES	DIST. 15 / UNDIST. ---- / CORE ----
CASING DIAMETER (in)	4 1/2" OD 4" ID
CASING DEPTH(ft)	30.5
WATER LEVEL (ft.)	FIRST ---- / COMPL. ---- / 24 HR. 6.4
SAMPLER	2" OD 1 3/4" ID Split Spoon (SS)
DRILLING FOREMAN	Tom Gregory/Kurt Conlon
SAMPLER HAMMER	WEIGHT(lbs) 140 / DROP(in) 30
INSPECTING ENGINEER	Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	4.5" CONCRETE						
	5.5" DENSE GRADED AGGREGATE						
	3.5" CONCRETE						
0.0	2.5" DENSE GRADED AGGREGATE						
	Red BRICK (11-65)*						
	Inferred Red BRICK						
	(Red f.-c. SAND, trace silt and clay) Inferred red BRICK (11-65)	S1	SS	0	50/0.5"	R*	*New York City BC Classification numbers in parenthesis Began drilling with water *Spoon refusal D=1' 50/0.5" w/ bouncing PID = 49 ppm Sample S1 Gray f.-c. SAND and c. GRAVEL FRAGMENT, trace silt from SS tip
		S2	SS	4	90/4"	R*	Hard/slow drilling w/ on/off rig chatter D=1'-5' and Red wash water D=2.5'-5' *Spoon refusal D=5.5' 90/4" w/ bouncing PID = 20 + ppm Hard/slow drilling w/ on/off rig chatter and red wash water D=5'-10'
	(Red f.-c. SAND, trace f. gravel and silt) Inferred red BRICK (11-65)	S3	SS	3	100/3"	R*	*Spoon refusal D=10' 100/3" w/ bouncing PID = 21 ppm Hard/slow drilling w/ on/off rig chatter and red wash water D=10'-27.5'
	Inferred red BRICK (11-65)						
	Inferred red BRICK (11-65)						
	Inferred red BRICK (11-65)						Petroleum like material in wash water D=27.5' Hard drilling D=28'-28.5'
	Gray f.-m. SAND, trace c. sand (11-65)	S4	SS	17	3 3 9 18	12	PID = 20 ppm Visible petroleum like material Gray f. sandy SILT, trace clay and m. sand in S4 SS tip Added mud D=30'
	Gray silty CLAY, trace f. sand (11-65)	S6 SS	SS	19	4 5 23 28	28	PP = 1.2-1.5 tsf PID = 9.8 ppm PID = 180 ppm
	Gray/brown f. SAND, trace m. sand and silt (7-65)						
	Brown/gray silty f. SAND (8-65)	S7	SS	13	11 11 13 11	24	PID = 1.1 ppm

SYMBOL LOG / DEPTH SCALE: 5, 10, 15, 20, 25, 30, 35, 40

BORING 1531601.GPJ LANGANFI.GDT 7/1/99

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LOG OF BORING LB5

SHEET 2 OF 2

PROJECT	Loews @ Gowanus
LOCATION	Brooklyn, NY
PROJECT NO.	1531601
ELEVATION AND DATUM	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown/gray SILT, some f. sand, trace clay (10-65)		45	SB	SS	12.5	11 15 15 24	34	PP = No reading PID = 400 ppm
	Gray/brown f. SAND, some silt, trace m. sand (7-65)		50	S9	SS	15	13 19 22 23	41	PID = 1.2 ppm
	Gray/brown f.-m. SAND, trace silt (7-65)		55	S10	SS	8	6 16 19 22	35	PID = 2.2 ppm Hard drilling D=58'-60'
	Brown f.-c. SAND, trace f.-m. gravel and silt (6-65)		60	S11	SS	9	12 17 27 28	44	PID = 0.4 ppm On/off rig chatter D=60'-65'
	Red brown f. SAND, some silt, trace m.-c. sand and f. gravel (7-65)		65	S12	SS	15	19 20 25 25	45	PID = 8.2 ppm On/off rig chatter D=65'-70'
	Red brown f.-m. SAND, some f.-m. gravel, trace c. sand and silt (6-65)		70	S13	SS	6	62 35 57 31	102	PID = 3.3 ppm On/off rig chatter D = 70'-75'
	Red brown f.-c. SAND, trace f.-m. gravel and silt (6-65)		75	S14	SS	7	22 49 25 13	74	PID = 0.4 ppm On/off rig chatter D=75'-78'
	Red brown f.-m. SAND, trace silt, c. sand, and f. gravel (7-65)			S15	SS	8	26 24 28 15	52	PID = 340 ppm Borehole grouted upon completion
	Boring terminated D=80'		80						
			85						
			90						

BORING 1531601.GPJ LANGANFL.GDT 7/1/09

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LOG OF BORING LB6

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 11/24/98; DATE FINISHED: 11/25/98; COMPLETION DEPTH: 77 ft.
SIZE AND TYPE OF BIT: HW Rock Core and Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 16; UNDIST. ----; CORE ----
CASING DIAMETER (in): 4 1/2" OD 4" ID; CASING DEPTH (ft): 13.5	WATER LEVEL (ft.): FIRST ----; COMPL. ----; 24 HR. 3.8
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Gus Surl/Mike Chizmar
SAMPLER HAMMER: WEIGHT (lbs) 140; DROP (in) 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	5" CONCRETE w/ wire mesh								*New York City BC Classification numbers in parenthesis
	Inferred Miscellaneous FILL (11-65)* Black/brown f.-c. SAND, trace f.-c. gravel/coal and silt (11-65)			S1	SS	14	24 21 14 12	35	Started coring w/ water; PID = 16.4 ppm
	Brown f.-c. SAND, trace f.-m. gravel/coal and silt (11-65)		5	S2	SS	4	7 7 5 5	12	Trace wood and red brick in wash D=6.25'-10'; PID = 5.5 ppm
									Rig chatter D=7.25'-8.25'; Lost some water D=7.25'-10'; Added mud D=10'
	Brown/black f.-c. SAND, trace silt, c. gravel/coal, and organics/wood fibers (11-65)		10	S3	SS	11.5	12 4 5 20	9	PID = 11.8 ppm
	Brown f.-c. SAND, some silt and clay, trace f.-m. gravel (11-65)		15	S5 S4	SS	16	1 2 2 2	4	PID = 4.2 ppm; PID = 18.3 ppm
	Brown, gray, and black PEAT, trace silt and clay (11-65)								
	Brown f. SAND, some silt, trace clay (8-65)		20	S6	SS	17	2 1 2 2	3	PID = 5 ppm
	Gray/brown f. SAND, trace silt (8-65)		25	S7	SS	13	11 12 16 15	28	PID = 20 ppm
	Brown and gray f.-m. SAND, some silt, trace clay (7-65)		30	S8	SS	14.5	7 8 8 7	16	PID = 30 ppm
	Gray/brown f.-m. SAND (7-65)		35	S9	SS	17	4 6 17 20	23	PP = 0.9-1.4 tsf; PID = 11.2 ppm
	Gray CLAY, trace f. sand and silt (9-65)								
	Brown f. SAND, trace silt (8-65)		40	S10	SS	16.5	10 17 15 16	32	0.5" of Gray CLAY, trace f. sand and silt (9-65) in top of S10 SS sample; PID = 550 ppm

BORING 1531601.GPJ LANGANFL.GDT 2/21/99

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LOG OF BORING LB6

SHEET 2 OF 2

PROJECT	Loews @ Gowanus	PROJECT NO.	1531601
LOCATION	Brooklyn, NY	ELEVATION AND DATUM	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS/FOOT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown SILT, some f. sand, trace clay (10-65)		45	S11	SS	14	16 19 13 14	32	PID = 1.4 ppm
	Gray/black f.-m. SAND, trace silt (7-65)		50	S12	SS	18	20 24 25 22	49	PID = 1.2 ppm
									Rig chatter D=53.75'-55'
	Inferred COBBLE (6-65)		55	-	SS	0	162/4"	R*	*Spoon refusal D=55' Rig chatter D=55'-55.25'
									Minor rig chatter D=58.75'
	Red brown f. SAND, some f.-c. gravel, trace m.-c. sand and silt (6-65)		60	S13	SS	111	150 58 51 65	109	PID = 400 ppm Slow/hard drilling D=62.25'-62.5' On/off rig chatter D=60'-65'
	Red brown f. SAND, some f.-c. gravel, trace m.-c. sand and silt (6-65)		65	S14	SS	6	96 39 25 26	65	PID = 155 ppm On/off rig chatter D=65'-70'
	Red brown f. SAND, some f.-m. gravel, trace m.-c. sand and silt (6-65)		70	S15	SS	13	62 100 93 93	193	PID = 410 ppm Minor on/off rig chatter D=70'-75'
	Red brown f.-c. GRAVEL and f.-c. SAND, trace silt (6-65)		75	S16	SS	14	100 88 77 55	165	PID = 380 ppm Borehole grouted upon completion
	Boring terminated D=77'		80						
			85						
			90						

BORING 1531601.GPJ LANGANFL.GDT 22/12/98

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LOG OF BORING LB7

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 11/19/98 · DATE FINISHED: 11/24/98 · COMPLETION DEPTH: 77 ft.
SIZE AND TYPE OF BIT: HW and NQ Rock Cores and Tri-Cone Roller Bit	NUMBER OF SAMPLES: DIST. 18 · UNDIST. 1 · CORE ----
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH (ft): 7	WATER LEVEL (ft.): FIRST ---- · COMPL. ---- · 24 HR. 6.5
SAMPLER: Standard Split Spoon (SS) or Shelby Tube (ST)	DRILLING FOREMAN: Gus Suri/Mike Chizmar
SAMPLER HAMMER · WEIGHT (lbs): 140 · DROP (in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	5" CONCRETE w/ wire mesh								*New York City BC Classification numbers in parenthesis
	5" CONCRETE								Started coring w/ water
	Inferred miscellaneous FILL (11-65)*								Lost some water D = 1.5'
	Gray/black f.-c. SAND, some silt (11-65)			S1	SS	7	28 47 54 20	101	PID = 400 ppm
									Petroleum like material odor
									On/off rig chatter D = 1.5' - 4.5'
	Black SILT/PETROLEUM LIKE MATERIAL, some c. sand, and white cement fragments, trace f.-m. sand and clay (11-65)		5						Petroleum like material in wash D = 4.75'
				S2	SS	2	4 2 1 50/1"	3	Spoon refusal 50/1" w/ bouncing D = 6'
0.0	Piece of STEEL								PID = 480 ppm
	Inferred miscellaneous FILL (11-65)								A 16" x 4" x 1/4" piece of vertical steel on a 1/2" thick base plate D = 7' w/ 2" wide horizontal pieces of steel, which were cut, at the top inside and bottom outside D = 6' - 7'
0.0	0.5" STEEL			S3					
0.0	CONCRETE								
	Petroleum like material treated WOOD (11-65)		10						Lost some water D = 8' - 9.25'
	Inferred WOOD (11-65)								Added mud D = 9.25'
	Inferred Brown PEAT, some silt (11-65)			-	SS	0	WOR WOR WOR WOR	WOR	Drilled through WOOD and lost circulation D = 9.75'
									WOR: Weight of rods
									WOR went from D = 10' - 15'
	Inferred Brown PEAT, some silt (11-65)		15	S4	SS	0	WOH WOH WOH WOH	WOH	WOH: Weight of hammer
									Sample S4 SS tip material
									PID = 590 ppm
									WOH went from D = 15' - 17.5'
	Brown PEAT, some silt (11-65)			T1	ST	24	PUSH PUSH PUSH PUSH	PUSH	Visible petroleum like material w/ odor
	Brown/gray f. SAND, some silt (8-65)								Pushing became more difficult D = 19.25'
	Brown f. SAND, some silt (8-65)		20	S5	SS	19	1 3 3 4	6	Added mud D = 20'
									PID = 920 ppm
	Brown f. SAND, trace silt and clay (8-65)		25	S6	SS	11	34 42 33 40	75	PID = 700 ppm
									Trace wood fibers in wash D = 27' - 30.5'
									Tight fit for bit D = 27' - 30.5'
	Brown f.-m. SAND, trace silt (7-65)		30	S8 S7	SS	7	18 19 11 12	30	1" of WOOD FIBERS, trace f.-m. sand w/
									PID = 170 ppm in top of SS
									PID = 750 ppm
									Brown SILT, trace clay and f. sand in SS tip D = 32.5'
	Brown SILT, trace clay and f. sand (10-65)		35	S10 S9	SS	18	3 3 2 3	5	PP = 0.1 - 0.3 tsf
									PID = 640 ppm
	Gray CLAY, some silt (9-65)								PP = 0.6 - 0.9 tsf
									PID = 320 ppm
	Gray/brown CLAY, some silt, trace f. sand (9-65)		40	S11	SS	17	WOR 2 2 4	4	PP = 0.4 - 0.65 tsf
									PID > 2000 ppm

BORING 1531601.GPJ LANGANFL.GDT 22/12/98

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LOG OF BORING LB7

SHEET 2 OF 2

PROJECT	PROJECT NO.
Loews @ Gowanus	1531601
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BLOWS	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown CLAY, some silt, trace f. sand (9-65)		45	S12	SS	13	8 4 4 4	8	PP = 0.5 - 0.65 tsf PID = 170 ppm
	Brown f. SAND, trace silt (8-65)		50	S13	SS	14	19 31 25 19	56	PID = 550 ppm Rig chatter D = 52.25' - 53'
	Brown f.-c. SAND, trace silt and f.-m. gravel (6-65)			S14	SS	10.5	20 20 24 24	44	PID = 710 ppm
			55						Added mud D = 57' - 58' Rig chatter D = 57.5 - 58'
	Red brown f.-c. SAND, trace silt and f.-m. gravel (6-65)		60	S15	SS	8	19 36 31 22	67	PID = 40 ppm On/off rig chatter D = 60' - 65'
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		65	S16	SS	8	28 42 22 19	64	PID = 640 ppm On/off rig chatter D = 65' - 70'
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		70	S17	SS	7.5	45 26 22 24	46	PID = 20 ppm On/off rig chatter D = 70' - 75'
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		75	S18	SS	8	50 28 22 25	50	PID = 540 ppm Borehole grouted upon completion
	Boring terminated D = 77'		80						
			85						
			90						

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LOG OF BORING LB8

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 11/18/98 · DATE FINISHED: 11/19/98 · COMPLETION DEPTH: 55 ft.
SIZE AND TYPE OF BIT: HW and NQ Rock Cores and Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 14 · UNDIST. ---- · CORE ----
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH(ft): 19.5	WATER LEVEL (ft.): FIRST ---- · COMPL. ---- · 24 HR. 3.6
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Gus Suri/Mike Chizmar
SAMPLER HAMMER · WEIGHT(lbs): 140 · DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BLOWS	N-VALUE BLOWS PER 6"	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	5" CONCRETE w/ wire mesh								*New York City BC Classification numbers in parenthesis
	CONCRETE DEBRIS and Inferred miscellaneous FILL (11-65)*								Started coring w/ water
	Red BRICK, some gray c. sand, trace f. gravel, concrete, tan brick, gray f.-m. sand, and white tile (11-65)			S1	SS	4.5	12 9 10 24	19	Lost some water D = 2' PID = 82 ppm
0.0	Red BRICK, some c. sand, trace f.-m. sand and gravel (11-65)		5	S2	SS	1	25/5"	R*	Lost water D = 2' - 6.5' *Spoon refusal 28/5" w/ bouncing D = 4.5' Hard/slow drilling w/ rig chatter D = 4.5' - 5' PID = 135 ppm
0.0	CONCRETE Inferred reinforced CONCRETE								
	Gray c. SAND, trace coal, concrete, red brick, gray f.-m. sand, f.-m. gravel, and glass (11-65)			S3	SS	3	9 7 4 4	11	PID = 15 ppm
			10						
	Gray c. SAND, trace coal, red brick, gray f.-m. sand, silt, and f. gravel (11-65)			S4	SS	1	5 3 2 4	5	PID = 260 ppm
	Gray c. SAND, some coal, trace red brick, gray f.-m. sand, silt, and f. gravel (11-65)		15	S5	SS	9	2 2 3 5	5	PID = 52 ppm
	Brown PEAT (11-65)								Added mud D = 20"
	Brown f. sandy SILT, trace clay (10-65)		20	S6	SS	6	4 4 6 5	10	PID = 30 ppm
	Brown f.-m. SAND, trace silt (7-65)		25	S7	SS	6	29 31 33 28	64	PID = 11 ppm
	Gray/brown SILT, some f. sand, trace m. sand and clay (10-65)		30	S8	SS	5	WOH 5 6 5	13	WOH: Weight of hammer Over drilled to D = 30'-5' resulting in WOH blow count PID = 36 ppm
	Brown/gray SILT, some clay, trace f. sand (10-65)		35	S10 S9	SS	17	4 3 3 6	6	PP = No reading PID = 420 ppm PP = 0.4 tsf PID = 340 ppm
	Brown/gray silty CLAY, trace f. sand (9-65)								
	Brown/gray silty CLAY, trace f. sand (9-65)		40	S11	SS	19	2 4 2 5	6	PP = 0.3 - 0.4 tsf PID = 108 ppm

BORING 1531601.GPJ LANGANFL.GDT 7/1/99

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LOG OF BORING LB8

SHEET 2 OF 2

PROJECT	PROJECT NO.
Loews @ Gowanus	1531601
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown/gray silty CLAY, trace f. sand (9-65)		45	S12	SS	19	2 1 WOH 1	1	PP = No reading - 0.2 tsf PID = 810 ppm
	Brown/gray silty CLAY, trace f. sand (9-65)		50	S13	SS	17	WOH WOH 9 17	9	PP = 0.2 - 0.7 tsf PID = 400 ppm
	Brown f.-m. SAND, trace gray silt and clay (7-65)			S14	SS	11	14 14 13 15	27	PID = 520 ppm
	Boring terminated D = 55'		55						Borehole grouted upon completion
			60						
			65						
			70						
			75						
			80						
			85						
			90						

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LOG OF BORING LB9

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 11/16/98 · DATE FINISHED: 11/18/98 · COMPLETION DEPTH: 57 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0' - 5') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 14 · UNDIST. ---- · CORE ----
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH (ft): 13.5	WATER LEVEL (ft.): FIRST ---- · COMPL. ---- · 24 HR. 4.6
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Gus Suri/Mike Chizmar
SAMPLER HAMMER · WEIGHT (lbs): 140 · DROP (in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
pprox. el 11	4" CONCRETE Inferred DENSE GRADED AGGREGATE CONCRETE								*New York City BC Classification numbers in parenthesis Started drilling w/ water Lost some water D=2.5' D=0'-4.5' : Slow/hard drilling and wash water Gray cement/concrete color NX Rock Core Barrel used D=4'-4.5' : 6" Concrete core recovered Lost some water D=4.5'
0.0	Inferred miscellaneous FILL (11-65)*		5	S1	SS	0	4 7 5 4	12	Attempted a 2nd SS to acquire some form a sample: Only gray sand wash was recovered, Sample S1
	Inferred Gray c. SAND/COAL, trace silt, f.-m. sand, clay, f. gravel, and organics (11-65)			S2	SS	0	3 2 2 2	4	PID = 2 ppm Overdrove SS 7'-10' to aid in recovery Sample S2 SS tip material
	Gray c. SAND/COAL, trace f.-m. sand, silt, and f. gravel (11-65)		10	S3	SS	4	2 3 2 2	5	Overdrove SS D=10'-13' to aid in recovery PID = 3.3 ppm
									Added mud D=15'
	Gray silty, organic/rooty CLAY (11-65)		15	S5 S4	SS	16.5	3 2 2 2	4	PID = 0 ppm PID = 0 ppm
	Brown/gray PEAT (11-65)								
	Brown SILT, trace clay and f. sand (10-65)		20	S6	SS	10.5	5 7 12 10	19	PID = 38 ppm
	Inferred Brown/gray f.-m. SAND, trace silt (7-65)		25	-	SS	0	27 32 37 34	59	
	Brown/gray f.-m. SAND, trace silt (7-65)			S7	SS	17	24 26 39	65	PID = 0 ppm
	Brown f.-m. SAND, trace silt and clay		30	S8	SS	7	11 11 9 10	20	PID = 0 ppm
	Gray/brown silty CLAY, trace f.-m. sand (9-65)		35	S9	SS	17.5	3 4 6 7	10	PID = 0.2 ppm
	Brown/gray f.-m. SAND, trace silt (7-65)		40	S10	SS	10.5	16 10 10 10	20	PID = 0 ppm

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LOG OF BORING LB9

SHEET 2 OF 2

PROJECT	PROJECT NO.
Loews @ Gowanus	1531601
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BLS/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown/gray SILT, some f. sand, trace clay (10-65)		45	S11	SS	19	7 6 6 6	12	PID = 0 ppm
	Brown/gray f. sandy SILT, trace f. gravel (10-65)		50	S13 S12	SS	15	15 18 15 17	31	PID = 0 ppm
	Brown/gray f.-m. SAND, trace silt (7-65)								PID = 0 ppm
	Brown f.-m. SAND, trace silt (7-65)		55	S14	SS	15	17 19 23 32	42	PID = 0 ppm
	Boring terminated D=57'								Borehole grouted upon completion
			60						
			65						
			70						
			75						
			80						
			85						
			90						

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LOG OF BORING LB7

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 11/19/98; DATE FINISHED: 11/24/98; COMPLETION DEPTH: 77 ft.
SIZE AND TYPE OF BIT: HW and NQ Rock Cores and Tri-Cone Roller Bit	NUMBER OF SAMPLES: DIST. 18; UNDIST. 1; CORE —
CASING DIAMETER (in): 4 1/2" OD 4" ID; CASING DEPTH(ft): 7	WATER LEVEL (ft.): FIRST ▽ ----- ; COMPL. ▼ ----- ; 24 HR. ▼ 6.5
SAMPLER: Standard Solit Spoon (SS) or Shelby Tube (ST)	DRILLING FOREMAN: Gus Suri/Mike Chizmar
SAMPLER HAMMER; WEIGHT(lbs): 140; DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	5" CONCRETE w/ wire mesh								*New York City BC Classification numbers in parenthesis
	5" CONCRETE								
	Inferred miscellaneous FILL (11-65)*								Started coring w/ water
	Gray/black f.-c. SAND, some silt (11-65)			S1	SS	7	28 47 54 20	101	Lost some water D = 1.5' PID = 400 ppm Petroleum like material odor
	Black SILT/PETROLEUM LIKE MATERIAL, some c. sand, and white cement fragments, trace f.-m. sand and clay (11-65)		5	S2	SS	2	4 2 1 50/1"	3	Oil/off rig chatter D = 1.5' - 4.5' Petroleum like material in wash D = 4.75' Spoon refusal 50/1" w/ bouncing D = 6'
0.0	Piece of STEEL								PID = 480 ppm
	Inferred miscellaneous FILL (11-65)								A 16" x 4" x 1/4" piece of vertical steel on a 1/2" thick base plate D = 7' w/ 2" wide horizontal pieces of steel, which were cut, at the top inside and bottom outside D = 6' - 7'
0.0	0.5" STEEL			S3					
0.0	CONCRETE								
	Petroleum like material treated WOOD (11-65)		10						Lost some water D = 8' - 9.25'
	Inferred WOOD (11-65)			-	SS	0	WOR WOR WOR WOR	WOR	Added mud D = 9.25' Drilled through WOOD and lost circulation D = 9.75'
	Inferred Brown PEAT, some silt (11-65)								WOR: Weight of rods WOR went from D = 10' - 15'
	Inferred Brown PEAT, some silt (11-65)		15	S4	SS	0	WOH WOH WOH WOH	WOH	WOH: Weight of hammer Sample S4 SS lip material PID = 590 ppm WOH went from D = 15' - 17.5'
	Brown PEAT, some silt (11-65)			T1	ST	24	PUSH PUSH PUSH PUSH	PUSH	Visible petroleum like material w/ odor Pushing became more difficult D = 19.25'
	Brown/gray f. SAND, some silt (8-65) Brown f. SAND, some silt (8-65)		20	S5	SS	19	1 3 3 4	6	Added mud D = 20' PID = 920 ppm
	Brown f. SAND, trace silt and clay (8-65)		25	S6	SS	11	34 42 33 40	75	PID = 700 ppm Trace wood fibers in wash D = 27' - 30.5' Tight fit for bit D = 27' - 30.5'
	Brown f.-m. SAND, trace silt (7-65)		30	S8 S7	SS	7	18 19 11 12	30	1" of WOOD FIBERS, trace f.-m. sand w/ PID = 170 ppm in top of SS PID = 750 ppm Brown SILT, trace clay and f. sand in SS tip D = 32.3'
	Brown SILT, trace clay and f. sand (10-65)		35	S10 S9	SS	18	3 3 2 3	5	PP = 0.1 - 0.3 tsf PID = 640 ppm PP = 0.6 - 0.9 tsf PID = 320 ppm
	Gray CLAY, some silt (9-65)								
	Gray/brown CLAY, some silt, trace f. sand (9-65)		40	S11	SS	17	WOH 2 2 4	4	PP = 0.4 - 0.85 tsf PID > 2000 ppm

BORING 1531601.GPJ LANGANFL.GDT 12/17/98

Langan
Engineering and Environmental Services

PROJECT	PROJECT NO.
Loews @ Gowanus	1531601
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	approx. el 11 [88HDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BLOWS	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown CLAY, some silt, trace f. sand (9-65)		45	S12	SS	13	4 4 4 4	8	PP = 0.6 - 0.65 tsf PID = 170 ppm
	Brown f. SAND, trace silt (8-65)		50	S13	SS	14	13 31 23 19	56	PID = 550 ppm Rig chatter D = 52.25' - 53'
	Brown f.-c. SAND, trace silt and f.-m. gravel (6-65)		55	S14	SS	10.5	29 20 24 24	44	PID = 710 ppm Added mud D = 57' - 58' Rig chatter D = 57.5 - 58'
	Red brown f.-c. SAND, trace silt and f.-m. gravel (6-65)		60	S15	SS	8	10 36 31 22	67	PID = 40 ppm On/off rig chatter D = 60' - 65'
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		65	S16	SS	8	28 42 22 19	64	PID = 640 ppm On/off rig chatter D = 65' - 70'
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		70	S17	SS	7.5	43 26 22 25	46	PID = 20 ppm On/off rig chatter D = 70' - 75'
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		75	S18	SS	8	38 28 22 25	50	PID = 540 ppm Borehole grouted upon completion
	Boring terminated D = 77'		80						
			85						
			90						

Nelson, Pope and Voorhis Logs – 1997

FIGURE 1

SAMPLING PLAN

Source: Based on Rizzo for base map
Scale: Not to Scale

Unico Service Corp. Monitoring Well
Soil/Groundwater Probe Node

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

TEST BORING / PROBE LOG

CODE: SP-7

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	Brooklyn	Date Begin/End:	4/24/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-7	Depth to Water:	
Location Description:		Total Depth:	7 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
2	10YR 2/2 Very Dark Brown					Fine to Medium	
3	10YR 3/3 Dark Brown					Fine to Medium	
4	10YR 2/1 Black					Fine to Medium Strong Odor	
5	10YR 2/1 Black					Fine to Medium Strong Odor	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-8

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	Brooklyn	Date Begin/End:	4/24/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-8	Depth to Water:	
Location Description:		Total Depth:	7 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
2	10YR 2/2 Very Dark Brown					Fine to Medium	
3	10YR 3/3 Dark Brown					Fine to Medium	
4	10YR 2/1 Black					Fine to Medium Strong Odor	
5	10YR 2/1 Black					Fine to Medium Strong Odor	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-9

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	Brooklyn	Date Begin/End:	4/24/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-9	Depth to Water:	
Location Description:		Total Depth:	7 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
2	10YR 2/2 Very Dark Brown					Fine to Medium	
3	10YR 3/3 Dark Brown					Fine to Medium	
4	10YR 2/1 Black					Fine to Medium Strong Odor	
5	10YR 2/1 Black					Fine to Medium Strong Odor	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-10

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	NPV	Date Begin/End:	5/7/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-10	Depth to Water:	
Location Description:		Total Depth:	7.5 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
2	10YR 2/2 Very Dark Brown					Fine to Medium Brick Fines	
3	10YR 2/2 Very Dark Brown					Fine to Medium Brick Fines	
4	10YR 2/2 Very Dark Brown					Fine to Medium Brick Fines	
5	10YR 2/1 Black					Fine to Medium	
6	10YR 2/1 Black					Fine to Medium	
7	10YR 2/1 Black					Fine to Medium	
8	10YR 2/1 Black					Fine to Medium	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-11

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	NPV	Date Begin/End:	5/7/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-11	Depth to Water:	
Location Description:		Total Depth:	10 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
2	10YR 2/2 Very Dark Brown					Fine to Medium Brick Fines	
3	10YR 2/2 Very Dark Brown					Fine to Medium Brick Fines	
4	10YR 2/2 Very Dark Brown					Fine to Medium Brick Fines	
5	10YR 2/1 Black					Fine to Medium	
6	10YR 2/1 Black					Fine to Medium	
7	10YR 2/1 Black					Fine to Medium	
8	10YR 2/1 Black					Fine to Medium	
9	10YR 2/2 Very Dark Brown					Fine to Medium	
10	10YR 2/2 Very Dark Brown					Fine to Medium	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-12

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	NPV	Date Begin/End:	5/7/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-12	Depth to Water:	
Location Description:		Total Depth:	10 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade (feet)	Color (Munsell)	Recovery	FID Reading (ppm)	Description (USCS)	Lithology	Description	Sample
0						Asphalt	
2	10YR 5/6 Yellowish Brown					Brick Fines	
3	10YR 5/6 Yellowish Brown					Brick Fines	
4	10YR 5/6 Yellowish Brown					Brick Fines	
5	10YR 5/6 Yellowish Brown					Brick Fines	
6	10YR 4/8 Red					Hard Red Clay	
7	10YR 2/2 Very Dark Brown					Fine to Medium Strong Odor	
8	10YR 2/1 Black					Fine to Medium Strong Odor	
9	10YR 2/1 Black					Fine to Medium Strong Odor	
10	10YR 2/2 Very Dark Brown					Fine to Medium Strong Odor	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-13

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	NPV	Date Begin/End:	5/7/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-13	Depth to Water:	
Location Description:		Total Depth:	10 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
2	10YR 5/6 Yellowish Brown					Brick Fines	
3	10YR 5/6 Yellowish Brown					Brick Fines	
4	10YR 5/6 Yellowish Brown					Brick Fines	
5	10YR 5/6 Yellowish Brown					Brick Fines	
6	10YR 4/8 Red					Hard Red Clay	
7	10YR 2/2 Very Dark Brown					Fine to Medium Strong Odor	
8	10YR 2/1 Black					Fine to Medium Strong Odor	
9	10YR 2/1 Black					Fine to Medium Strong Odor	
10	10YR 2/2 Very Dark Brown					Fine to Medium Strong Odor	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-16

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	Brooklyn	Date Begin/End:	5/5/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-16	Depth to Water:	
Location Description:		Total Depth:	8 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
2	10YR 2/2 Very Dark Brown					Fine to Medium	
3	10YR 2/2 Very Dark Brown					Fine to Medium	
4	10YR 2/1 Black					Fine to Medium Strong Odor	
5	10YR 2/1 Black					Fine to Medium Strong Odor	
6	10YR 2/1 Black					Fine to Medium Strong Odor	
7	10YR 2/1 Black					Fine to Medium Strong Odor	
8	10YR 2/1 Black					Fine to Medium Strong Odor	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-17

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	Brooklyn	Date Begin/End:	5/5/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-17	Depth to Water:	
Location Description:		Total Depth:	7 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
2	10YR 2/2 Very Dark Brown					Fine to Medium	
3	10YR 3/3 Dark Brown					Brick Fines	
4	10YR 2/1 Black					Anthrocite pieces	
5	10YR 2/1 Black					Anthrocite pieces	
6	2 Clay 3/1 Dark Blueish Gray					Fine to Medium	
7	10R 4/6 Red					Fine to Medium	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-18

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	Brooklyn	Date Begin/End:	5/5/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-18	Depth to Water:	
Location Description:		Total Depth:	7 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
2	10YR 2/2 Very Dark Brown					Brick Fines	
3	10YR 2/1 Black					Brick Fines	
4	10YR 2/2 Very Dark Brown					Brick Fines	
5	10YR 2/2 Very Dark Brown					Brick Fines	
6	2 Clay 5/1 Blueish Gray					Clay	
7	10R 4/6 Red					Medium to course Gravel	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-19

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	Brooklyn	Date Begin/End:	5/5/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-19	Depth to Water:	
Location Description:		Total Depth:	7 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
2	10YR 6/2 Gray to Light Brown					Brick Fines	
3	10YR 6/2 Gray to Light Brown					1/4" Blue Gravel Stone	
4	10YR 3/3 Dark Brown					Medium to fine	
5	10YR 4/6 Dark Yellowish Brown					Fine to Medium	
6	10YR 5/8 Yellowish Brown					Fine to Medium Sandy Material	
7	10YR 5/8 Yellowish Brown					Fine to Medium Sandy Material	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-20

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	Brooklyn	Date Begin/End:	5/5/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-20	Depth to Water:	
Location Description:		Total Depth:	4 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
	10YR 1/1 Black					1/4 " Blue Gravel Stone	
3							
	10YR 1/1 Black					Pieces of Anthrocite	
4							
	REFUSAL						

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-21

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	Brooklyn	Date Begin/End:	5/5/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-21	Depth to Water:	
Location Description:		Total Depth:	7 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
3	10YR 2/2 Very Dark Brown					Medium to Fine Wood Chips/Brick Fines	
4	10YR 2/1 Black					Strong odor/ Wet Black Staining on Gloves	
5	10YR 2/1 Black					Strong odor/ Wet Black Staining on Gloves	
6	10YR 2/1 Black					Strong odor/ Wet Black Staining on Gloves	
7	10YR 2/2 Very Dark Brown					Medium to Fine	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-22

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	NPV	Date Begin/End:	5/5/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-22	Depth to Water:	
Location Description:		Total Depth:	7 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
3	10YR 2/2 Very Dark Brown					Very Coarse to Coarse Soil	
4	10YR 2/2 Very Dark Brown					Fine to Medium Pieces of Anthrocite	
5	10YR 2/1 Black					Fine to Medium Pieces of Anthrocite	
6	10Y 6/3 Pale Brown					Very Fine to Fine Sandy Material	
7	10YR 2/1 Black					Medium to fine 1/2" Coke	

Note: USCS-(Unified Soil Classification System)

Third Party Sites with Historical Usage of PAHs and Tar

Figure A-1

Tar and PAHs Sources in Gowanus Canal

Consolidated Edison vault with sewer connection

Bulkhead Key

- Timber cribwork
- Timber cribwork with concrete replacement/infill above mean low water
- Concrete wall or relieving platform
- Rip-rap slope, probably on timber cribwork collapsed above mean low water
- Timber sheet piling and steel sheet piling
- Steel sheet piling

Source: USACE, Gowanus Historic Resources Report, 2004, Figure 3-1

1. Fulton MGP
2. Citizens MGP
3. Metropolitan MGP
4. US Government Toluol Plant
5. US Government Toluol Plant
6. US Government Toluol Plant
7. Barrett Manufacturing
8. Warren Chemical & Manufacturing Co.
9. Cranford Asphalt Company
10. Brooklyn Alcatraz Asphalt Company
11. Coal Tar Product Company
12. New York City Asphalt Plant
13. New York City Incinerator and Dump
14. New York City Asphalt Plant
15. New York City Incinerator, Dump, and Marine Transfer Station
16. New York City Flushing Tunnel
17. New York City Transit related
18. Standard Asphalt Co.
19. David E. Kennedy, Inc. /Kentile, Inc. /Kentile Floors, Inc.
20. Uvalde Asphalt Paving Company
21. Moen's Asphaltic Cement Company
22. C.M Higgins & Co./Higgins Co./Higgins Ink Co., Inc.
23. Wm. J. Matheson & Co.
24. Commonwealth Color & Chemical Company
25. Ernest Zobel Co. Inc. /Ernest Zobel Chemical Corp.
26. Zobel, Stein & Campbell Company
27. Atlas Color
28. Iridescent Dyestuff & Color Company
29. Blythe Chemical Company
30. H. Koppers Co./Koppers Gas and Coke Co./Koppers Seaboard Coke Co.
31. New York City Power Plant and Coal Yard
32. Greason Son & Dazell, Inc.
33. Pittston Prospect Coal Company
34. Scranton & Lehigh Coal Co., Inc./Kelsey & Loughlin Co./Patterson Fuel Oil Co. Inc.
35. Burns Brothers
36. Eppinger & Russell Co.
37. SPX Corporation (O-Z Gedney Co. Inc.)
38. J.F. Schmadene Inc.
39. The Lidford Co.
40. Schroeder & Horstman
41. Thompson & Co./Nelsons Brothers
42. Somers & Conzen Coal, Co. Inc.
43. Verizon New York, Inc. (NYNEX Corp. and New York Telephone Co.)
44. NIC Holding Corp. (Northville Industries Corp., Premium Corp, Premium Coal & Oil Co.)
45. Bayside Fuel Oil Corp.
46. Chevron USA, Inc. (Union Oil Company of California, Pure Oil Co.
47. ExxonMobil Corp. (Standard Oil of New York)
48. TDA Industries, Inc./Northeastern Plastics, Inc.
49. H.J. Baker & Bro., Inc. (Forrester Fertilizer Co.)
50. Consolidated Edison Company of New York, Inc. (Brooklyn Edison Co.)
51. Citigroup, Inc./MRC Holdings (American Can Co., Primerica Corp., Travelers Group, Inc.)
52. MCIZ Corp. (Fifteen Second Avenue LLC, 36-2nd-J Corp., 107 Sixth Street LLC)
53. Brink's Inc. (The Pittston Co., Metropolitan Petroleum Corp.)
54. Kraft Foods Global, Inc. (New York Tartar Co., Standard Brands, Nabisco)/Stauffer Management Company, LLC (Stauffer Chemical Co.)
55. CBS Corp. (H. Krantz Manufacturing Co., Inc. Westinghouse Electric Co.)
56. Hauck Manufacturing Co.
57. Brooklyn Improvement Company
58. John W. Masury and Son
59. U.S. Postal Service/U.S. General Service Administration
60. Chemtura Corp. (Argus Chemical Co., Witco Chemical Co., Crompton Corp.)
61. US Maritime Commission/U.S. Navy
62. Puget Sound Commerce Center, Inc.
63. Amerada Hess Corp. (Patchogue Oil, Ira Bushey & Sons)

Spill Case Closure

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau "C", 11th Floor
625 Broadway, Albany, New York 12233-7010
Phone: (518) 402-9669 • FAX: (518) 402-9679
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

September 5, 2003

LETTER FAXED

Mr. Greg Lowe
Vice President
FC Gowanus
Forest City Ratner Companies
1 Metro Tech Center North
Brooklyn, New York 11201

Re: **Spill Case Closure for Spill #'s 9214380, 9704147, 0107907**
Former Manufactured Gas Plant (MGP)
124-136 Second Avenue, Brooklyn, New York
USPS Gowanus Site
Site No.: V00405-2
Volunteer: FC Gowanus Associates, LLC

Dear Mr. Lowe:

The New York State Department of Environmental Conservation (DEC) has revised the Spills Data Base to acknowledge the closure of Spill Case numbers 9214380, 9704147 and 0107907. These three Spill Case files were closed based on information gained through investigations, ongoing remedial action and development at the former MGP site. The future site activity is restricted to commercial use with stipulations prohibiting the use of ground water and excavations four feet below grade without prior DEC notification. The Operation, Maintenance and Monitoring Plan (OM&M) includes a long term Free Product Collection Well System and a Underslab Venting System for the commercial structure currently under construction.

Based upon the submissions from your consultant, no further action is required by the Department in this matter. Notwithstanding this determination, the Department hereby reserves all of its rights concerning, and such forbearance shall not extend to, any further investigation or remedial action the Department deems necessary:

I. Due to the off-site migration of petroleum contaminants that was not identified at the time of the spill investigation.

II. Due to environmental conditions related to the Site which were unknown to the Department at the time of this investigation.

III. Due to information received, in whole or part, after the Department's determination for no further action in this matter, which indicates that inactivation decision and/or corrective action is not sufficiently protective of human health for the reasonably anticipated use of the site.

IV. Due to fraud in obtaining this approval for inactivation.

Enclosed is a copy of our database files, reflecting the closure of this spill report. Please be advised that you should maintain a permanent file of all documentation and correspondence regarding this release for future property transactions, refinancing, etc. The Department's files regarding this release may not be maintained indefinitely.

The following documents were instrumental in the decisions to close the aforementioned cases:

- Detached Mail Unit (DMU) Subsurface Investigation Results and Recommendations (11/27/02) prepared by Roux Associates.
- DMU Subsurface Remediation Results and Evaluation (2/24/03) prepared by Roux Associates
- Gowanus, Site No. V00405-2, Final Completion Report (3/18/03) prepared by Roux Associates.
- Gowanus, Site No. V00405-2, Operation, Maintenance and Monitoring Plan (revised 8/13/03) prepared by Roux Associates.
- Declaration of Restrictions (executed 7/1/03) First Amendment to Declaration of Restrictions (executed (7/31/03).

These documents are on file with the DEC and are available for public review under the Freedom of Information Law (FOIL).

If you have any questions please contact me at (518) 402-9669.

Sincerely,

Anthony Karwiel

Anthony Karwiel
Project Manager
Remedial Bureau "C"

cc: W. Fisher
R. Austin
D. Hettrick
C. Parish, USPS

Appendix B

Test Pit Excavation Logs

Test Pit Log

TP-1

PROJECT NO: 60137361	**TEST PIT DESIGNATION: TP-1**	**SURFACE ELEVATION: 8.81 (ft NAVD88)**
CLIENT: National Grid	**SITE LOCATION OR AREA: North edge of #5 holder**	**START DATE: 5/19/2010**
SITE NAME: Metropolitan Former MGP Site	**EQUIPMENT USED: Excavator**	**FINISH DATE: 5/19/2010**
GEOLOGIST: J. Pfeiffer	**OPERATOR: PPM / Op-Tech**	**START TIME: 10:05**
DEPTH WATER ENCOUNTERED: 3.85 ft bgs	**TOTAL DEPTH: 3.85 ft bgs**	**FINISH TIME: 13:30**

DEPTH (FEET)	VISUAL IMPACTS (FEET)	PID HEADSPACE (PPM)	SOIL STRATIG-RAPHY USCS	SOIL CLASS USCS	SOIL DESCRIPTION LOG	STRUCTURES ENCOUNTERED OR COMMENTS
				FILL	0' - 0.6': ASPHALT	
1					0.6' - 2': FILL: Brown, sandy silt. 75% Brick pieces, concrete pieces, marble rubble, glass. Slab found at 2.3' bgs.	
		7.5				Collected sample TP-1 (1.5') 1.5' bgs assumed building slab adjactent to holder. Slab is located at the most Northern 4' length of the total 15'
2					at 2' 2" CONDUIT	Test pit was extended 3' to the North to get around concrete slab.
					2.3' - 2.8': Concrete Slab	
3						
		36.9				
					3.8': Bottom of wood	Collected sample TP-1 (3.8')
4					3.85' Water table (possibly perched)	
					End of Test Pit at 3.85 ft bgs	

Definitions:

1.) NA - Not Applicable
2.) ft - feet
3.) SAA - Same As Above
4.) bgs - below ground surface
5.) ppm - parts per million
6.) PID - Photo Ionization Meter
7.) NAVD 88 - North American Vertical Datum of 1988
8.) U.S.C.S. - Unified Soil Classification System

TP-1 was backfilled with material removed, with hot asphalt rolled on the surface to grade.

Test Pit Log

TP-1

PROJECT NO: 60137361	TEST PIT DESIGNATION: TP-1	SURFACE ELEVATION: 8.81 (ft NAVD88)
CLIENT: National Grid	SITE LOCATION OR AREA: North edge of #5 holder	START DATE: 5/19/2010
SITE NAME: Metropolitan Former MGP Site	EQUIPMENT USED: Excavator	FINISH DATE: 5/19/2010
GEOLOGIST: J. Pfeiffer	OPERATOR: PPM / Op-Tech	START TIME: 10:05
DEPTH WATER ENCOUNTERED: 3.85 ft bgs	TOTAL DEPTH: 3.85 ft bgs	FINISH TIME: 13:30

Test Pit Log

TP-2

PROJECT NO: 60137361	**TEST PIT DESIGNATION: TP-2**	**SURFACE ELEVATION: 8.74 (ft NAVD88)**
CLIENT: National Grid	**SITE LOCATION OR AREA: Eastern edge of #5 holder**	**START DATE: 5/20/10**
SITE NAME: Metropolitan Former MGP Site	**EQUIPMENT USED: Excavator**	**FINISH DATE: 5/20/10**
GEOLOGIST: S. Pandya / J. Pfeiffer	**OPERATOR: PPM / Op-Tech**	**START TIME: 11:14**
DEPTH WATER ENCOUNTERED: 9.0 ft bgs	**TOTAL DEPTH: 6.5 ft bgs**	**FINISH TIME: 13:30**

DEPTH (FEET)	VISUAL IMPACTS (FEET)	PID HEADSPACE (PPM)	SOIL STRATIG-RAPHY USCS	SOIL CLASS USCS	SOIL DESCRIPTION LOG	STRUCTURES ENCOUNTERED OR COMMENTS
				FILL	0' - 6.5': FILL: gravel, sand, and loose bricks. Two wood piles approzimately 4.5' long and 12" in diameter.	Gravel, sand, and loose brick FILL continues from top to bottom of test pit.
1					1' - 2.5': Fuel oil-like smell.	
2					1.85': pipe; 2" diameter steel pipe in a north to south direction.	
3					2.5' - 6.5': MGP like odor. 2.7': Concrete pad in North - South direction. Lots of sand and bricks overlapping concrete pad.	
4						TP-2 sample (4' - 4.5')
5					4.5': Standing water with an oil-like material approximately 2 cm thick on top, moderately viscous.	Probable purched water entered test pit on removal of wood ties.
6						
7						
					End of Test Pit at 6.5 ft bgs	

Definitions:

1.) NA - Not Applicable
2.) ft - feet
3.) SAA - Same As Above
4.) bgs - below ground surface
5.) ppm - parts per million
6.) NAVD 88 - North American Vertical Datum of 1988
7.) PID - Photo Ionization Meter
8.) U.S.C.S. - Unified Soil Classification System

TP-2 was backfilled below the water table with 3/8" stone. The material removed was replaced just below the surface. The extra material was placed in a roll-off for disposal. Hot asphalt rolled on the surface to grade.

AECOM	Test Pit Log	TP-2

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CLIENT: National Grid	SITE LOCATION OR AREA: Eastern edge of #5 holder	START DATE: 5/20/10
SITE NAME: Metropolitan Former MGP Site	EQUIPMENT USED: Excavator	FINISH DATE: 5/20/10
GEOLOGIST: S. Pandya	OPERATOR: PPM / Op-Tech	START TIME: 11:14
DEPTH WATER ENCOUNTERED: 9.0 ft bgs	TOTAL DEPTH: 6.5 ft bgs	FINISH TIME: 13:30

Appendix C

Soil Boring Logs and Well Construction Logs (Current and Historical)

RI Boring Logs - AECOM 2010-2012

TAR SATURATED

INTERBEDDED LENSES OF SATURATED TAR

BLEBS, GLOBS, LENSES, COATINGS

TAR SHEEN/ STAINING

TAR/ NAPHTHALENE-LIKE ODORS

PETROLEUM SHEEN/ STAINING

PETROLEUM ODORS

SOLID TAR

PURIFIER MATERIAL

PURIFIER ODORS

NOTES:

1. USE ONLY THE COLOR KEYS FOR THE CONDITIONS THAT ARE ENCOUNTERED AT A GIVEN SITE. IF CONDITIONS DESCRIBED ABOVE DO NOT EXIST, DO NOT USE IN LEGEND.
2. THE COLOR DESCRIPTORS ABOVE ARE TO BE USED IN CONJUNCTION WITH THE "ENVIRONMENTAL TERMINOLOGY FOR SOIL DESCRIPTIONS" BY M. PASTER OF GEI CONSULTANTS, INC.

NATIONAL GRID IMPACT COLORS	**COLORS FOR NATIONAL GRID IMPACTS**
nationalgrid	February 2011

I:\Project\National Grid\All Sites\KeySpan & National Grid COLORS\ Nat Grid Impact Colors_2010-08-25.dwg \Feb 15, 2011

Boring ID: SB-1 / MW-1

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 72 ft bgs
Client: National Grid	**Sampling Method:** 5 ft disposable plastic liner	**Ground Elevation:** 12.09'(I/D)11.99'(S)NAVD88
Date Pre-Cleared: 4-5-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-6-2010/4-8-2010	**Logged By:** Stephen Wright	**Well ID:** MW-1D/ MW-1I/ MW-1S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-1D	MW-1I	MW-1S
12	0		NA						0.0-0.75 ft bgs: REINFORCED CONCRETE SIDEWALK.	CEMEIBENTONI		
11	-1		263				FILL		0.75-2.0 ft bgs: WELL GRADED SAND, SILT, GRAVEL (Fill): fine to coarse grained sand, 25% silt, 25% fine to coarse grained gravel, cobbles, dry, black/dark brown, brick and concrete fragments, strong gasoline-like odor.			
10	-2		1,601						2.0-3.0 ft bgs: SAA, dry, strong gasoline-like odor.			
9	-3	5.0/ 5.0	2,300						3.0-4.0 ft bgs: SANDY SILT (Fill): silt, 25% fine to coarse grained sand, 15% fine to coarse grained gravel, moist, brown, strong-gasoline-like odor.			
8	-4		2,775			SB-1 (4-5)			4.0-5.0 ft bgs: SAA, moist, strong gasoline-like odor.			
7	-5											
6	-6		646			SB-1 (5-7)			5.0-7.0 ft bgs: SAA, wet, strong gasoline-like odor.			
5	-7								7.0-10 ft bgs: SANDY SILT (Fill): silt, 15% fine to coarse grained sand, wet, moderate gasoline-like odor.			
4	-8	2.0/ 5.0	23.6							SAND PACK		
3	-9											
2	-10								10.0-14.5 ft bgs: SAA, 15% fine to coarse grained gravel.			
1	-11											
0	-12	3.0/ 5.0	76									
-1	-13											
-2	-14											
-3	-15		2.6				PT		14.5-15.0 ft bgs: FIBROUS AND FRIABLE PEAT (PT): peat, 15% silt, dark brown.			
-4	-16		3.4						15.0-17.0 ft bgs: PEAT (PT): thin layers of dark brown peat within brown silt.			
-5	-17	3.0/ 5.0							17.0-20.0 ft bgs:FIBROUS AND FRIABLE PEAT (PT): brown peat, 15% silt, 5-10% clay.			
-6	-18		2.2									
-7	-19											
-8	-20						ML		20.0-25.0 ft bgs: SANDY SILT (ML): silt and very fine grained sand.	BEN	BEN	

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Boring was converted into Monitoring Well: MW-1D/1I/1S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid
10) NR- no recovery

Boring ID: SB-1 / MW-1

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 72 ft bgs
Client: National Grid	**Sampling Method:** 5 ft disposable plastic liner	**Ground Elevation:** 12.09'(I/D)11.99'(S)NAVD88
Date Pre-Cleared: 4-5-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-6-2010/4-8-2010	**Logged By:** Stephen Wright	**Well ID:** MW-1D/ MW-1I/ MW-1S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-1D	MW-1I	MW-1S
-9	-21											
-10	-22	3.0/ 5.0	2.5									
-11	-23											
-12	-24											
-13	-25								25.0-30.0 ft bgs: SAA.			
-14	-26											
-15	-27	3.0/ 5.0	2.1									
-16	-28											
-17	-29											
-18	-30								30.0-35.0 ft bgs: SAA: with 0.5 ft of silt, grey, with 25% very fine grained sand at 34.5 ft bgs.			
-19	-31											
-20	-32	4.0/ 5.0	1.2									
-21	-33											
-22	-34											
-23	-35						SM		35.0-36.0 ft bgs: SILTY SAND (SM): silt and very fine grained sand, cobbles, thin lenses (<1inch) of very fine grained sand with 15% silt, grey.			
-24	-36											
-25	-37	4.0/ 5.0	2.3						36.0-40.0 ft bgs: SAA.			
-26	-38											
-27	-39											
-28	-40								40.0-45.0 ft bgs: SANDY SILT (SM): silt and very fine to fine grained sand, grey.			
-29	-41											

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Boring was converted into Monitoring Well: MW-1D/1I/1S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid
10) NR- no recovery

Boring ID: SB-1 / MW-1

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 72 ft bgs
Client: National Grid	**Sampling Method:** 5 ft disposable plastic liner	**Ground Elevation:** 12.09'(I/D)11.99'(S)NAVD88
Date Pre-Cleared: 4-5-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-6-2010/4-8-2010	**Logged By:** Stephen Wright	**Well ID:** MW-1D/ MW-1I/ MW-1S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-1D	MW-1I	MW-1S
-30	-42	5.0/ 5.0	2.2			SB-1 (40-45)						
-31	-43											
-32	-44											
-33	-45								45.0-50.0 ft bgs: SAA.			
-34	-46											
-35	-47	5.0/ 5.0	2.1									
-36	-48											
-37	-49									BENTONITE SEAL		
-38	-50		3.1						50.0-55.0 ft bgs: SILTY SAND (SM): sand, 25% silt, 15% fine to coarse grained gravel, grey.			
-39	-51											
-40	-52	5.0/ 5.0										
-41	-53											
-42	-54											
-43	-55								55.0-57.0 ft bgs: SAA.			
-44	-56		2.9									
-45	-57	5.0/ 5.0					SP		57.0-60.0 ft bgs: POORLY GRADED SAND (SP): fine to coarse grained sand and silt, 15% fine to coarse grained gravel, brown.			
-46	-58		3.0									
-47	-59											
-48	-60								60.0-65.0 ft bgs: POORLY GRADED SAND (SP): fine to coarse grained sand, 25% silt, 15% cobbles.			
-49	-61											
-50	-62											

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Boring was converted into Monitoring Well: MW-1D/1I/1S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid
10) NR- no recovery

Boring ID: SB-1 / MW-1

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 72 ft bgs
Client: National Grid	**Sampling Method:** 5 ft disposable plastic liner	**Ground Elevation:** 12.09'(I/D)11.99'(S)NAVD88
Date Pre-Cleared: 4-5-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-6-2010/4-8-2010	**Logged By:** Stephen Wright	**Well ID:** MW-1D/ MW-1I/ MW-1S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-1D	MW-1I	MW-1S
-50	-62		2.8									
-51	-63											
-52	-64											
-53	-65								65.0-72.0 ft bgs: SAA, fine grained sand and silt layer at 67-68 ft bgs.	SAND PACK		
-54	-66											
-55	-67	5.0/ 5.0										
-56	-68		2.1									
-57	-69											
-58	-70									PVC SCREEN		
-59	-71	2.0/ 5.0				SB-1 (71-72)			End of boring at 72 ft bgs	SUMP		
	-72											

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Boring was converted into Monitoring Well: MW-1D/1I/1S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
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4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid
10) NR- no recovery

Boring ID: SB-2 / MW-2

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~2 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 72 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.26' NAVD88
Date Pre-Cleared: 4-2-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-8-2010/4-9-2010	**Logged By:** Stephen Wright	**Well ID:** MW-2D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
10	0		NA						0-0.75 ft bgs: REINFORCED CONCRETE SIDEWALK.	CEME
9	-1		0.5			SB-2 (1-2)	FILL		0.75-2.0 ft bgs: SILTY SAND (Fill): fine to coarse grained sand, 25% silt, 15% fine to coarse grained gravel, dry, no odor	
8	-2		0.4						2.0-3.0 ft bgs: SILTY SAND (Fill): fine to coarse grained sand, 25% fine to coarse grained gravel, 15% silt, cobbles, bricks, concrete, wet	
7	-3	5.0/ 5.0	0.4						3.0-4.0 ft bgs: SAA	
6	-4		0.4						4.0-5.0 ft bgs: SAA: moist, strong gasoline-like odor.	
5	-5		0.4						5.0-7.0 ft bgs: SANDY SILT (Fill): silt, 15% very fine grained sand, concrete fragments, cobbles, grey, wet, no odor.	
4	-6		2.5							
3	-7	3.75/ 5							7.0-10 ft bgs: SANDY SILT (Fill): fine grained sand and silt, little fine grained gravel, brown.	
2	-8		2.4							
1	-9									
0	-10								10.0-14.0 ft bgs: SAA.	
-1	-11									
-2	-12	2.0/ 5.0	1.7							
-3	-13									
-4	-14		1.8						14.0-15.0: SANDY SILT (Fill): silt, 25% very fine grained sand, little fine to coarse grained gravel.	
-5	-15						PT		15.0-17.5 ft bgs: FIBROUS AND FRIABLE PEAT (PT): peat, 15% silt, dark brown.	
-6	-16		4.4							
-7	-17	5.0/ 5.0								
-8	-18		1.8				CL		17.5-19.0 ft bgs: ORGANIC SILT/CLAY (CL): very fine grained sand and silt, 5 - 10% clay, trace organic matter.	
-9	-19		2.1				SM		19.0-20.0 ft bgs: SILTY SAND (SM): very fine grained sand, 15% silt, grey.	
-10	-20								20.0-25.0 ft bgs: SAA.	

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-2D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-2 / MW-2

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~2 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 72 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.26' NAVD88
Date Pre-Cleared: 4-2-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-8-2010/4-9-2010	**Logged By:** Stephen Wright	**Well ID:** MW-2D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-10										
-11	-21									
-12	-22	5.0/ 5.0	1.9							
-13	-23									
-14	-24									
-15	-25								25.0-27.0 ft bgs: SAA.	
-16	-26		1.9							
-17	-27	5.0/ 5.0					ML		27.0-30.0 ft bgs: SANDY SILT (ML): silt, 25% very fine grained sand, brown.	BENTONITE SEAL; PVC RISER
-18	-28		1.7							
-19	-29									
-20	-30								30.0-35.0 ft bgs: SAA, grades to almost 100% silt with depth.	
-21	-31									
-22	-32	5.0/ 5.0	1.8							
-23	-33									
-24	-34									
-25	-35						NR		35.0-40.0 ft bgs: No recovery.	
-26	-36									
-27	-37	0.0/ 5.0	NA							
-28	-38									
-29	-39									
-30	-40						ML		40'-45': SANDY SILT (ML): very fine grained sand and silt, brown, appears to be same as 30-35 ft bgs.	
	-41									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-2D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-2 / MW-2

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~2 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 72 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.26' NAVD88
Date Pre-Cleared: 4-2-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-8-2010/4-9-2010	**Logged By:** Stephen Wright	**Well ID:** MW-2D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-31	-41									
-32	-42	2.0/ 5.0	1.3			SB-2 (40-45)				
-33	-43									
-34	-44									
-35	-45								45.0-50.0 ft bgs: SAA.	
-36	-46									
-37	-47	5.0/ 5.0	2.1							
-38	-48									
-39	-49									
-40	-50									
-41	-51								50.0-55.0 ft bgs: SAA.	
-42	-52	5.0/ 5.0	1.2							
-43	-53									
-44	-54									
-45	-55									
-46	-56									
-47	-57		1.0						55.0-60.0 ft bgs: SAA.	
-48	-58									
-49	-59									
-50	-60	5.0/ 5.0					SM		60.0-62.0 ft bgs: SILTY SAND (SM): fine grained sand, 15% silt, brown.	
-51	-61									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-2D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
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8) ppm - parts per million
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Boring ID: SB-2 / MW-2

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~2 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 72 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.26' NAVD88
Date Pre-Cleared: 4-2-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-8-2010/4-9-2010	**Logged By:** Stephen Wright	**Well ID:** MW-2D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-51										
-52	-62	5.0/ 5.0	1.3						62.0-67.0 ft bgs: SAA.	SAND PACK; PVC SCREEN
-53	-63									
-54	-64		1.4							
-55	-65									
-56	-66									
-57	-67								67.0-72.0 ft bgs: SAA, grades to very fine grained sand, grey.	
-58	-68									
-59	-69	5.0/ 5.0	1.5							
-60	-70									
-61	-71					SB-2 (71-72)			End of boring at 72 ft bgs	SUMP
	-72									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-2D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
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8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-3/MW-3

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 60 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.61' NAVD88
Date Pre-Cleared: 4-13-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-13-2010/4-13-2010	**Logged By:** Stephen Wright	**Well ID:** MW-3I / MW-3S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-3I	Well Construction MW-3S
8	0		NA				FILL		0.0-0.25 ft bgs: ASPHALT.	CEMENT/BENTO	PVC RISER
7	-1		2.2						0.25-2.0 ft bgs: (Fill): fine to coarsegrained sand, 25% silt, 25% fine to coarse grained gravel and cobbles, dark brown, brick and concrete fragments, trace naphthalene-like odor from 1-2 ft bgs.		
6	-2		13						2.0-2.5 ft bgs: CONCRETE SLAB (Fill)		
5	-3	5.0/ 5.0	NA						2.5-5.0 ft bgs: POORLY GRADED SAND (Fill): fine to coarse grained sand, 25% gravel, <10% silt, strong tar-like odor.		
4	-4		>2,000			SB-3 (4-5)					
3	-5								5.0-8.0ft bgs: SAA, strong naphthalene-like odor and sheen, slight tar coating on sand grains, black.		
2	-6	2.4/ 3.0	381								
1	-7										
0	-8								8.0-10.0 ft bgs: WOODEN PLANKS.	SAND PACK	PVC SCREEN
-1	-9	NA	NA								
-2	-10	1.0/ 2.0	263						10.0-12.0 ft bgs: (Fill): fine to coarse grained sand, 10% silt, 10% fine to coarse grained gravel, brick fragments, strong tar-like odor, black.		
-3	-11										
-4	-12	1.0/ 2.0	67				CL		12.0-15.0 ft bgs: ORGANIC SILT (OH): silt, 5-10% clay, some organic material, grey, tar-like odor.	PVC RISER	SUMP
-5	-13										
-6	-14										
-7	-15	1.5/ 3.0	67						15.0-18.0 ft bgs: SAA.		
-8	-16										
-9	-17										
-10	-18	1.0/ 2.0	3.9						18.0-20.0 ft bgs: SAA, trace organic material, grey, no odor.	BENTONITE SEAL	
-11	-19										
-12	-20						SM		20.0-25.0 ft bgs: SILTY SAND (SM): fine grained sand, 20%		

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-3I/3S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-3/MW-3

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 60 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.61' NAVD88
Date Pre-Cleared: 4-13-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-13-2010/4-13-2010	**Logged By:** Stephen Wright	**Well ID:** MW-3I / MW-3S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-3I	Well Construction MW-3S
-12											
-13	-21								silt, grey, strong naphthalene-like odor and heavy sheen, pockets of tar saturated sand.		
-14	-22	4.0/ 5.0	312								
-15	-23										
-16	-24										
-17	-25								25.0-30.0 ft bgs: SILTY SAND (SM): very fine to fine grained sand, 20% silt, strong tar-like odor and sheen, pockets of tar saturated sand.		
-18	-26										
-19	-27	4.0/ 5.0	388								
-20	-28										
-21	-29										
-22	-30								30.0-35.0 ft bgs: SAA, interbedded very fine to fine grained sand (brown) and silt (grey/black), tar saturated in sand lenses, strong tar-like odor.		
-23	-31										
-24	-32	4.0/ 5.0	1,887			SB-3 (30-35)					
-25	-33										
-26	-34										
-27	-35						NR		35'-40': No recovery		
-28	-36										
-29	-37	NA	NA								
-30	-38										
-31	-39										
-32	-40						SM		40.0-45.0 ft bgs: SILTY SAND (SM): very fine to fine grained sand, 10% silt, tar saturated in sand lenses, strong tar-like odor.		
	-41										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-3I/3S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-3/MW-3

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 60 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.61' NAVD88
Date Pre-Cleared: 4-13-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-13-2010/4-13-2010	**Logged By:** Stephen Wright	**Well ID:** MW-3I / MW-3S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-3I	Well Construction MW-3S
-33	-41										
-34	-42	4.0/ 5.0	1,787								
-35	-43										
-36	-44										
-37	-45								45.0-50.0 ft bgs: SAA, no odor, no visible or olfactory impacts observed/detected.		
-38	-46										
-39	-47	5.0/ 5.0	23								
-40	-48										
-41	-49										
-42	-50								50.0-55.0 ft bgs: SAA, grey, no odor.		SUMP
-43	-51										
-44	-52	5.0/ 5.0	31								
-45	-53										
-46	-54										
-47	-55								55.0-58.0 ft bgs: SAA,has 5% fine grained gravel, no odor.	BENTONITE SEAL	
-48	-56	3.0/ 3.0	4.1								
-49	-57										
-50	-58						SP		58.0-60.0 ft bgs: POORLY GRADED SAND (SP): fine to coarse grained sand, 20% fine to coarse grained gravel, 10% silt, black/brown.		
-51	-59	2.0/ 2.0	3.2			SB-3 (59-60)			End of boring at 60 ft bgs		
	-60		5.4								

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-3I/3S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-4 / MW-4

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 60 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.86' NAVD88
Date Pre-Cleared: 4-27-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-27-2010/4-27-2010	**Logged By:** Stephen Wright	**Well ID:** MW-4I/MW-4S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-4I	Well Construction MW-4S
6	0		NA				FILL		0.0-0.5 ft bgs: ASPHALT.	CEMEBENTONI	PVC RISER
5	-1		1.2						0.5-2.0 ft bgs: POORLY GRADED SAND (Fill): fine to coarse grained sand, 20% silt, 20% fine to coarse gravel, cobbles, brick fragments, dry, dark brown.		
4	-2	5.0/ 5.0	1.1						2.0-3.0 ft bgs: SAA, dry.		
3	-3		0.9						3.0-4.0 ft bgs: SAA, more brick fragments.		
2	-4		1.3			SB-4 (4-5)			4.0-5.0 ft bgs: ASH (Fill): ash, cinders, grey, glass fragments, wet, no odor.		
1	-5								5.0-10 ft bgs: SAA.	SAND PACK	PVC SCREEN
0	-6										
-1	-7	2.0/ 5.0	0.6								
-2	-8										
-3	-9										
-4	-10		NA						10.0-11.0 ft bgs: SAA.		
-5	-11		0.9				SM		11.0-12.0 ft bgs: SILTY SAND (SM): very fine grained sand, 30% silt, dark grey, no odor.		
-6	-12	5.0/ 5.0	0.8				OH		12.0-15.0: ORGANIC SILT (OH): silt, 10% very fine grained sand, 5-10% clay, organics, shells, grey.		
-7	-13										
-8	-14										
-9	-15								15'-21': SAA.	BENTONITE SEAL	
-10	-16										
-11	-17	5.0/ 5.0	0.8								
-12	-18										
-13	-19										
	-20										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4I/4S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-4 / MW-4

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 60 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.86' NAVD88
Date Pre-Cleared: 4-27-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-27-2010/4-27-2010	**Logged By:** Stephen Wright	**Well ID:** MW-4I/MW-4S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-4I	Well Construction MW-4S
-14	-21										
-15	-22										
-16	-23	2.0/ 5.0	81				ML		21.0-26.0 ft bgs: SANDY SILT (ML): silt, very fine grained sand, grey, moderate tar-like odor and sheen, tar b lebs. Moderate tar-like odor from 25-26 ft bgs.		
-17	-24										
-18	-25										
-19	-26						SM		26.0-29.5 ft bgs: SILTY SAND (SM): fine grained sand, 10% silt, grey, strong tar-like odor, grains coated with tar, weeping tar.		
-20	-27										
-21	-28	5.0/ 5.0	346								
-22	-29										
-23	-30						ML		29.5-31.5 ft bgs: SANDY SILT (ML): silt, 10% very fine grained sand, grey, slight tar-like odor, strong odor from 30-31.5 ft bgs.	SAND PACK	PVC SCREEN
-24	-31		67								
-25	-32						SM		31.5-34.0 ft bgs: SILTY SAND (SM): fine grained sand, 10% silt, grey, tar saturated.		
-26	-33	5.0/ 5.0	404			SB-4 (32-34)					
-27	-34						ML		34-36.0 ft bgs: SANDY SILT (ML): silt, 10% very fine grained sand, slight tar-like odor.		
-28	-35		26								
-29	-36		NA								SUMP
-30	-37						SM		36-40.0 ft bgs: SILTY SAND (SM): sand, 10% silt, brown, slight tar-like odor.		
-31	-38	4.0/ 5.0	44								
-32	-39										
-33	-40								40.0-43.0 ft bgs: SAA: 10% fine to coarse grained gravel, faint tar-like odor, slight tar-like staining at 42 ft bgs.		
-34	-41										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4I/4S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-4 / MW-4

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 60 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.86' NAVD88
Date Pre-Cleared: 4-27-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-27-2010/4-27-2010	**Logged By:** Stephen Wright	**Well ID:** MW-4I/MW-4S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-4I	Well Construction MW-4S
-34	-41		18								
-35	-42										
-36	-43	4.0/ 5.0							43.0-45.0 ft bgs: SAA, no odor.		
-37	-44		10								
-38	-45						NR		45.0-50.0 ft bgs: No recovery.	BENTONITE SEAL	
-39	-46										
-40	-47		NA								
-41	-48	0.0/ 5.0									
-42	-49										
-43	-50						SM		50.0 - 55.0 ft bgs: SAA, (43-45 ft bgs), no odor.		
-44	-51										
-45	-52		8.2								
-46	-53	2.5/ 5.0									
-47	-54										
-48	-55								55.0 - 60.0: SAA, no odor, 10% fine to coarse grained gravel.		
-49	-56										
-50	-57		5.4								
-51	-58	2.5/ 5.0									
-52	-59					SB-4 (58-60)			End of Boring at 60 ft bgs		
-53	-60										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4I/4S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D1

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 120 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.85 ft NAVD88
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: 4/25/2011-4/28/2011	**Logged By:** Rita Papagian	**Well ID:** MW-4D1

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
6	0	5.0'/ 5.0'	0.2				FILL		0-0.67 ft bgs: ASPHALT 0.67-1 ft bgs: FILL: coarse to fine grained sand, ~35% gravel, ~5-10% brick fragments, dry, dark brown. 1-2 ft bgs: SAA, slight napthalene-like odor. 2-2.67 ft bgs: FILL: boulder. 2.67-3 ft bgs: FILL: coarse to fine grained sand, ~35% gravel, ~5-10% brick fragments, slight napthalene-like odor, dry. 3-3.42 ft bgs: FILL: cinder block. 3.42-4 ft bgs: SAA (2.67-3 ft bgs interval). 4-5 ft bgs: SAA.	
5	-1		0.2							
4	-2		0.1							
3	-3		0.4							
2	-4		0.3							
1	-5								See boring log SB-4/MW-4 for lithology description from 5-60 ft bgs. See boring log MW-4D2 for lithology descriptions from 60-110 ft bgs.	
0	-6									
-1	-7									
-2	-8									
-3	-9									
-4	-10									
-5	-11									
-6	-12									
-7	-13									
-8	-14									
-9	-15									
-10	-16									
-11	-17									
-12	-18									
-13	-19									
	-20									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D1
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D1

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 120 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.85 ft NAVD88
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: 4/25/2011-4/28/2011	**Logged By:** Rita Papagian	**Well ID:** MW-4D1

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-14	-21									
-15	-22									
-16	-23									
-17	-24									
-18	-25									
-19	-26									
-20	-27									
-21	-28									
-22	-29									
-23	-30									
-24	-31									
-25	-32									
-26	-33									
-27	-34									
-28	-35									
-29	-36									
-30	-37									
-31	-38									
-32	-39									
-33	-40									
-34	-41									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D1
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D1

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 120 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.85 ft NAVD88
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: 4/25/2011-4/28/2011	**Logged By:** Rita Papagian	**Well ID:** MW-4D1

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-34	-41									
-35	-42									
-36	-43									
-37	-44									
-38	-45									
-39	-46									
-40	-47									
-41	-48									
-42	-49									
-43	-50									
-44	-51									
-45	-52									
-46	-53									
-47	-54									
-48	-55									
-49	-56									GROUT
-50	-57									
-51	-58									
-52	-59									
-53	-60									
-54	-61									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D1
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D1

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 120 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.85 ft NAVD88
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: 4/25/2011-4/28/2011	**Logged By:** Rita Papagian	**Well ID:** MW-4D1

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-55	-62									
-56	-63									
-57	-64									
-58	-65									
-59	-66									
-60	-67									
-61	-68									
-62	-69									
-63	-70									
-64	-71									
-65	-72									
-66	-73									
-67	-74									
-68	-75									
-69	-76									
-70	-77									
-71	-78									
-72	-79									
-73	-80									
-74	-81									
-75	-82									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D1
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D1

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 120 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.85 ft NAVD88
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: 4/25/2011-4/28/2011	**Logged By:** Rita Papagian	**Well ID:** MW-4D1

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-75	-82									
-76	-83									
-77	-84									
-78	-85									
-79	-86									
-80	-87									
-81	-88									
-82	-89									
-83	-90									
-84	-91									
-85	-92									
-86	-93									
-87	-94									
-88	-95									
-89	-96									
-90	-97									
-91	-98									
-92	-99									
-93	-100									
-94	-101									
-95	-102									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D1
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D1

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 120 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.85 ft NAVD88
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: 4/25/2011-4/28/2011	**Logged By:** Rita Papagian	**Well ID:** MW-4D1

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-96	-103									
-97	-104									
-98	-105									
-99	-106									
-100	-107									
-101	-108									
-102	-109									
-103	-110	4.5'/ 5.0'	ND				SP		110-115 ft bgs: POORLY GRADED SAND (SP): fine grained sand, moist, reddish brown.	BENTONITE
-104	-111									
-105	-112									
-106	-113									
-107	-114									
-108	-115	4.5'/ 5.0'	ND							
-109	-116					MW-4D1 (116-118)	SM		116-120 ft bgs: SILTY SAND (SM): fine grained sand and silt, moist, grey.	SAND PACK
-110	-117									
-111	-118									
-112	-119									
-113	-120									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D1
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D2

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 150 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.80 ft bgs
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: Apr. 25, 2011/Apr. 27, 201	**Logged By:** Rita Papagian	**Well ID:** MW-4D2

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
6	0	5.0'/ 5.0'	0.1				FILL		0-0.67 ft bgs: ASPHALT 0.67-1 ft bgs: FILL: dark brown coarse to fine grained sand, ~35% gravel, ~5-10% cobbles.	
5	-1		0.8						1-2 ft bgs: FILL: SAA, slight napthalene-like odor.	
4	-2		1.1						2-3 ft bgs: FILL: SAA, ~5-10% brick fragments.	
3	-3		0.4						3-4 ft bgs: FILL: SAA, no odor.	
2	-4		0.4						4-5 ft bgs: SAA.	
1	-5								See log SB-4/MW-4 for lithology descriptions from 5-60 ft bgs.	
0	-6									
-1	-7									
-2	-8									
-3	-9									
-4	-10									
-5	-11									
-6	-12									
-7	-13									
-8	-14									
-9	-15									
-10	-16									
-11	-17									
-12	-18									
-13	-19									
	-20									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D2
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D2

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 150 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.80 ft bgs
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: Apr. 25, 2011/Apr. 27, 2011	**Logged By:** Rita Papagian	**Well ID:** MW-4D2

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-14	-21									
-15	-22									
-16	-23									
-17	-24									
-18	-25									
-19	-26									
-20	-27									
-21	-28									
-22	-29									
-23	-30									
-24	-31									
-25	-32									
-26	-33									
-27	-34									
-28	-35									
-29	-36									
-30	-37									
-31	-38									
-32	-39									
-33	-40									
-34	-41									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D2
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D2

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 150 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.80 ft bgs
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: Apr. 25, 2011/Apr. 27, 2011	**Logged By:** Rita Papagian	**Well ID:** MW-4D2

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-34	-41									
-35	-42									
-36	-43									
-37	-44									
-38	-45									
-39	-46									
-40	-47									
-41	-48									
-42	-49									
-43	-50									
-44	-51									
-45	-52									
-46	-53									
-47	-54									
-48	-55									
-49	-56									
-50	-57									
-51	-58									
-52	-59									
-53	-60	3.5'/ 5.0'	0.5				SP		60-65 ft bgs: POORLY GRADED SAND (SP): medium to fine grained sand, wet to moist, brown.	
-54	-61									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D2
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D2

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 150 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.80 ft bgs
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: Apr. 25, 2011/Apr. 27, 201	**Logged By:** Rita Papagian	**Well ID:** MW-4D2

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-55	-62									
-56	-63		0.6							
-57	-64									
-58	-65	4.0'/ 5.0'	0.8				SW		65-68.5 ft bgs: WELL GRADED SAND (SW): coarse to fine grained sand, ~20% gravel, wet, brown.	
-59	-66									
-60	-67									
-61	-68		0.9							
-62	-69						SP		68.5-70 ft bgs: POORLY GRADED SAND (SP): medium to fine grained sand, wet, brown.	GROUT
-63	-70	4.5'/ 5.0'	0.7							
-64	-71									
-65	-72									
-66	-73		0.8							
-67	-74									
-68	-75	4.5'/ 5.0'	0.8				SW		75-76 ft bgs WELL GRADED SAND (SW): medium to fine grained sand, ~35% gravel, wet, reddish brown.	
-69	-76						SP		76-80 ft bgs: POORLY GRADED SAND (SP): medium to fine grained sand, moist, reddish brown.	
-70	-77									
-71	-78		1.1							
-72	-79									
-73	-80	4.0'/ 5.0'	0.5							
-74	-81									
-75	-82									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D2
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D2

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 150 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.80 ft bgs
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: Apr. 25, 2011/Apr. 27, 201	**Logged By:** Rita Papagian	**Well ID:** MW-4D2

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-75	-82									
-76	-83		1.5							
-77	-84									
-78	-85	ND	0.5							
-79	-86									
-80	-87									
-81	-88		1.0							
-82	-89									
-83	-90	4.5'/ 5.0'	1.3				SW		90-93 ft bgs: WELL GRADED SAND (SW): medium to coarse grained sand, wet, light brown.	
-84	-91									
-85	-92									
-86	-93		1.0				SP		93-95 ft bgs: POORLY GRADED SAND (SP): medium to fine grained sand, wet, light brown.	
-87	-94									
-88	-95	4.0'/ 5.0'	1.4							
-89	-96									
-90	-97									
-91	-98		1.8							
-92	-99									
-93	-100	4.5'/ 5.0'	0.7							
-94	-101									
-95	-102									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D2
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D2

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 150 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.80 ft bgs
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: Apr. 25, 2011/Apr. 27, 201	**Logged By:** Rita Papagian	**Well ID:** MW-4D2

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-96	-103		0.8							
-97	-104									
-98	-105	4.5'/ 5.0'	1.2							
-99	-106									
-100	-107									
-101	-108		1.2				SM		107.5-110 ft bgs: SILTY SAND (SM): fine grained sand, ~35% silt, moist, light brown.	
-102	-109									
-103	-110	4.0'/ 5.0'	0.5				SP		110-115 ft bgs: POORLY GRADED SAND (SP): fine grained sand, moist, brown.	
-104	-111									
-105	-112									
-106	-113		0.4							
-107	-114									
-108	-115	3.0'/ 5.0'	0.4							
-109	-116									
-110	-117									
-111	-118		0.4							
-112	-119									
-113	-120	5.0'/ 5.0'	0.3				SW		120-121 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, ~20% gravel, grey.	
-114	-121						CH		121-125 ft bgs: CLAY AND SILTY CLAY OF HIGH PLASTICITY (CH): clay, <5% silt, firm, grey.	
-115	-122									
-116	-123		0.1							

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D2
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D2

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 150 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.80 ft bgs
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: Apr. 25, 2011/Apr. 27, 201	**Logged By:** Rita Papagian	**Well ID:** MW-4D2

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-116	-123									
-117	-124									
-118	-125	4.5'/ 5.0'	0.1							
-119	-126									
-120	-127									
-121	-128		0.1							
-122	-129									
-123	-130	5.0'/ 5.0'	0.3							
-124	-131									
-125	-132									
-126	-133		0.3							
-127	-134									
-128	-135	4.5'/ 5.0'	0.2				GW		135-136 ft bgs: WELL GRADED GRAVEL (GW): large angular gravel and coarse grained sand, brown.	
-129	-136						SW		136-140 ft bgs: WELL GRADED SAND (SW): medium to coarse grained sand, brown, ~35% gravel.	
-130	-137									
-131	-138		0.3							
-132	-139									
-133	-140	5.0'/ 5.0'	ND							
-134	-141									
-135	-142					MW-4D2 (142-144)				
-136	-143		ND				GW		143-145 ft bgs: WELL GRADED GRAVEL (GW): sandy gravel, brown, wet,	

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D2
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: MW-4D2

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** See MW-4
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 150 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.80 ft bgs
Date Pre-Cleared: Apr. 25, 2011	**Boring Diameter:** 6 Inches	**Converted To Well (Y/N):** YES
Date Started/Completed: Apr. 25, 2011/Apr. 27, 20	**Logged By:** Rita Papagian	**Well ID:** MW-4D2

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-137	-144								gravel is multicolored.	SAND PACK
-138	-145	5.0'/ 5.0'	ND							
-139	-146									
-140	-147						SM		147-150 ft bgs: SILTY SAND (SM): silty sand, ~35% medium to large gravel, brown, wet.	
-141	-148		ND							
-142	-149									
-143	-150									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-4D2
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-5 / MW-5

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 72 ft bgs
Client: National Grid	**Sampling Method:** 5 ft disposable plastic liner	**Ground Elevation:** 9.79' (D/I/S) NAVD88
Date Pre-Cleared: 4-21-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-21-2010/4-22-2010	**Logged By:** Stephen Wright	**Well ID:** MW-5D/MW-5I/MW-5S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-5D	MW-5I	MW-5S
9	0		NA				FILL		0-0.25 ft bgs: ASPHALT	CEME	CEME	CEME
8	-1		1.7						0.25-1.0 ft bgs: SANDY SILT (FILL): silt, 30% sand, 20% fine to coarse gravel, cobbles, dry, dark brown, brick, glass.	BENTONI	BENTONI	BENTONI
7	-2		1.8						1.0-2.0 ft bgs: SAA.			
6	-3	5.0/ 5.0	2.0						2.0-3.5 ft bgs: SAA.			
5	-4		NA						3.5-4.0 ft bgs: GRANITE SLAB (Fill)			
4	-5		3.1			SB-5 (4-5)			4.0 - 6.0 ft bgs: SAA.			
3	-6		1.5						6.0-9.0 ft bgs: SILTY SAND (Fill): silt, 20% fine to coarse grained sand, 20% fine to coarse gravel, cobbles, brown.			
2	-7	3.0/ 5.0	2.2							SAND PACK	SAND PACK	SAND PACK
1	-8											
0	-9		1.4				SM		9.0-10 ft bgs: SILTY SAND (SM): fine grained sand, 10% silt, grey.			
-1	-10						NR		10-15 ft bgs: No recovery.			
-2	-11											
-3	-12	0.0/ 5.0	NA									
-4	-13											
-5	-14											
-6	-15						SM		15.0-20.0 ft bgs: SILTY SAND (SM): fine grained sand, 10% silt, grey, no odor.			
-7	-16											
-8	-17	4.0/ 5.0	3.8									
-9	-18											
-10	-19											
-11	-20								20.0-25.0 ft bgs: SAA, 5% fine grained gravel, no odor.			

Well Construction: PVC RISER, PVC SCREEN, SUMP

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Boring was converted into Monitoring Well: MW-5D/5I/5S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid
10) NR- no recovery

Boring ID: SB-5 / MW-5

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 72 ft bgs
Client: National Grid	**Sampling Method:** 5 ft disposable plastic liner	**Ground Elevation:** 9.79' (D/I/S) NAVD88
Date Pre-Cleared: 4-21-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-21-2010/4-22-2010	**Logged By:** Stephen Wright	**Well ID:** MW-5D/MW-5I/MW-5S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-5D	MW-5I	MW-5S
-11	-21											
-12	-22	4.0/ 5.0	3.7									
-13	-23											
-14	-24											
-15	-25								25.0-29.0 ft bgs: SAA	BENTONITE SEAL	BENTONITE SEAL	
-16	-26											
-17	-27		1.3									
-18	-28	4.0/ 5.0										
-19	-29						OH		29.0-39.0 ft bgs: ORGANIC SILT (OH): silt, 5 - 10% clay, organics, shell fragments, grey, no odor.		PVC RISER	
-20	-30		1.3									
-21	-31											
-22	-32	3.0/ 5.0	2.4									
-23	-33											
-24	-34											
-25	-35											
-26	-36											
-27	-37		2.6									
-28	-38	5.0/ 5.0										
-29	-39		38			SB-5 (39-40)	SM		39.0-40.0 ft bgs: SILTY SAND (SM): very fine grained sand, 20% silt, brown, faint tar-like odor.			
-30	-40		36						40.0-41.0 ft bgs: SAA, faint tar-like odor.			
-31	-41											

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Boring was converted into Monitoring Well: MW-5D/5I/5S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid
10) NR- no recovery

Boring ID: SB-5 / MW-5

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 72 ft bgs
Client: National Grid	**Sampling Method:** 5 ft disposable plastic liner	**Ground Elevation:** 9.79' (D/I/S) NAVD88
Date Pre-Cleared: 4-21-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-21-2010/4-22-2010	**Logged By:** Stephen Wright	**Well ID:** MW-5D/MW-5I/MW-5S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-5D	MW-5I	MW-5S
-32	-42								41.0-45 ft bgs: SILTY SAND (SM): fine grained sand, 10% silt, grey/brown.	SAND PACK	SAND PACK	PVC SCREEN
-33	-43	5.0/ 5.0	2.3									
-34	-44											
-35	-45								45.0-49.0 ft bgs: SAA, grades to very fine grained sand, brown, no odor.			
-36	-46											
-37	-47		1.9									
-38	-48	5.0/ 5.0										
-39	-49						ML		49.0-50.0 ft bgs: SANDY SILT (ML): silt and very fine grained sand, brown, no odor.			SUMP
-40	-50						SP		50.0-55.0 ft bgs: POORLY GRADED SAND (SP): fine to coarse grained sand, 10% silt, 10% gravel, brown.			
-41	-51											
-42	-52	4.0/ 5.0	1.6							BENTONITE SEAL		
-43	-53											
-44	-54											
-45	-55								55.0-60.0 ft bgs: SAA, 20% fine gravel, no odor.			
-46	-56											
-47	-57	5.0/ 5.0	1.3									
-48	-58											
-49	-59											
-50	-60								60.0-65.0 ft bgs: SAA			
-51	-61											
-52	-62											

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Boring was converted into Monitoring Well: MW-5D/5I/5S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid
10) NR- no recovery

Boring ID: SB-5 / MW-5

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 72 ft bgs
Client: National Grid	**Sampling Method:** 5 ft disposable plastic liner	**Ground Elevation:** 9.79' (D/I/S) NAVD88
Date Pre-Cleared: 4-21-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-21-2010/4-22-2010	**Logged By:** Stephen Wright	**Well ID:** MW-5D/MW-5I/MW-5S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-5D	MW-5I	MW-5S
-53	-62	3.0/ 5.0	1.2									
-54	-63											
-55	-64											
-56	-65								65.0-72.0 ft bgs: SAA, 5% gravel.			
-57	-66											
-58	-67											
-59	-68	5.6/ 7.0	1.8									
-60	-69											
-61	-70					SB-5 (70-72)						
-62	-71								End of boring at 72 ft bgs			
	-72											

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Boring was converted into Monitoring Well: MW-5D/5I/5S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid
10) NR- no recovery

Boring ID: SB-6 / MW-6

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.81' NAVD88
Date Pre-Cleared: 4-20-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-20-2010/4-21-2010	**Logged By:** Stephen Wright	**Well ID:** MW-6I/MW-6S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-6I	Well Construction MW-6S
9	0		NA				FILL		0-0.25 ft bgs: ASPHALT	CEMENT BENTO	
8	-1		22						0.25-1.0 ft bgs: POORLY GRADED SAND (Fill): fine to coarse grained sand, 30% silt, 20% gravel, cobbles, moist, black, wood, slight petroleum-like odor.		
7	-2		21						1.0'-2.0': SAA, moist, slight petroleum-like odor.		
6	-3	5.0'/ 5.0'	24						2.0'-3.0': SAA, wet, moderate to strong petroleum-like odor.		
5	-4		36								
4	-5		47			SB-6 (4-5)			3.0 - 5.0 ft bgs: SAA.		
3	-6								5.0-10 ft bgs: SAA, glass fragments, slight petroleum-like odor.		
2	-7		69								
1	-8	4.0'/ 5.0'									
0	-9										
-1	-10								10.0-16.0 ft bgs: SAA.		
-2	-11										
-3	-12	1.0'/ 5.0'	20								
-4	-13										
-5	-14										
-6	-15		NA								
-7	-16		11				PT		16.0-17.0 ft bgs: FIBROUS AND FRIABLE PEAT (PT): peat, dark brown, organic-like odor.		
-8	-17	5.0'/ 5.0'					OH		17.0- 26.5 ft bgs: ORGANIC SILT (OH): silt, 5 - 10% clay, organics and shell fragments, grey, no odor.		
-9	-18		1.8								
-10	-19										
	-20										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-6I/6S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-6 / MW-6

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.81' NAVD88
Date Pre-Cleared: 4-20-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-20-2010/4-21-2010	**Logged By:** Stephen Wright	**Well ID:** MW-6I/MW-6S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-6I	Well Construction MW-6S
-11	-21										
-12	-22										
-13	-23	5.0/ 5.0	1.8								
-14	-24										
-15	-25										
-16	-26		1.9								
-17	-27		53			SB-6 (26-28)	SM		26.5-28.0 ft bgs: SILTY SAND (SM): fine grained sand, 10% silt, grey, ~2" layer black organics at 27 ft bgs, PEAT, fibrous, woody,slight tar-like odor.	BENTONITE SEAL	
-18	-28	5.0'/ 5.0'							28.0-30.5.0 ft bgs: SILTY SAND (SM): silt, 10% very fine grained sand, brown.		
-19	-29		16								
-20	-30		NA						30.5-33.5 ft bgs: SILTY SAND (SM): fine grained sand, 10% silt, brown, slight tar-like odor.		
-21	-31										
-22	-32		45								
-23	-33	5.0'/ 5.0'									
-24	-34		34				ML		33.5-37.0 ft bgs: SILT (ML): silt, 10% very fine grained sand, brown, slight tar-like odor.	SAND PACK	PVC SCREEN
-25	-35										
-26	-36		12								
-27	-37						SM		37.0-40.0 ft bgs: SILTY SAND (SM): fine grained sand, 20% silt, grey.		
-28	-38	5.0'/ 5.0'									
-29	-39		13								
-30	-40						ML		40.0-46.0 ft bgs: SANDY SILT (ML): silt, 20% fine to coarse grained sand, 20% fine to coarse grained gravel, cobbles, brown,		SU
-31	-41										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-6I/6S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-6 / MW-6

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.81' NAVD88
Date Pre-Cleared: 4-20-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-20-2010/4-21-2010	**Logged By:** Stephen Wright	**Well ID:** MW-6I/MW-6S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-6I	Well Construction MW-6S
-31	-41										
-32	-42								no odor.		
-33	-43	5.0'/ 5.0'	1.9								
-34	-44										
-35	-45		NA								
-36	-46						SM		46.0-50.0 ft bgs: SAND (SM): fine grained sand, 10% silt, brown, no odor.	BENTONITE SEAL	MP
-37	-47										
-38	-48	5.0/ 5.0	1.8								
-39	-49					SB-6 (49-50)					
-40	-50								End of boring at 50 ft bgs		

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-6I/6S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-7 / MW-7

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.36' NAVD88
Date Pre-Cleared: 4-28-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-28-2010/4-29-2010	**Logged By:** Stephen Wright	**Well ID:** MW-7I/MW-7S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-7I	Well Construction MW-7S
10	0		NA				FILL		0.0-0.25.0 ft bgs: CONCRETE	CEMENT	
9	-1		2.4						0.25-2.0 ft bgs: SILTY SAND (Fill): fine to coarse grained sand, 30% silt, 20% gravel, cobbles, very moist, dark brown.	BENTONI	
8	-2		2.8						2.0-3.0 ft bgs: SANDY SILT (Fill): silt, 20% fine to coarse grained sand, 10% fine to coarse grained gravel, very moist, red-brown.		
7	-3	5.0'/ 5.0'	5.0						3.0-4.0 ft bgs: SAA, wet.		
6	-4		59			SB7 (4-5)			4.0-5.0 ft bgs: SANDY SILT (Fill): silt, 30% fine to coarse grained sand, 10% fine to coarse gravel, black, coal fragments, strong petroleum-like odor.		
5	-5								5.0-10.0 ft bgs: SAA, coal fragments, strong petroleum-like odor.		
4	-6										
3	-7		36								
2	-8	5.0'/ 5.0'									
1	-9										
0	-10								10'-12': SAA, strong petroleum-like odor and sheen.		
-1	-11		451			SB7 (10-12)					
-2	-12								12'-13': SANDY SILT (Fill): silt, 30% fine to coarse sand, 20% fine to coarse gravel, brown, no odor.		
-3	-13	5.0'/ 5.0'	12				OH		13.0-15.0 ft bgs: ORGANIC SILT (OH): silt, 10% very fine grained sand, 5 - 10% clay, organic material and shell fragments, grey.	SAND PACK	SAND PACK
-4	-14		1.9								
-5	-15								15.0-20.0 ft bgs: SAA, no odor.		
-6	-16										
-7	-17		1.3								
-8	-18	5.0/ 5.0									
-9	-19										
-10	-20								20.0-25.0 ft bgs: SAA.	BENT	

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-7I/7S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-7 / MW-7

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.36' NAVD88
Date Pre-Cleared: 4-28-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-28-2010/4-29-2010	**Logged By:** Stephen Wright	**Well ID:** MW-7I/MW-7S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-7I	Well Construction MW-7S
-10											
-11	-21										
-12	-22	2.0'/ 5.0'	1.3								
-13	-23										
-14	-24										
-15	-25								25.0-27.0 ft bgs: SAA, trace organics, no odor.		
-16	-26		4.5								
-17	-27	5.0'/ 5.0'					SM		27.0 -30.0 ft bgs: SILTY SAND (SM): very fine grained sand, 10% silt, grey/brown.		
-18	-28		2.9								
-19	-29										
-20	-30						ML		30.0-37.0 ft bgs: SANDY SILT (ML): silt, 20% very fine grainedsand, grey, no odor.		
-21	-31										
-22	-32	5.0'/ 5.0'	5.1								
-23	-33										
-24	-34										
-25	-35		2.1								
-26	-36										
-27	-37	5.0'/ 5.0'	2.9			SB7 (37-40)	SM		37.0-40.0 ft bgs: SILTY SAND (SM): very fine grained sand, 20% silt, grey, no odor.		
-28	-38										
-29	-39										
-30	-40						ML		40.0-48.0 ft bgs: SANDY SILT (ML): silt, 20% fine to coarse grained sand, 20% fine to coarse gravel, cobbles, brown, no		
	-41										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-7I/7S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-7 / MW-7

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.36' NAVD88
Date Pre-Cleared: 4-28-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 4-28-2010/4-29-2010	**Logged By:** Stephen Wright	**Well ID:** MW-7I/MW-7S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-7I	Well Construction MW-7S
-31	-41								odor.		
-32	-42	2.0/ 5.0	3.5								
-33	-43										
-34	-44										
-35	-45										
-36	-46		3.9								
-37	-47										
-38	-48	4.0'/ 5.0'	3.8			SB7 (48-50)	SP		48.0-50.0 ft bgs: POORLY GRADED SAND (SP): fine grained sand, 10% silt, 10% fine to coarse gravel, brown, no odor.		
-39	-49										
	-50								End of boring at 50 ft bgs		

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-7I/7S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-8 / MW-8

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.46' NAVD88
Date Pre-Cleared: 5-4-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 5-4-2010/5-5- 2010	**Logged By:** Stephen Wright	**Well ID:** MW-8I/MW-8S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-8I	Well Construction MW-8S
7	0		NA				FILL		0.0'-0.5 ft bgs: ASPHALT	CEMEIBENTONT	CEMEIBENTONT
6	-1		4.6						0.5-1.5 ft gs: POORLY GRADED SAND (Fill): fine to coarse grained sand, 30% silt, 20% fine to coarse grained gravel, cobbles, dry, dark brown, no odor detected.		
5	-2		NA						1.5-2.5 ft bgs: REINFORCED CONCRETE		
4	-3	5.0'/ 5.0'	123			SB-8 (3-4)			2.5-4 ft bgs: SILT (Fill): silt, 20% fine to coarse grained sand, 20% fine to coarse gravel, coal fragments, dry, strong tar-like odor.		
3	-4		37						4.0-5.0 ft bgs: SAA		
2	-5								5.0-10.0 ft bgs: No recovery		
1	-6										
0	-7	0.0'/ 5.0'	NA							SAND PACK	SAND PACK
-1	-8										
-2	-9										
-3	-10								10.0 - 15.0 ft bgs: SILT (Fill): silt, 20% fine to coarse grained sand, 20% fine to coarse gravel, cobbles, dark brown, strong tar-like odor.		
-4	-11										
-5	-12	4.0'/ 5.0'	102								
-6	-13										
-7	-14										
-8	-15						OH		15.0-20.0 ft bgs: ORGANIC SILT (OH): silt, 10% very fine grained sand, gray, organics, shell fragments, no odor detected.		
-9	-16										
-10	-17	5.0'/ 5.0	1.2								
-11	-18										
-12	-19										
-13	-20										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-8I/8S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-8 / MW-8

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.46' NAVD88
Date Pre-Cleared: 5-4-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 5-4-2010/5-5- 2010	**Logged By:** Stephen Wright	**Well ID:** MW-8I/MW-8S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-8I	Well Construction MW-8S
-13											
-14	-21										
	-22		1.8								
-15	-23	5.0'/ 5.0									
-16	-24										
-17	-25		NA				ML		20.0 - 24.0 ft bgs: SAA, 20% very fine grained sand, no shells, no odor detected.	BENTONTIE SEAL	
-18	-26		2.1						24.0-25.0 ft bgs: SILT and SAND (ML): 50% silt, 50% very fine grained sand, gray, no odor detected.		
-19	-27								25.0-27.0 ft bgs: SAA, no odor.		
-20	-28	5.0'/ 5.0'	113				SM		27.0-30.0 ft bgs: SILTY SAND (SM): fine grained sand, 10% silt, gray, moderate tar-like odor.		
-21	-29										
-22	-30		96						30.0-31.0 ft bgs: SAA		
-23	-31						ML		31.0-34.0 ft bgs: SANDY SILT (ML): silt, 10% sand, brown, organics, no odor detected.		
-24	-32		11								
-25	-33	5.0'/ 5.0'									
-26	-34										
-27	-35		202			SB-8 (34-35)	SM		34.0-35.0 ft bgs: SILTY SAND (SM): fine grained sand, 10% silt, gray, strong tar-like odor.	SAND PACK	PVC SCREEN
-28	-36								35.0-40.0 ft bgs: SAA, grades to brown fine grained sand; moderate tar-like odor.		
-29	-37										
-30	-38	4.0'/ 5.0'	84								
-31	-39										
-32	-40								40'-45': SAA, no odor.		SU
-33	-41										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-8I/8S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-8 / MW-8

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.46' NAVD88
Date Pre-Cleared: 5-4-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 5-4-2010/5-5- 2010	**Logged By:** Stephen Wright	**Well ID:** MW-8I/MW-8S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-8I	Well Construction MW-8S
-34	-41										
-35	-42	4.0'/ 5.0'	9.6								
-36	-43										
-37	-44										
-38	-45								45.0-50.0 ft bgs: SAA, no odor.	BENTONTIE SEAL	MP
-39	-46										
-40	-47	4.0'/ 5.0'	3.5								
-41	-48					SB-8 (48-50)					
-42	-49								End of boring at 50 ft bgs		
	-50										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-8I/8S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-9 / MW-9

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~9 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 80 ft bgs
Client: National Grid	**Sampling Method:** 5 ft disposable plastic liner	**Ground Elevation:** 9.29'(I/D) 9.36'(S) NAVD88
Date Pre-Cleared: 9-14-10	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 9-15-2010/9-17-2010	**Logged By:** Jennifer Pfieffer/Jessica Ehlen	**Well ID:** MW-9D/MW-9I/MW-9S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW - 9D	MW - 9I	MW - 9S
9	0	5.0'/ 5.0'	1.4				FILL		0.0-0.4 ft bgs: SAND and SILT (FILL): fine to medium grained sand, brown, moist, 50% rounded gravel, 1/2" in diameter, fine roots, moss on surface, black plastic layer at 0.4' bgs.	CEME	CEME	CEME
8	-1		0.8						0.4-2.0 ft bgs: SAND and SILT (FILL): fine to medium grained sand, light brown, dry, 50% gravel 1/8 - 1/4" diameter, half of the 50% gravel is 1/2" - 1" diameter, brick bits 1" diameter, rounded and angular gravel, 2 brick debris >4" diameter.	BENTONITE	BENTONITE	BENTONITE
7	-2		0.8						2.0-4.5 ft bgs: SAND (FILL): fine grained sand, grey, dry, very faint hydrocarbon/petroleum-like odor, no staining, no sheen.			
6	-3		1.1						4.5-5.0 ft bgs: SAND, SILT, and GRAVEL (FILL): fine to medium grained sand, moist, slight hydrocarbon/petroleum-like odor detected, no staining observed.			
5	-4		1						5.0-7.5 ft bgs: SAND and GRAVEL (FILL): 50% of gravel ranges from 1/4" - 1.5" diameter, grey to brown sand, dry, no odor, no staining.			
4	-5		0.8			SB-9 (4.5-5)			7.5-10.0 ft bgs: SAND and GRAVEL (FILL): coarse grained sand, brown and black, fine shale fragment observed, gravel rounded up to 3" in diameter, gravel pieces at bottom, (schist-like, rich in mica), faint hydrocarbon/petroleum-like odor, no staining, moist to wet at bottom .			
3	-6		8.8						10.0-15.0 ft bgs: SAND and SILT (FILL): large cobbles throughout and small ~50% brick bits, dry to wet, sand and silt, slight sheen, no staining, slight hydrocarbon/petroleum-like odor and sewer-like odor.			
2	-7	3.0'/ 5.0'	2.4									
1	-8											
0	-9		11.2									
-1	-10											
-2	-11											
-3	-12	3.0'/ 5.0'	18.7									
-4	-13											
-5	-14											
-6	-15								15.0-20.0 ft bgs: SAND, SILT and GRAVEL (FILL): gravel is roughly 1/2" diameter, top 2/3 of sample saturated with water and strong hydrocarbon/petroleum-like odors, bottom 1/3 of sample less wet, no odors, 2 rocks 4" diameter, angular, sand/silt/mica, no staining, small tar blebs observed on sides of sample bag.			
-7	-16											
-8	-17	2.0'/ 5.0'	13.8									
-9	-18											
-10	-19											
-11	-20								20.0-25.0 ft bgs: GRAVELLY SAND and COBBLES	GROI	GROI	RISER
												SAND
												BENTONITE
												PVC SCREEN
												SUMP

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Boring was converted into Monitoring Well: MW-9D/9I/9S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid
10) NR- no recovery

Boring ID: SB-9 / MW-9

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~9 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 80 ft bgs
Client: National Grid	**Sampling Method:** 5 ft disposable plastic liner	**Ground Elevation:** 9.29'(I/D) 9.36'(S) NAVD88
Date Pre-Cleared: 9-14-10	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 9-15-2010/9-17-2010	**Logged By:** Jennifer Pfieffer/Jessica Ehlen	**Well ID:** MW-9D/MW-9I/MW-9S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW - 9D	MW - 9I	MW - 9S
-12	-21								(FILL): water has NAPL tar blebs, strong tar-like odor, cobbles are mix of schist and small boulders make up ~40% of sample.	JT	JT	
-13	-22											
-14	-23	1.6'/ 5.0'	16.2									
-15	-24											
-16	-25						OH		25.0-30.0 ft bgs: ORGANIC SILT (OH): silt, 5 - 10% clay, <1% fibers, 1 shell fragment @ 25 ft bgs, NAPL blebs on outer sides of sample bag from borehole advancment.	BENTONITE	BENTONITE	
-17	-26											
-18	-27											
-19	-28	1.0'/ 5.0'	11.3									
-20	-29											
-21	-30						SP		30.0-33.0 ft bgs: POORLY GRADED SAND (SP): sand, moist, grains coated with tar, strong tar-like odor.	RISER		
-22	-31		330									
-23	-32											
-24	-33	3.0'/ 5.0'					ML		33.0-35.0 ft bgs: SANDY SILT (ML): 25% fine grained sand and silt interbedded, brown, coated NAPL in black (organic) material, strong tar-like odor.		SAND	
-25	-34		525									
-26	-35						SP		35.0-40.0 ft bgs: POORLY GRADED SAND (SP): fine grained sand, grey, wet, coated with NAPL, strong tar-like odor.	SAND		PVC SCREEN
-27	-36											
-28	-37		190									
-29	-38	3.0'/ 5.0'										
-30	-39											
-31	-40						ML		40.0-45.0 ft bgs: SANDY SILT (ML): silt is brown and black from organics, sand is coated with NAPL, silt is dense, <10% clay.			
-32	-41											

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Boring was converted into Monitoring Well: MW-9D/9I/9S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid
10) NR- no recovery

Boring ID: SB-9 / MW-9

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~9 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 80 ft bgs
Client: National Grid	**Sampling Method:** 5 ft disposable plastic liner	**Ground Elevation:** 9.29'(I/D) 9.36'(S) NAVD88
Date Pre-Cleared: 9-14-10	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 9-15-2010/9-17-2010	**Logged By:** Jennifer Pfieffer/Jessica Ehlen	**Well ID:** MW-9D/MW-9I/MW-9S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW - 9D	MW - 9I	MW - 9S
-32												
-33	-42											
-34	-43	1.0'/ 5.0'	723			SB-9 (40-45)						
-35	-44											
-36	-45						SP		45'-50': POORLY GRADED SAND (SP): fine grained sand, brown, wet, loose, uniform, no odor, no visible impacts.			SUMP
-37	-46											
-38	-47											
-39	-48	5.0'/ 5.0	33									
-40	-49											
-41	-50						SW		50.0-55.0 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, moist, loose, @ 55 ft bgs coated NAPL globual 2" by 2", sheen, moderate NAPL-like odor at spot.	BENTONITE		
-42	-51											
-43	-52											
-44	-53	4.0'/ 5.0'	40.8									
-45	-54											
-46	-55								55.0 - 60.0 ft bgs: WELL GRADED SAND (SW): medium to coarse grained sand, brown, wet on top 2.5 ft, 15% rounded gravel ~10 mm in size, very faint tar-like odor at 60', no staining/sheen.			
-47	-56											
-48	-57											
-49	-58	5.0'/ 5.0'	11.3			SB-9 (55-60)						
-50	-59											
-51	-60						NR		60.0-65.0 ft bgs: No recovery			
-52	-61											
-53	-62											

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Boring was converted into Monitoring Well: MW-9D/9I/9S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid
10) NR- no recovery

Boring ID: SB-9 / MW-9

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~9 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 80 ft bgs
Client: National Grid	**Sampling Method:** 5 ft disposable plastic liner	**Ground Elevation:** 9.29'(I/D) 9.36'(S) NAVD88
Date Pre-Cleared: 9-14-10	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 9-15-2010/9-17-2010	**Logged By:** Jennifer Pfieffer/Jessica Ehlen	**Well ID:** MW-9D/MW-9I/MW-9S

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW - 9D	MW - 9I	MW - 9S
-53	-62											
-54	-63	0.0'/ 5.0'	NA									
-55	-64											
-56	-65						SP		65.0-70.0 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, no gravel, wet, loose, brown, no staining or odors detected.	SAND		
-57	-66											
-58	-67											
-59	-68	5.0'/ 5.0'	26									
-60	-69											
-61	-70						SW		70.0-72.5 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, wet, brown, no odor or visible impacts.	PVC SCREEN		
-62	-71											
-63	-72									SUMP		
-64	-73	5.0'/ 5.0'	2.5						72.5-75.0 ft bgs: WELL GRADED SAND (SW): medium to fine sand, 30% gravel 10 mm to 1inch diameter, wet, loose, no odors or visible impacts.			
-65	-74											
-66	-75								75.0 ft bgs-76.0 ft bgs: SAA	BENTONITE		
-67	-76								76.0-80.0 ft bgs: WELL GRADED SAND (SW): sand, loose, wet, reddish-color, no odor, no visible impacts.			
-68	-77											
-69	-78	5.0'/ 5.0	1.5			SB-9 (75-80)						
-70	-79								End of Boring at 80' bgs			
	-80											

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Boring was converted into Monitoring Well: MW-9D/9I/9S
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid
10) NR- no recovery

Boring ID: SB-10

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.27' NAVD88
Date Pre-Cleared: 4-15-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-15-2010	**Logged By:** Stephen Wright	**Well ID: NA**

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
0		NA				FILL		0' - 0.25': ASPHALT
-1		1.4						0.25'-1.0: GRAVELY SAND (Fill): coarse grained sand, 30% coarse gravel, 20% silt, dry, black.
-2								1.0'-4.0': CONCRETE (Fill)
-3	5.0'/ 5.0'	NA						
-4		3.1			SB-10 (4-5)			4.0'-5.0': GRAVELY SAND (Fill): coarse sand, 30% coarse gravel, 20% silt, wet, black, brick fragments and glass.
-5								5.0'-10': SAA, no gravel.
-6								
-7								
-8	5.0'/ 5.0'	2.1						
-9								
-10								10'-12.5': SANDY SILT (Fill): silt, 10% fine sand, black wood (lumber) fragments.
-11		2.2						
-12								
-13	4.0'/ 5.0'					OH		12.5'-16': ORGANIC SILT (OH): silt with organic matter, 20% clay, grey.
-14		2.4						
-15								
-16						SM		16'-20': SAND (SM): fine sand, 10% silt, 10% organic matter, grey.
-17								
-18	4.0'/ 5.0'	2.2						
-19								
-20								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-10

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.27' NAVD88
Date Pre-Cleared: 4-15-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-15-2010	**Logged By:** Stephen Wright	**Well ID: NA**

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-21								20'-23': SAA, < 5% gravel, no organic matter.
-22		2.8						
-23	5.0'/ 5.0'					ML		23-26': SILT (ML): silt, 10% very fine sand, < 5% fine gravel, < 5% shells, grey.
-24		2.1						
-25								
-26						SM		26'-30.5': SILTY SAND (SM): very fine sand, 20% silt, grey.
-27	5.0'/ 5.0'							
-28		3.0						
-29								
-30								
-31		4.1				ML		30.5'-32': SILT (ML): silt, 10% very fine sand, <10% clay, grey.
-32	5.0'/ 5.0'					SM		32'-35.5': SILTY SAND (SM): very fine sand, 30% silt, grey.
-33		6.4						
-34								
-35								
-36						ML		35.5'-38': SILT (ML): silt, 10% very fine sand, grey.
-37		3.3			SB-10 (35-40)			
-38	5.0'/ 5.0'					SM		38'-40': SAND (SM): fine sand, 10% silt, brown.
-39		3.2						
-40								40'-50': SAA, 10% gravel.
-41								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-10

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.27' NAVD88
Date Pre-Cleared: 4-15-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-15-2010	**Logged By:** Stephen Wright	**Well ID: NA**

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-41								
-42	5.0'/ 5.0'	2.2						
-43								
-44								
-45								
-46		4.1						
-47	5.0'/ 5.0'							
-48								
-49					SB-10 (49-50)			End of boring at 50 ft bgs
-50								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-11

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 60 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.44' NAVD88
Date Pre-Cleared: 4-19-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-19-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
0		NA				FILL		0' - 0.25': ASPHALT
-1		90						0.25'-1.0': SANDY SILT and GRAVEL (Fill): silt, 20% fine to coarse sand, 20% fine to coarse gravel, cobbles, dry, black, moderate naphthalene-like odor.
		214						1.0'-2.0': SAA, dry, wood fragments, strong naphthalene-like odor.
-2	5.0/ 5.0	100						2.0'-3.0': SAA, dry, strong naphthalene-like odor.
-3		155						3.0'-4.0': SAA, dry, coal, strong naphthalene-like odor.
-4		229			SB-11 (4-5)			4.0'-5.0': SAA, dry, coal and coal slag, strong naphthalene-like odor.
-5								5.0-8.0': SAA, moist, strong naphthalene-like odor.
-6		280						
-7	3.0/ 5.0							
-8		NA						8.0'-9.0': CONCRETE PAD (Fill)
-9		60						9.0'-10': SANDY SILT (Fill): silt, 30% fine to coarse sand, 20% fine to coarse gravel, wet, brown.
-10								10'-15': SANDY SILT (Fill): silt, 30% fine to coarse sand, 20% fine to coarse gravel, cobbles, brown/reddish brown, brick fragments, wire at 15 ft bgs.
-11								
-12	3.0/ 5.0	3.1						
-13								
-14								
-15						OH		15'-26.5': ORGANIC SILT (OH): silt, 10% very fine grained sand, 5 - 10% clay, 15% inorganic matter and shells, dark grey.
-16								
-17	5.0/ 5.0	1.8						
-18								
-19								
-20								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-11

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 60 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.44' NAVD88
Date Pre-Cleared: 4-19-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-19-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-21								
-22	5.0/ 5.0	5.1						
-23								
-24								
-25		3.2						
-26								
-27	5.0/ 5.0	5.6				SM		26.5'-29': SILTY SAND (SM): very fine to fine grained sand and silt, brown.
-28								
-29		478						29'-33': SILTY SAND (SM): fine grained sand, 10% silt, brown, strong naphthalene-like odor.
-30								
-31		608			SB-11 (30-33)			
-32	5.0/ 5.0							
-33						ML		33'-40': SANDY SILT (ML): silt, 10% very fine grained sand, brown, strong naphthalene-like odor.
-34		207						
-35								
-36								
-37	5.0/ 5.0	425						
-38								
-39								
-40								40'-42': SANDY SILT (ML): silt, 20% very fine grained sand, brown, slight naphthalene-like odor.
-41		25						

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-11

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 60 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.44' NAVD88
Date Pre-Cleared: 4-19-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-19-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-41								
-42						SM		42'-47': SILTY SAND (SM): fine sand, 10% silt, brown, strong naphthalene-like odor.
-43	4.0/ 5.0	227						
-44								
-45								
-46		201						
-47						ML		47'-48': SANDY SILT (ML): silt, 20% very fine grained sand, brown, slight naphthalene-like odor.
-48	4.0/ 5.0	32				SM		48'-50': SILTY SAND (SM): fine grained sand, 10% silt, grery, strong naphthalene-like odor.
-49		219						
-50								50'-60': SAA, no odor.
-51								
-52								
-53	5.0/ 5.0	18.4						
-54								
-55								
-56								
-57								
-58	5.0/ 5.0	3.5						
-59					SB-11 (59-60)			End of boring at 60 ft bgs
-60								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-12

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.56' NAVD88
Date Pre-Cleared: 4-14-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-14-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
0		NA				FILL		0' - 0.25': ASPHALT
-1		2.6						
		2.5						0.25'-3.5': SILTY SAND (Fill): fine to coarse sand, 30% silt, 15% fine to coarse gravel, cobbles, dry, brown, brick and concrete fragments. Moist at 2.0 ft bgs.
-2								
-3	5.0/ 5.0	4.6		SB-12 (2-3.5)				3.5'-4.0': CONCRETE PAD (Fill).
-4		NA						4.0'-7.0': SANDY SILT and GRAVEL (Fill): silt, 30% fine to coarse sand, 20% fine to coarse gravel, very moist, grey, strong naphthalene-like odor.
-5		320						
-6								
-7								7.0'-8.0': CONCRETE SLAB (Fill).
-8	4.0/ 5.0	NA						8.0'-9.0': GRAVELY SAND (Fill): fine to coarse sand, 30% fine to coarse gravel, moist, brown, strong naphthalene-like odor.
-9		>2,000						9.0'-10': CONCRETE SLAB (Fill).
-10		NA						10'-15': GRAVELY SAND (Fill): fine to coarse sand and fine to coarse gravel, 15% silt, wet, dark brown, tar blebs, strong naphthalene-like odor.
-11								
-12	3.0/ 5.0	>2,000						
-13								
-14								
-15		>2,000						15'-16': SAA, wood in tip.
-16						OH		16'-19': ORGANIC SILT (OH): silt, 5 - 10% clay, organic matter, grey, strong naphthalene-like odor.
-17	4.0/ 5.0	656						
-18								
-19						ML		19'-25': SILT (ML): silt, <10% very fine sand, grey, moderate naphthalene-like odor.
-20								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-12

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.56' NAVD88
Date Pre-Cleared: 4-14-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-14-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-21								
-22		55						
-23	1.0/ 5.0							
-24								
-25						SM		25'-30': SILTY SAND (SM): very fine sand, 30% silt, brown, tar blebs, strong naphthalene-like odor and sheen.
-26								
-27								
-28	4.0/ 5.0	118.4						
-29								
-30								30'-35': SAA, 30% silt, tar saturated sand lenses.
-31								
-32					SB-12 (30-35)			
-33	4.0/ 5.0	98						
-34								
-35								35'-40': SAA, no odor.
-36								
-37								
-38	3.0/ 5.0	25						
-39								
-40								40'-50': SILTY SAND (SM): interbedded very fine grained sand and silt, brown, no odor.
-41		28						

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-12

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.56' NAVD88
Date Pre-Cleared: 4-14-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-14-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-41								
-42	5.0/ 5.0	3.6						
-43								
-44		11						
-45								
-46		10						
-47	5.0/ 5.0							
-48								
-49		4.1			SB-12 (49-50)			End of boring at 50 ft bgs
-50								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-13

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.42' NAVD88
Date Pre-Cleared: 4-14-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-14-2010/4-15-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
0		NA				FILL		0' - 0.25': ASPHALT
-1		18						0.25' - 1: SAND: (Fill) fine to coarse grained sand, 20% coarse gravel, 20% silt, cobbles, brick fragments, black, moderate tar-like odor, dry.
-2		54						1' - 2': SAA: moderate tar-like odor, dry.
-3	5.0/ 5.0	189						2' - 3': SAA: strong tar-like odor, moist.
								3' - 4': SAA: with <5% coal, <5% wood fragments, strong tar-like odor, wet.
-4		389			SB-13 (4-5)			4' - 5': SAA: strong tar-like odor, wet.
-5		584						5' - 13': SAA: strong tar-like odor, heavy tar sheen.
-6								
-7								
-8	1.0/ 5.0	597						
-9								
-10								
-11								
-12		221						
-13	5.0/ 5.0							13' - 15': Black timber, strong tar-like odor, heavy tar sheen, coated with tar at ~ 14'.
-14		201						
-15						OH		15' - 18': ORGANIC SILT (OH): silt with organics, grey, moderate tar-like odor.
-16								
-17								
-18	5.0/ 5.0	54						18' - 20': SAA
-19								
-20								20' - 23': SAA: with trace organics, moderate tar-like odor.

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-13

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.42' NAVD88
Date Pre-Cleared: 4-14-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-14-2010/4-15-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-21								
-22		60						
-23	5.0/ 5.0					SM		23' - 25': SILTY SAND (SM): Fine grained sand with 10% silt, brown, strong tar-like odor.
-24		135						
-25								25' - 27': SAA: strong tar-like odor, saturated with tar @ 27'.
-26		1600						
-27								27' - 30': SAA: strong tar-like odor.
-28	5.0/ 5.0							
-29		122						
-30								30' - 31': SAA: stong tar-like odor.
-31		NA						31' - 37': SAA: strong tar-like odor, saturated with tar.
-32								
-33	5.0/ 5.0	>2000						
-34								
-35								
-36		>2000			SB-13 (35-37)			
-37						ML		37' - 40': SANDY SILT (ML): silt with 10% very fine grained sand, grey, strong tar-like odor, small seams of heavy tar sheen.
-38	5.0/ 5.0							
-39		1310						
-40						SM		40' - 45': SILTY SAND (SM): fine grained sand, 20% silt, brown, strong tar-like odor, heavy tar sheen.
-41								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-13

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.42' NAVD88
Date Pre-Cleared: 4-14-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-14-2010/4-15-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-41								
-42								
-43	2.0/ 5.0	370						
-44								
-45								45' - 50': SAA: strong tar-like odor, small blebs of tar in ground water
-46								
-47								
-48	2.0/ 5.0	1250						
-49								
-50								50' -55': SAA: strong tar-like odor, heavy tar sheen, no blebs
-51								
-52								
-53	2.0/ 5.0	223						
-54								
-55								55' - 58': SAA; strong tar-like odor; heavy sheen
-56								
-57		613						
-58	5.0/ 5.0					ML		58' - 60': SANDY SILT (ML): silt 10% very fine grained sand, brown, no odor detected.
-59		22						
-60						NR		60' - 65': No recovery
-61								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-13

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.42' NAVD88
Date Pre-Cleared: 4-14-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-14-2010/4-15-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-62 -63 -64	0.0/ 5.0	NA						
-65 -66 -67 -68	5.0/ 5.0	12				ML		65' - 69': SANDY SILT (ML): silt 10% very fine grained sand, brown, no odor detected.
-69 -70		4.5			SB-13 (69-70)	SM		69' - 70': SILTY SAND (SM): fine to coarse grained sand, 20% fine gravel, cobbles, brown, no odor detected. End of boring at 70 ft bgs

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-14

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 1 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.23' NAVD88
Date Pre-Cleared: 4/1/2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-1-2010/4-2-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
0		NA				FILL		0' - 0.75': REINFORCED CONCRETE SIDEWALK
-1		21.3						0.75' - 1.5': SAND (Fill): fine to coarse grained sand with some silt, cobbles, dark brown.
-2		NA						1.5' - 2': CONCRETE (Fill).
-3	5.0/ 5.0	71.3						2' - 5': SILT (Fill): silt, 10% fine to medium grained sand, brown, strong tar-like odor, tar sheen, wet.
-4		NA						
		257			SB-14 (4-5)			
-5					SB-14 (5-6)			
-6		241						5' - 6': SAND (Fill): fine to coarse grained sand with 20% silt, black, strong tar-like odor, tar sheen.
-7		44						6' - 8': SILT (Fill): silt with 10% very fine grained sand, dark brown, moderate tar-like odor, tar sheen.
-8	3.0/ 5.0	NA						
-9		3.9						8' - 12': SILT (Fill): silt with <5% fine to coarse grained sand, small cobbles, brown.
					SB-14 (9-10)			
-10		1.8						
-11		2.1						
-12		0.0				PT		12' - 15.5': FIBROUS and FRIABLE PEAT (PT): peat with <10% silt, brown.
-13	4.0/ 5.0	1.1						
-14		1.6						
-15		1.2						
		2.4						
-16		0.0				OH		15.5' - 16': ORGANIC SILT (OH): silt with 20% organics, brown.
						SM		16' - 18': SILTY SAND (SM): very fine grained sand with 20% silt, grey.
-17		NA						
-18	3.0/ 5.0	6.4						18' - 20': SAA
-19		NA						
-20		2.8						20' - 21': SAA

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-14

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 1 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.23' NAVD88
Date Pre-Cleared: 4/1/2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-1-2010/4-2-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-21		11						21' - 25': SAA
-22	2.5/ 5.0	15						
-23								
-24		1.6						
-25								25' - 27': SAA, grading to fine grained sand with little silt.
-26		0.0						
-27	4.0/ 5.0					ML		27' - 30': SANDY SILT (ML): silt with very fine grained sand, brown.
-28								
-29		0.0						
-30								30' - 35': SAA, grades back and forth between silt and very fine grained sand.
-31		0.0						
-32	3.0/ 5.0							
-33								
-34		1.1						
-35								35' - 36': SAA
-36		2.4						36' - 40': SAA
-37	3.0/ 5.0	4.6						
-38								
-39		0.6						
-40						NR		40' - 45': No recovery
-41								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-14

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 1 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.23' NAVD88
Date Pre-Cleared: 4/1/2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-1-2010/4-2-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-41, -42, -43	0.0/ 5.0	NA						
-44, -45								45' - 50': No recovery
-46, -47, -48	0.0/ 5.0	NA						
-49, -50						SM		50' - 54': SILTY SAND (SM): fine grained sand and silt, brown, moderate coal/tar-like odor, no visible sheen.
-51		18.9						
-52, -53	2.5/ 5.0							
-54		12.2						54' - 55': SAA
-55						SP		55' - 57': POORLY GRADED SAND (SP): fine grained sand, 10% silt, 10% fine to coarse gravel, brown.
-56, -57								
-58	3.5/ 5.0	0.0						57' - 60': POORLY GRADED SAND (SP): silt with 10% very fine grained sand, little fine to coarse gravel, cobbles, brown.
-59, -60								
-61								60' - 65': POORLY GRADED SAND (SP): fine to coarse grained sand with 10% fine gravel, brown.

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-14

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 1 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 9.23' NAVD88
Date Pre-Cleared: 4/1/2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-1-2010/4-2-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-62								
-63	1.0/ 5.0	0.0						
-64								
-65								65' - 70': SAA with cobbles.
-66								
-67								
-68	4.0/ 5.0	0.0						
-69					SB-14 (69-70)			End of boring at 70 ft bgs
-70								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-15

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 11.46' NAVD88
Date Pre-Cleared: 4-14-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-14-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
0		NA				FILL		0' - 0.25': ASPHALT
-1		54						0.25' - 1': SAND (Fill): fine to coarse grained sand, with 30% silt, 20% fine to coarse gravel, dark brown , brick/concrete fragments, cobbles, dry, slight tar-like odor.
-2		351						1' - 2': SAA: slight tar-like odor, dry.
-3	5.0/ 5.0	603						2' - 4': SAA: slight tar-like odor, moist.
-4		733						4' - 5': SILT (Fill): silt/ash, with 30% fine to coarse grained sand, 20% fine to coarse gravel, grey, coal, strong tar-like odor, small blebs of tar visible, wet.
-5		931			SB-15 (4-5)			5' - 10': SAA: strong tar-like odor, heavy tar sheen, slight coating of tar.
-6								
-7								
-8	4.0/ 5.0	400						
-9								
-10								10' - 15': SAA: strong tar-like odor, heavy tar sheen.
-11								
-12								
-13	5.0/ 5.0	352						
-14								
-15						PT		15' - 18': FIBROUS and FRIABLE PEAT (PT): dark brown peat fibrous throughout; moderate organic-like odor.
-16								
-17								
-18	5.0/ 5.0	226						18' - 20': SAA
-19								
-20						ML		20' - 22': SANDY SILTY (ML): silt with 50% very fine sand, grey, faint tar-like odor,

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-15

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 11.46' NAVD88
Date Pre-Cleared: 4-14-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-14-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-21		29						organics.
-22	5.0/ 5.0					SM		22' - 25': SILTY SAND (SM): fine grained sand with 40% silt, grey, faint tar-like odor.
-23								
-24		34						
-25								25' - 30': SAA: fine grained sand with 30% silt, grey, strong tar-like odor, weeping tar, heavy tar sheen.
-26								
-27	5.0/ 5.0	183						
-28								
-29								
-30								30' - 34': SAA: strong tar-like odor, weeping tar, heavy tar sheen, coated with tar at 34'.
-31								
-32	5.0/ 5.0	237						
-33								
-34		451				ML		34' - 35': SANDY SILTY (ML): silt with 40% very fine sand, grey, strong tar-like odor.
-35						SM		35' - 37': SILTY SAND (SM): fine grained sand, 50% silt, grey, moderate tar-like odor.
-36		337						
-37	5.0/ 5.0							37' - 39': SAA: saturated with tar.
-38		1749			SB-15 (37-39)			
-39						ML		39' - 40': SANDY SILT (ML): silt with <5% very fine grained sand, strong tar-like odor.
-40		497				NR		40' - 45': No recovery.
-41								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-15

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 11.46' NAVD88
Date Pre-Cleared: 4-14-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-14-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-41								
-42								
-43	0.0/ 5.0	NA						
-44								
-45						ML		45' - 49': SAA: (39'-40'), faint tar sheen, moderate tar-like odor.
-46								
-47		236						
-48	5.0/ 5.0							
-49						SM		49' - 50': SILTY SAND (SM): fine grained sand with 10% silt; grey, faint tar-like odor.
-50		NA						50' - 52': SAA
-51		102						
-52								52' - 53.5': SAA: sand with 20% fine gravel, 10% silt, no odor detectable.
-53	4.0/ 5.0	27						53.5' - 55': SILTY SAND (SM): coarse grained sand with 30% gravel, <10% silt, black, no odor detectable.
-54		NA						
-55								55' - 59': SAA
-56								
-57		35						
-58	3.0/ 5.0							
-59						ML		59' - 60': SANDY SILTY (ML): silt with 40% very fine grained sand, grey, no odor detectable.
-60		NA						60' - 63': SAA
-61								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-15

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 11.46' NAVD88
Date Pre-Cleared: 4-14-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-14-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-62		29						
-63	5.0/ 5.0							63' - 65': SANDY SILTY (ML): silt with 10% fine to coarse grained sand, 10% fine to coarse gravel, cobbles, brown, no odor detectable.
-64		19						
-65								65' - 70': SAA
-66								
-67								
-68	5.0/ 5.0	18			SB-15 (69-70)			
-69								
-70								End of boring at 70 ft bgs

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-16

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.58' NAVD88
Date Pre-Cleared: 5-4-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 5-5-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
0		NA				FILL		0' - 0.25': ASPHALT
-1		4.4						0.25' - 1': SAND (Fill): fine to coarse grained sand with 20% silt, 10% fine to coarse gravel, brown, dry, no odor detected.
-2		NA						1' - 3': CONCRETE (Fill)
-3	5.0/ 5.0							3' - 4': SILT (Fill): silt with 20% fine to coarse grained sand, 10% fine to coarse gravel, cobbles, black, little coal, no odor detectable, dry.
-4		18.2						4' - 5': SAA: very moist.
-5		18.2			SB16 (4-5)			5' - 10': No recovery
-6								
-7	5.0/ 5.0	NA						
-8								
-9								
-10					SB-16 (10-13)			10' - 13': SAND (Fill): fine to coarse sand with 30% silt, 20% fine to coarse gravel, wood fragments, black, strong tar-like odor, coated with tar.
-11								
-12		570						
-13	4.0/ 5.0							13' - 15': SILT (Fill): silt with 20% fine to coarse sand, 20% fine to coarse gravel, brown, no odor detectable.
-14		3.8						
-15								15' - 16': SAA
-16		NA				OH		16' - 18': ORGANIC CLAY (OH): silt with organics, grey, no odor detectable.
-17								
-18	5.0/ 5.0	6.6						18' - 20': SAA
-19								
-20								20' - 25': SAA: moderate tar-like odor.

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-16

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.58' NAVD88
Date Pre-Cleared: 5-4-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 5-5-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-21								
-22								
-23	5.0/ 5.0	116						
-24								
-25								25' - 30': SAA
-26								
-27								
-28	5.0/ 5.0	105						
-29								
-30								30' - 31': SAA
-31		NA				SM		31' - 35': SILTY SAND (SM) very fine grained sand with 10% silt, grey, strong tar-like odor.
-32								
-33	4.0/ 5.0	305						
-34								
-35								35' - 36': SAA
-36		NA				ML		36' - 40': SANDY SILTY (ML): silt with 10% very fine grained sand, moderate tar-like odor.
-37								
-38	5.0/ 5.0	102						
-39								
-40								40' - 41': SAA
-41		NA						

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-16

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.58' NAVD88
Date Pre-Cleared: 5-4-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 5-5-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-41						SM		41' - 45': SILTY SAND (SM): very fine grained sand/silt, brown, moderate tar-like odor.
-42								
-43	4.0/ 5.0	143						
-44								
-45								45' - 50': SILTY SAND (SM): fine grained sand with 10% silt, gray, moderate tar-like odor.
-46								
-47								
-48	4.0/ 5.0	110						
-49								
-50								50' - 55': SAA
-51								
-52								
-53	4.0/ 5.0	88						
-54								
-55								
-56								55' - 60': SAA
-57								
-58	4.0/ 5.0	69						
-59								
-60								60' - 65': SAA
-61								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-16

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.58' NAVD88
Date Pre-Cleared: 5-4-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 5-5-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-62								
-63	1.0/ 5.0	73						
-64								
-65								65' - 70': SAA
-66								
-67								
-68	4.0/ 5.0	43			SB-16 (68-70)			
-69								End of boring at 70 ft bgs
-70								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB - 17

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~ 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.15 ft
Date Pre-Cleared: 4-20-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-20-2010/4-21-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
0		NA				FILL		0' - 0.25': ASPHALT
-1		18.6						0.25' - 2': SAND (Fill) fine to coarse grained sand, 30% silt, 20% fine to coarse gravel, coal gragments, slight hydrocarbon/naphthalene-like odor, dry, black.
-2	5.0/ 5.0	6.3						2' - 3': SAA: with larger pieces of coal, dry, moderate hydrocarbon/naphthalene-like odor.
-3		101						3' - 4': SILT (Fill): silt with 30% fine to coarse grained sand, 20% fine to coarse gravel, black, dry, moderate hydrocarbon/naphthalene-like odor.
-4		194			SB-17 (4-5)			4' - 5': SAA: strong hydrocarbon/naphthalene-like odor, very moist.
-5						NR		5' - 10': NO RECOVERY - Difficult drilling with 2 pieces of 1-inch thick steel in core barrel at 7 ft bgs.
-6								
-7	0.0/ 5.0	NA						
-8								
-9								
-10						FILL		10' - 11': SILT (Fill): silt with 20% fine to coarse sand and wood fragments, brown.
-11		NA						11' - 15': SILT (Fill): silt with 30% fine to coarse sand, 20% fine to coarse gravel, cobbles, and wood fragments, brown, strong tar-like odor.
-12	1.0/ 5.0							
-13		51						
-14								
-15								15' - 19': SILT (Fill): silt with 20% fine to coarse sand, 10% fine to coarse gravel, cobbles, brown, no odor.
-16								
-17		10.3						
-18								
-19						OH		19' - 20': ORGANIC SILT (OH): silt with shells and organics, grey, no odor.
-20		NA						20' - 25': SAA

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB - 17

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~ 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.15 ft
Date Pre-Cleared: 4-20-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-20-2010/4-21-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-21, -22, -23, -24, -25	5.0/ 5.0	3.0				SM		25' - 30': SILTY SAND (SM): fine grained sand, 20% silt, some shell fragments.
-26, -27, -28, -29, -30	2.0/ 5.0	5.3						
-31, -32		36			SB-17 (30-32)			30' - 32': SILTY SAND (SM): fine grained sand with 10% silt, grey, slight tar-like odor.
-33, -34, -35	5.0/ 5.0	2.7				OH		32' - 35': ORGANIC SILT (OH): silt with 10% very fine grained sand and organics, grey, no odor.
-36, -37		NA						35' - 37': SAA
-38, -39, -40	5.0/ 5.0	6.2				SM		37' - 40': SILTY SAND (SM): very fine to fine grained sand with 10% silt, brown/grey, no odor.
-41								40' - 45': SAA

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB - 17

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~ 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 50 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.15 ft
Date Pre-Cleared: 4-20-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-20-2010/4-21-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-41								
-42								
-43	2.5/ 5.0	4.4						
-44								
-45								45' - 50': SAA
-46								
-47								
-48	4.0/ 5.0	4.2			SB-17 (48-50)			
-49								End of boring at 50 ft bgs
-50								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-18

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.00' NAVD88
Date Pre-Cleared: 4-20-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-20-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
0		NA				FILL		0' - 0.75': ASPHALT
-1		315			SB-18 (1-2)			0.75' - 2': SILT (Fill): silt with 30% fine to coarse grained sand, 30% fine to coarse gravel, brick fragments, black, dry, strong tar-like odor.
-2	5.0/ 5.0	93						2' - 3': SAA: with cobbles, moist, strong tar-like odor.
-3		85						3' - 4': SAA: strong tar-like odor, brown, wet.
-4		66						4' - 5': SAA: strong tar-like odor, slight tar sheen, brown, wet.
-5								5' - 10': SAA: slight tar-like odor.
-6								
-7	4.0/ 5.0	31						
-8								
-9								
-10						OH		10' - 15': ORGANIC SILT (OH): silt with organics, slight organic odor, grey.
-11								
-12	5.0/ 5.0	2.2						
-13								
-14								
-15								15' - 18': SAA: slight organic odor; small bleb at ~16'.
-16								
-17	5.0/ 5.0	1.9						
-18								18' - 21': SAA: slight organic odor.
-19								
-20								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-18

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.00' NAVD88
Date Pre-Cleared: 4-20-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-20-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-21		NA				SM		21' - 24': SILTY SAND (SM): fine grained sand with 10% silt, brown, moderate tar-like odor.
-22	5.0/ 5.0	113						
-23								
-24						ML		24' - 26': SANDY SILT (ML): silt with 10% very fine grained sand, dark grey, slight tar-like odor.
-25		41						
-26						SM		26' - 30': SILTY SAND (SM): fine grained sand with 10% silt, brown, strong tar-like odor, saturated with tar from 28' - 30'.
-27	4.0/ 5.0							
-28		>2000			SB-18 (28-30)			
-29								
-30								30' - 34.5': SAA: strong tar-like odor, tar weeping from soil, heavy tar sheen.
-31								
-32	4.0/ 5.0	1256						
-33								
-34								
-35						ML		34.5' - 36': SANDY SILT (ML): silt with 10% very fine grained sand, brown, strong tar-like odor.
-36		330						36' - 37': SAA
-37	5.0/ 5.0					SM		37' - 40': SILTY SAND (SM): fine grained sand with 10% silt, grey, strong tar-like odor.
-38								
-39		540						
-40								
-41								40' - 45': SAA

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
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5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-18

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.00' NAVD88
Date Pre-Cleared: 4-20-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-20-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-41								
-42								
-43	5.0/ 5.0	177						
-44								
-45								45' - 50': SAA.
-46								
-47								
-48	5.0/ 5.0	411						
-49								
-50								50' - 54': SAA: slight tar-like odor.
-51								
-52								
-53	5.0/ 5.0	60						
-54								
-55								
-56								54' - 61': SAA
-57								
-58	5.0/ 5.0	24						
-59								
-60								
-61		NA				ML		61' - 63': SANDY SILT (ML): silt with 20% very fine grained sand, 10% fine to coarse

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-18

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** 3 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 7.00' NAVD88
Date Pre-Cleared: 4-20-2010	**Boring Diameter:** 8"	**Converted To Well (Y/N):** NO
Date Started/Completed: 4-20-2010	**Logged By:** Stephen Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-62	5.0/ 5.0	1.8						gravel, cobbles, brown, no odor detected.
-63						SM		63' - 65': SILTY SAND (SM): fine grained sand with 10% silt, !0% fine to coarse gravel, reddish brown, no odor detected.
-64		2.1						
-65								
-66		1.9						65' - 67': SAA: grey.
-67						ML		67' - 70': SANDY SILT (ML): silt with 20% fine to coarse grained sand, 10% fine to coarse gravel, cobbles, brown, no odor detected.
-68	5.0/ 5.0	1.8						
-69					SB-18 (69-70)			End of boring at 70 ft bgs
-70								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) No Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-19/MW-19S/I

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~6.0 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 85 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.91 ft NAVD88
Date Pre-Cleared: 10/2/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 10/2/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-19S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
	0	NA	NA				FILL		0-3 ft bgs: CONCRETE
	-3		2.2						3-5 ft bgs: SILT (FILL): silt, ~30% gravel, ~15% medium to fine grained sand, dark gray, no odors.
	-5	4.0'/ 5.0'	0.2						5-7 ft bgs: FILL: silt, ~30% brick debris, ~15% gravel, non-MGP staining, no odor, wet at 6 ft bgs.
	-7		0.1						7-10 ft bgs: FILL: cobbles, wet, light brown, some non-MGP staining.
	-10	3.0'/ 5.0'	75.6						10-13 ft bgs: FILL: cobbles and gravel, ~15% coarse to medium grained sand and silt, 7 inch core of wood, wet, brown, tar-like odor.
	-13		397						13-15 ft bgs: FILL: 4 inch piece of wood debris in tar saturated silt, ~15% fine grained sand, wet, black, trace DNAPL.
	-15	4.5'/ 5.0'	9.2				OH		15-17 ft bgs: ORGANIC CLAY (OH): organic clay, ~30% gravel, shells, loose, plastic, wet, organic
	-17		9.8						17-19 ft bgs: ORGANIC CLAY (OH): organic clay, cobbles, shells, ~30% wood debris, wet, organic odor.
	-19		4.1						19-20 ft bgs: ORGANIC SILT (OH): organic silt/clay, two wood cores, ~15% wood fibers, wet.
	-20	1.5'/	3.5						

Well Construction

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-19S/19I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-19/MW-19S/I

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~6.0 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 85 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.91 ft NAVD88
Date Pre-Cleared: 10/2/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 10/2/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-19S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-19S	Well Construction MW-19I
-10	-21	5.0'							20-25 ft bgs: SAA, wood debris and shells, no wood core.		
-11	-22										
-12	-23										
-13	-24										
-14	-25	5.0'/ 5.0'	6.2				ML		25-27.5 ft bgs: SANDY SILT (ML): silt, ~30% organic clay, wet, dark gray, slight organic odor.		
-15	-26										
-16	-27										
-17	-28		163.1				SW		27.5-30 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, wet, naphthalene-like odor, 2 inch tar coated lense of coarse to medium grained sand at 28.5 ft bgs.		
-18	-29										
-19	-30	5.0'/ 5.0'	181.5				SM		30-32.5 ft bgs: SILTY SAND (SM): medium to fine grained sand, ~15% silt, moist, olive gray, moderate naphthalene-like odor.		
-20	-31										
-21	-32										
-22	-33		522						32.5-34 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, moist, tar coated, bottom 6 inches clay and silt.		
-23	-34		38.6						34-35 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, moist, light brown, slight naphthalene-like odor.		
-24	-35	5.0'/ 5.0'	57.2				SP		35-37 ft bgs: POORLY GRADED SAND (SP): fine grained sand, brown, slight naphthalene-like odor, top 4 inches tar-like staining.		
-25	-36										
-26	-37		610			SB-19 (37-37.5)	SW				
-27	-38		70.4				ML		37-37.5 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, tar coated and saturated, trace NAPL.		
-28	-39								37.5-40 ft bgs: SANDY SILT (ML): silt, <5% fine grained sand, plastic, slight naphthalene-like odor.		
-29	-40	3.5'/ 5.0'	57						40-40.5 ft bgs: SANDY SILT (ML): silt, brown, slight naphthalene-like odor.		
-30	-41		63				SM				

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-19S/19I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-19/MW-19S/I

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~6.0 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 85 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.91 ft NAVD88
Date Pre-Cleared: 10/2/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 10/2/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-19S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-19S	Well Construction MW-19I
-30	-41								40.5-43.5 ft bgs: SILTY SAND (SM): fine grained sand, ~15% silt, olive gray, moderate naphthalene-like odor.		
-31	-42										
-32	-43										
-33	-44		54				SW		43.5-45 ft bgs: WELL GRADED SAND (SW): coarse to fine grained sand, ~15% silt, light brown.		
-34	-45	0.0'/ 5.0'	NA						45-50 ft bgs: No recovery.		
-35	-46										
-36	-47										
-37	-48										
-38	-49										
-39	-50	0.0'/ 5.0'	NA						50-55 ft bgs: No recovery.		
-40	-51										
-41	-52										
-42	-53										
-43	-54										
-44	-55	5.0'/ 5.0'	6.2				SM		55-57.5 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, light brown, slight naphthalene-like odor.		
-45	-56										
-46	-57										
-47	-58		13.1				SW		57.5-60 ft bgs: WELL GRADED SAND (SW): coarse to fine grained sand, ~30% silt, light gray, no odor.		
-48	-59										
-49	-60	4.5'/ 5.0'	19						60-63 ft bgs: SAA, very slight naphthalene-llike odor.		
-50	-61										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-19S/19I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-19/MW-19S/I

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~6.0 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 85 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.91 ft NAVD88
Date Pre-Cleared: 10/2/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 10/2/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-19S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-19S	Well Construction MW-19I
-51	-62										
-52	-63		8.4						63-65 ft bgs: WELL GRADED SAND (SW): coarse to fine grained sand, ~30% gravel, ~15% silt, brown.		BENTONITE
-53	-64										
-54	-65	5.0'/ 5.0'	18						65-69 ft bgs: SAA, very slight naphthalene-like odor.		
-55	-66										
-56	-67										
-57	-68		12.8								
-58	-69						ML		69-70 ft bgs: SANDY SILT (ML): silt, ~30% fine grained sand, slightly dense, brown.		
-59	-70	4.0'/ 5.0'	26.3						70-75 ft bgs: SAA, slight naphthalene-like odor.		
-60	-71										
-61	-72										
-62	-73		24.6			SB-19 (72.5-75)					
-63	-74										
-64	-75	0.0'/ 5.0'	NA						75-80 ft bgs: No recovery.		
-65	-76										
-66	-77										
-67	-78										
-68	-79										
-69	-80	0.0'/ 5.0'	NA						80-85 ft bgs: No recovery.		
-70	-81										
-71	-82										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-19S/19I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-19/MW-19S/I

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~6.0 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 85 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.91 ft NAVD88
Date Pre-Cleared: 10/2/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 10/2/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-19S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-19S	Well Construction MW-19I
-71	-82										
-72	-83										
-73	-84								End of Boring 85 ft bgs		
-74	-85										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-19S/19I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-20/MW-20I/S

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~15 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 85 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 11.69 ft NAVD88
Date Pre-Cleared: 10/16/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 10/16/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-20 S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-20S	Well Construction MW-20I
11	0	5.0'/ 5.0'	2.6				FILL		0-3 ft bgs: CONCRETE	BENTONITE	BENTONITE
10	-1										
9	-2										
8	-3		1.1						3-5 ft bgs: FILL: gravelly silt, brick debris, trace black staining from 4-5 ft bgs.		
7	-4										
6	-5	5.0'/ 5.0'	31						5-7 ft bgs: FILL: silt, ~30% fine grained sand, ~14% gravel, moist, light brown, no odor, slight black staining.	PVC RISER	
5	-6										
4	-7		20.3						7-9 ft bgs: FILL: silt, ~15% gravel, moist, brown, no odor. trace black staining.	SAND PACK	SAND PACK
3	-8										
2	-9		487			SB-20 (9-10)			9-10 ft bgs: FILL: silt, fine grained sand, moist, tar-like odor, slight black staining.		
1	-10	4.0'/ 5.0'	23						10-12.5 ft bgs: FILL: silt, medium to fine grained sand, ~30% brick debris, moist, light brown,slight tar-like odor, little tar-like staining	PVC SCREEN	
0	-11										
-1	-12		146.6								
-2	-13		409.1				SM		12.5-15 ft bgs: SILTY SAND (SM): sandy silt, ~30% gravel, moist, dark gray, 14-15 ft bgs black staining and tar-like odor.		
-3	-14										
-4	-15	4.0'/ 5.0'	164				ML		15-20 ft bgs: SANDY SILT (ML): silt with fine grained sand, <5% gravel, wet, dark gray, naphthalene-like odor. Very soft clay in drill tip.	PVC SUMP	PVC RISER
-5	-16										
-6	-17										
-7	-18		160								
-8	-19										
-9	-20	4.0'/	137				OH		20-25 ft bgs: ORGANIC CLAY (OH): organic clay, peat,	BENTONITE	BE

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-20S/21I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-20/MW-20I/S

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~15 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 85 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 11.69 ft NAVD88
Date Pre-Cleared: 10/16/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 10/16/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-20 S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-20S	Well Construction MW-20I
-9	-21	5.0'	67.4						slightly stiff, wet, dark gray, organic odor.		
-10	-22		19.3								
-11	-23										
-12	-24										
-13	-25	5.0'/ 5.0'	6.3						25-27.5 ft bgs: SAA, ~15-30% peat, ~30% interbedded silt.		
-14	-26										
-15	-27										
-16	-28		7.2				SM		27.5-30 ft bgs: SILTY SAND (SM): fine grained sand, ~15% silt, wet, dark gray, no odor.		
-17	-29										
-18	-30	4.0'/ 5.0'	6.5				ML		30-35 ft bgs: SANDY SILT (ML): silt, ~30% fine grained sand, wet, brown and olive gray, 1 inch thick black stained lense at 32 ft bgs, slight tar-like odor.		
-19	-31										
-20	-32										
-21	-33		8.4								
-22	-34										
-23	-35	0.0'/ 5.0'	NA						35-40 ft bgs: No recovery.		
-24	-36										
-25	-37										
-26	-38										
-27	-39										
-28	-40	1.0'/ 5.0'	96.5				SM		40-45 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, wet, olive gray, very slight naphthalene-like odor.		
-29	-41										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-20S/21I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-20/MW-20I/S

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~15 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 85 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 11.69 ft NAVD88
Date Pre-Cleared: 10/16/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 10/16/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-20 S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-20S	Well Construction MW-20I
-30	-41										
-31	-42										
-32	-43										
-33	-44										
-34	-45	5.0'/ 5.0'	60						45-50 ft bgs: SAA, brown interbedded silt, coarse to fine grained sand from 48-50 ft bgs, naphthalene-like odor.		
-35	-46										
-36	-47										
-37	-48		66.9								
-38	-49										
-39	-50	4.5'/ 5.0'	32.2						50-55 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, wet, olive gray/brown, moderate naphthalene-like odor.		
-40	-51										
-41	-52										
-42	-53		62								
-43	-54										
-44	-55	3.0'/ 5.0'	71.3						55-57.5 ft bgs: SAA, medium to fine grained sand, <5% gravel.		
-45	-56										
-46	-57										
-47	-58		38.5				SW		57.5-60 ft bgs: WELL GRADED SAND (SW): coarse to fine grained sand, wet, olive gray/brown, naphthalene-like odor, silt lense from 59.67-60 ft bgs.		
-48	-59										
-49	-60	2.0'/ 5.0'	6.5						60-65 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, ~15% coarse grained sand, ~15% silt, wet, brown, no odor.		
	-61										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-20S/21I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-20/MW-20I/S

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~15 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 85 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 11.69 ft NAVD88
Date Pre-Cleared: 10/16/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 10/16/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-20 S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-20S	Well Construction MW-20I
-50	-62										
-51	-63										
-52	-64										
-53	-65	5.0'/ 5.0'	8.6						65-70 ft bgs: SAA, slight naphthalene-like odor from 68-70 ft bgs.		BENTONITE
-54	-66										
-55	-67										
-56	-68		13.7								
-57	-69										
-58	-70	1.5'/ 5.0'	8.3						70-75 ft bgs: SAA, no odor.		
-59	-71										
-60	-72										
-61	-73										
-62	-74										
-63	-75	5.0'/ 5.0'	11.7						75-78 ft bgs: SAA.		
-64	-76										
-65	-77										
-66	-78		11.6				ML		78-80 ft bgs: SANDY SILT (ML): silt with fine grained sand, wet, brown, no odor.		
-67	-79										
-68	-80	3.5'/ 5.0'	1.3				SW		80-82.5 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, ~30% silt, ~15% coarse grained sand, wet, brown, no odor.		
-69	-81										
-70	-82										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-20S/21I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-20/MW-20I/S

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~15 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 85 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 11.69 ft NAVD88
Date Pre-Cleared: 10/16/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** Yes
Date Started/Completed: 10/16/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-20 S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-20S	Well Construction MW-20I
	-82										
-71	-83		2.6				ML		83-85 ft bgs: SANDY SILT (ML): silt, fine grained sand, wet, brown, no odor.		
-72	-84					SB-20 (82.5-85)			End of Boring 85 ft bgs		
-73	-85										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-20S/21I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-21/MW-21D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.07
Date Pre-Cleared: 10/12/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/18/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-21D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
10	0	NA	NA				FILL		0-5 ft bgs: ASPHALT, FILL: silty gravel with concrete and brick debris, ~15% coarse to medium grained sand, moist at 3 ft bgs, wet at 4 ft bgs, brown.	CONCRETE
9	-1									
8	-2									
7	-3									
6	-4									
5	-5	1.0'/ 5.0'	3.8				OH		5-10 ft bgs: ORGANIC SILT (OH): silt, medium to fine grained sand, <5% wood debris, <5% gravel, soft, plastic, moist, organic odor.	
4	-6									
3	-7									
2	-8									
1	-9									
0	-10	1.0'/ 5.0'	3.9						10-14 ft bgs: SAA, ~30% peat in bottom of tip, trace black staining, organic odor.	
-1	-11									
-2	-12									
-3	-13									
-4	-14						PT		14-20 ft bgs: FIBROUS AND FRIABLE PEAT (PT): organic clay, ~30% peat, ~30% silt and medium to fine grained sand, ~15% gravel, <5% wood debris, little black staining, organic odor.	
-5	-15	3.0'/ 5.0'	5.7							
-6	-16									
-7	-17									
-8	-18		5.2							
-9	-19									
-10	-20	5.0'/	7.0						20-22 ft bgs: SAA,~30% wire debris, <5% cobbles, <5% peat, organic odor.	

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-21D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-21/MW-21D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.07
Date Pre-Cleared: 10/12/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/18/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-21D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-11	-21	5.0'								
-12	-22						ML		22-25 ft bgs:SANDY SILT (ML): silt, <5% gravel, ~15% wire debris, wet, olive gray/brown, slight naphthalene-like odor.	
-13	-23		13.6							
-14	-24									
-15	-25	5.0'/ 5.0'	14.1			SB-21 (25-27.5)			25-28: SANDY SILT (ML): silt, ~30% fine grained sand, wet, brown, naphthalene-like odor.	
-16	-26									
-17	-27									
-18	-28		7.9				CL		28-30 ft bgs: CLAY AND SILTY CLAY OF LOW PLASTICITY (CL): clay, ~15% interbedded silt, very stiff, wet, olive gray/brown.	GROUT
-19	-29									
-20	-30	5.0'/ 5.0'	12.9						30-31 ft bgs: SAA.	
-21	-31						ML		31-34 ft bgs: SANDY SILT (ML): silt, ~30% fine grained sand, wet, brown, naphthalene-like odor.	
-22	-32									
-23	-33		12.9							
-24	-34								34-35 ft bgs: SANDY SILT (ML): silt, interbedded clay, wet, olive gray/brown, naphthalene-like odor.	
-25	-35	1.0'/ 5.0'	12.7						35-40 ft bgs: SAA.	
-26	-36									
-27	-37									
-28	-38									
-29	-39									
-30	-40	5.0'/ 5.0'	13.7						40-41 ft bgs: SAA.	PVC RISER
-31	-41									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-21D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-21/MW-21D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.07
Date Pre-Cleared: 10/12/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/18/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-21D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-31	-41								41-43.5 ft bgs: SANDY SILT (ML): silt, medium to fine grained sand, wet, brown and olive gray, naphthalene-like odor.	
-32	-42									
-33	-43		4.2							
-34	-44								43.5-45 ft bgs: SANDY SILT (ML): silt, <5% fine grained sand, wet, olive gray, no odor.	
-35	-45	1.0'/ 5.0'	6.2						45-50 ft bgs: SAA.	
-36	-46									
-37	-47									
-38	-48									
-39	-49									
-40	-50	5.0'/ 5.0'	5.9						50-51 ft bgs: SAA.	
-41	-51		5.0				SW		51-55 f bgs: WELL GRADED SAND (SW): coarse to fine grained sand, ~15% gravel, ~15% silt, wet, light brown.	
-42	-52									
-43	-53		6.1							
-44	-54									
-45	-55	1.0'/ 5.0'	3.7				ML		55-60 ft bgs: SANDY SILT (ML): silt, ~15% fine grained sand, wet, light brown, no odor.	BENTONITE
-46	-56									
-47	-57									
-48	-58									
-49	-59									
-50	-60	5.0'/ 5.0'	4.7						60-64 ft bgs: SAA, no odor.	
-51	-61									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-21D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-21/MW-21D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.07
Date Pre-Cleared: 10/12/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/18/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-21D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-52	-62		5.1							SAND PACK; PVC SCREEN
-53	-63									
-54	-64		2.2				SM		64-65 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, ~15% silt, ~15% gravel, 3 inch thick lense of black medium grained sand, wet, light brown, no odor.	
-55	-65	0.0'/ 5.0'	NA						65-70 ft bgs: No recovery.	
-56	-66									
-57	-67									
-58	-68									
-59	-69									
-60	-70	3.0'/ 5.0'	2.5				SW		70-72.5 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, ~15% silt, ~30% gravel in tip, wet, light brown, no odor.	PVC SUMP
-61	-71									
-62	-72									
-63	-73		2.7						72.5-75 ft bgs: SAA, <5% gravel in tip, reddish brown sand.	
-64	-74									
-65	-75	1.0'/ 5.0'	4.7				SP-SM		75-80 ft bgs: POORLY GRADED SAND (SP) fine grained sand, ~15% silt, wet, reddish brown.	BENTONITE
-66	-76									
-67	-77									
-68	-78									
-69	-79									
-70	-80	5.0'/ 5.0'	6.1						80-84 ft bgs: SAA, no odor.	
-71	-81									
-72	-82									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-21D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-21/MW-21D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~4 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 10.07
Date Pre-Cleared: 10/12/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/18/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-21D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-72	-82									
-73	-83		5.8							
-74	-84						ML		84-85 ft bgs: SANDY SILT (ML): silt, clay, ~15% fine grained sand, <5% gravel, wet, reddish brown, no odor.	
-75	-85	4.0'/ 5.0'	7.4				CL		85-90 ft bgs: CLAY AND SILTY CLAY OF LOW PLASTICITY (CL): clay with interbedded silt and gravel, 2- 4 inch in diameter cobbles, wet, brown/reddish brown, no odor.	
-76	-86									
-77	-87									
-78	-88		5.5			SB-21 (87.5-90)				
-79	-89									
	-90								End of Boring 90 ft bgs	

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-21D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-22/MW-22 I/D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3.5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.12' NAVD 88
Date Pre-Cleared: 10/5/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/5/2011-10/6/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-22 I/D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-22 I	Well Construction MW-22 D
8	0	5.0'/ 5.0'	4.8				FILL		0-0.33 ft bgs: ASPHALT	CONCRETE	
7	-1		2.0						0.33-5 ft bgs: FILL: 1' road base material, gravel, silt, ~15% coarse to fine grained sand, concrete debris at 2.5' bgs.		
6	-2										
5	-3		0.6								
4	-4										
3	-5	3.0'/ 5.0'	0.0						5-6 ft bgs: FILL: wood debris, <5% peat, wet, organic odor.		
2	-6						OH		6-10 ft bgs: ORGANIC SILT (OH): silt, ~30% fine grained sand, <5% peat, wet, gray to olive gray, organic odor.		
1	-7										
0	-8		0.0								
-1	-9										
-2	-10	4.0'/ 5.0'	0.0						10-12.5 ft bgs: SAA		
-3	-11										
-4	-12		0.3						12.5-15 ft bgs: ORGANIC CLAY (OH): organic clay and peat, saturated lense at 13 ft bgs, ~2 inches thick, wet, gray, tar-like and organic odors.		
-5	-13		0.0								
-6	-14										
-7	-15	5.0'/ 5.0'	0.0						15-17 ft bgs: SAA, 1 inch thick lense of tar-like stained silt, no odor.		
-8	-16										
-9	-17								17-18.5 ft bgs: ORGANIC CLAY (OH): organic clay, ~15% shells, wet, dark gray, organic odor.		
-10	-18										
-11	-19		0.0						18.5-20 ft bgs: SAA, no shells, <5% peat, organic odor.		
-12	-20	5.0'/	0.0				ML		20-22.5 ft bgs: SANDY SILT (ML): silt, ~15% fine grained		

Well Construction: GROUT; PVC RISER; GROUT; CONCRETE; CONCRETE

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-22I/22D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-22/MW-22 I/D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3.5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.12' NAVD 88
Date Pre-Cleared: 10/5/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/5/2011-10/6/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-22 I/D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-13	-21	5.0'							sand, <5% wire and plastic debris, dark brown/dark gray, slight organic odor.
-14	-22								
-15	-23		0.5				SP		22.5-25 ft bgs: POORLY GRADED SAND (SP): fine grained sand, ~15% silt, light gray, no odor.
-16	-24								
-17	-25	5.0'/ 5.0'	0.0				ML		25-28 ft bgs: SANDY SILT (ML): silt, interbedded clay, brown and rust-like color.
-18	-26								
-19	-27								
-20	-28		0.6				SP		28-30 ft bgs: POORLYGRADED SAND (SP): fine grained sand, ~15% silt, light brown, no odor.
-21	-29								
-22	-30	5.0'/ 5.0'	20.9			SB-22/ (30-33)			30-33 ft bgs: SANDY SILT (ML): silt, plastic, gray, slight organic odor.
-23	-31						ML		
-24	-32								
-25	-33		0.5				SP		33-35 ft bgs: POORLY GRADED SAND (SP): fine grained sand, ~15% silt, light brown, no odor.
-26	-34								
-27	-35	2.0'/ 5.0'	7.9				SM		35-40 ft bgs: SILTY SAND (SM): fine grained sand and silt, wet, olive gray, no odor.
-28	-36								
-29	-37								
-30	-38								
-31	-39								
-32	-40	5.0'/ 5.0'	6.8				ML		40-42 ft bgs: SANDY SILT (ML): silt, ~15% fine grained sand, wet, olive gray/dark gray, no odor.
-33	-41								

Well Construction

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-22I/22D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-22/MW-22 I/D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3.5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.12' NAVD 88
Date Pre-Cleared: 10/5/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/5/2011-10/6/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-22 I/D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-22 I	Well Construction MW-22 D
-33	-41										
-34	-42		0.5				SM		42-43.5 ft bgs: SILTY SAND (SM): fine grained sand with silt, wet, olive gray/dark gray, no odor.		
-35	-43										
-36	-44		1.3				ML		43.5-45 ft bgs: SANDY SILT (ML): silt, slightly dense, wet, olive gray/dark gray, no odor.		
-37	-45	4.0'/ 5.0'	1.7				SW		45-50 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, ~15% silt, wet, olive gray.		BENTONITE
-38	-46										
-39	-47										
-40	-48		3.5								
-41	-49										
-42	-50	5.0'/ 5.0'	5.1				SM		50-55 ft bgs: SILTY SAND (SM): fine grained sand and silt, moist, olive gray, no odor.		
-43	-51										
-44	-52										
-45	-53		6.2								
-46	-54										
-47	-55	2.0'/ 5.0'	4.0				SW		55-60 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand and silt, wet, olive gray, no odor.		
-48	-56										
-49	-57										
-50	-58										
-51	-59										
-52	-60	5.0'/ 5.0'	4.5				SM		60-62 ft bgs: SILTY SAND (SM): fine grained sand and silt, wet, olive gray, no odor.		
-53	-61										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-22I/22D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-22/MW-22 I/D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3.5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.12' NAVD 88
Date Pre-Cleared: 10/5/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/5/2011-10/6/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-22 I/D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-22 I	Well Construction MW-22 D
-54	-62		3.0				SW		62-63.5 ft bgs: WELL GRADED SAND (SW): coarse to fine grained sand and silt, <5% gravel, wet, olive gray, no odor.		
-55	-63										
-56	-64		3.7				ML		63.5-65 ft bgs: SANDY SILT (ML):silt, ~30% fine grained sand, ~15% interbedded soft clay in silt, wet, olive grey, no odor.		
-57	-65	5.0'/ 5.0'	2.4				SM		65-67 ft bgs: SILTY SAND (SM): fine grained sand and silt, wet, olive gray, no odor.		
-58	-66										
-59	-67		1.2				SW		67-68.5 ft bgs: WELL GRADED SAND (SW): coarse to fine grained sand, ~15% silt, <5% gravel, wet, olive gray.		
-60	-68										
-61	-69		4.1						68.5-70 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, ~15% silt, <5% gravel, <5% coarse grained sand, wet, olive gray.		
-62	-70	4.0'/ 5.0'	0.4				SM		70-72 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, <5% gravel, wet, olive gray.		
-63	-71										
-64	-72								72-75 ft bgs: SILTY SAND (SM): sandy silt, fine grained sand, 2 rocks up to 3 inches in diameter, ~15% gravel, wet, olive gray.		
-65	-73		0.8								
-66	-74										
-67	-75	3.5'/ 5.0'	1.7						75-78 ft bgs: SILTY SAND (SM): fine grained sand and silt, wet, light brown, no odor.		
-68	-76										
-69	-77										
-70	-78		0.0						78-80 ft bgs: SANDY SILT (ML): silt with gravel, ~30% subrounded 2 inch in diameter rocks, ~15% coarse to fine grained sand, wet, light brown/gray.		
-71	-79						ML				
-72	-80	2.0'/ 5.0'	0.3				SM		80-85 ft bgs: SILTY SAND (SM): silty fine grained sand, wet, light brown, no odor.		
-73	-81										
-74	-82										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-22I/22D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-22/MW-22 I/D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3.5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.12' NAVD 88
Date Pre-Cleared: 10/5/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/5/2011-10/6/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-22 I/D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-22 I	Well Construction MW-22 D
-74	-82										
-75	-83										
-76	-84										
-77	-85	5.0'/ 5.0'	0.0						85-90 ft bgs: SAA, 2 rocks in bottom 10 inches, ~15% coarse to medium grained sand.		
-78	-86										
-79	-87										
-80	-88		0.0								
-81	-89										
	-90					SB-22/			End of Boring 90 ft bgs.		

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-22I/22D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) No Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-23/MW-23D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3.5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 5.22' NAVD 88
Date Pre-Cleared: 10/3/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/3/2011 - 10/4/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-23D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
5	0	5.0'/ 5.0'	1.0				FILL		0-0.25 ft bgs: ASPHALT	CONCRETE
4	-1								0.25-3 ft bgs: FILL: fill material with brick and concrete debris, ~30% slight staining.	
3	-2									
2	-3		0.9						3-5 ft bgs: FILL: concrete debris	
1	-4									
0	-5	3.5'/ 5.0'	1.4						5-7 ft bgs: FILL: gravel, ~30% silt and coarse to medium grained sand, wet, dark gray, no odor.	
-1	-6									
-2	-7								7-9.5 ft bgs: FILL: wood cores.	
-3	-8		4.0							
-4	-9									
-5	-10	5.0'/ 5.0'	1.2				ML		9.5-10 ft bgs: SANDY SILT (ML): silt, ~15% gravel, ~15% wood fibers, slightly plastic, wet, brown.	
-6	-11						GW		10-12 ft bgs: WELL GRADED GRAVEL (GW): gravel, ~30% silt and coarse to medium grained sand, wet, dark gray, no odor.	
-7	-12						OH		12-15 ft bgs: ORGANIC CLAY (OH): clay, ~15% fibrous peat, ~15% coarse grained sand and gravel, <5% wood debris, soft (thumb penetrates easily through), wet, organic odor.	
-8	-13		2.3							
-9	-14									
-10	-15	3.5'/ 5.0'	2.7						15-20 ft bgs: SAA, <5% peat fibers, organic odor, no wood debris, <5% gravel.	
-11	-16									
-12	-17									
-13	-18		1.1							
-14	-19									
-15	-20	3.0'/	3.2						20-25 ft bgs: SAA, ~30% gravel, <5% shells.	

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-23D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-23/MW-23D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3.5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 5.22' NAVD 88
Date Pre-Cleared: 10/3/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/3/2011 - 10/4/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-23D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-16	-21	5.0'								
-17	-22									
-18	-23		1.2							
-19	-24									
-20	-25	3.5'/ 5.0'	0.7						25-30 ft bgs: SAA, <5% wood debris.	
-21	-26									
-22	-27									
-23	-28		1.3							
-24	-29									
-25	-30	5.0'/ 5.0'	1.0						30-32 ft bgs: SAA.	
-26	-31									
-27	-32		1.4				SM		32-34 ft bgs: SILTY SAND (SM): fine grained sand and silt, wet, dark gray, no odor.	
-28	-33									
-29	-34		3.3				ML		34-35 ft bgs: SANDY SILT (ML): silt, ~30% fine grained sand, wet, reddish brown.	
-30	-35	4.0'/ 5.0'	0.7				SM		35-40 ft bgs: SILTY SAND (SM): fine grained sand , ~30% silt, wet, olive gray/light gray, no odor.	
-31	-36									
-32	-37									
-33	-38		2.0							
-34	-39									
-35	-40	4.0'/ 5.0'	0.3						40-45 ft bgs: SAA.	
	-41									

GROUT

PVC RISER

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-23D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-23/MW-23D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3.5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 5.22' NAVD 88
Date Pre-Cleared: 10/3/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/3/2011 - 10/4/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-23D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-36	-41									
-37	-42									
-38	-43		2.5							
-39	-44									
-40	-45	5.0'/ 5.0'	0.9						45-50 ft bgs: SAA, <5% gravel.	
-41	-46									
-42	-47		2.2							
-43	-48									
-44	-49									
-45	-50	5.0'/ 5.0'	0.7						50-52.5 ft bgs: SAA, <5% gravel, slightly dense/cohesive, moist.	
-46	-51									
-47	-52		0.8						52.5-55 ft bgs: SILTY SAND (SM): ~40% fine grained sand and ~60% silt, coarse to medium grained sand and gravel in a 3 inch thick lense at 54 ft bgs, moist, light brown.	
-48	-53									
-49	-54									
-50	-55	4.0'/ 5.0'	0.5						55-57.5 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, wet, light brown, no odor.	BENTONITE
-51	-56									
-52	-57		1.3				SW		57.5-60 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, ~15% silt, wet, light brown, no odor.	
-53	-58									
-54	-59									
-55	-60	5.0'/ 5.0'	0.5						60-61.5 ft bgs: WELL GRADED SAND (SW): coarse to fine grained sand, ~30% silt, ~15% subrounded gravel.	
-56	-61									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-23D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-23/MW-23D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3.5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 5.22' NAVD 88
Date Pre-Cleared: 10/3/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/3/2011 - 10/4/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-23D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-56										
-57	-62		0.9				SM		61.5-63.5 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, <5% gravel, wet, brown.	SAND PACK; PVC SCREEN
-58	-63		1.6							
-59	-64						ML		63.5-65 ft bgs: SANDY SILT (ML): silt with fine grained sand, wet, brown, no odor.	
-60	-65	5.0'/ 5.0'	1.8				SM		65-70 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, wet, light brown, no odor.	
-61	-66									
-62	-67									
-63	-68		1.8							
-64	-69									
-65	-70	5.0'/ 5.0'	1.8				SW		70-72 ft bgs: WELL GRADED SAND (SW): coarse to fine grained sand, ~30% gravel, ~15% silt, wet, brown, no odor.	PVC SUMP
-66	-71									
-67	-72		0.9				ML		72-73.5 ft bgs: SANDY SILT (ML): silt, ~30% fine grained sand, ~15% gravel, wet, brown.	
-68	-73									
-69	-74		0.2				SM		73.5-75 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, <5% gravel, 2.5 inch in diameter subrounded rock, wet, brown, no odor.	
-70	-75	5.0'/ 5.0'	3.9						75-80 ft bgs: SAA.	BENTONITE
-71	-76									
-72	-77									
-73	-78		4.6							
-74	-79									
-75	-80	5.0'/ 5.0'	5.5			SB-23 (80-82.5)			80-85 ft bgs: SILTY SAND (SM): fine grained sand with silt, moist, reddish brown, mild sweet odor.	
-76	-81									
	-82									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-23D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-23/MW-23D

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~3.5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 5.22' NAVD 88
Date Pre-Cleared: 10/3/2011	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/3/2011 - 10/4/2011	**Logged By:** Luis Ferreira	**Well ID:** MW-23D

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction
-77	-82									
-78	-83		1.9							
-79	-84									
-80	-85	5.0'/ 5.0'	1.7						85-87 ft bgs: SAA, trace sweet odor.	
-81	-86									
-82	-87					SB-23 (87-90)			87-90 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, wet, olive gray.	
-83	-88		1.4							
-84	-89								End of Boring 90 ft bgs.	
	-90									

Notes:
1) Location hand cleared from 0-5 ft bgs.
2) Boring was converted into Monitoring Well: MW-23D
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.020 slot size
5) Sand pack #0
6) No Meadow Mat Present
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-24

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.16' NAVD 88
Date Pre-Cleared: 10/11/11	**Boring Diameter:** 8 inches	**Converted To Well (Y/N):** NO
Date Started/Completed: 10/11/11 - 10/12/11	**Logged By:** Luis Ferreira	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
0	5.0'/ 5.0'	7.0				FILL		0-0.25 ft bgs: ASPHALT
-1								0.25-5 ft bgs: FILL: back fill, gravel and sand with concrete and brick debris, <5% shell deposits, <5% wood and glass debris from 4-5 ft bgs, organic odor.
-2		12.1						
-3								
-4		9.5						
-5	4.0'/ 5.0'	11.3						5-10 ft bgs: FILL: slightly dense silt, ~30% gravel, ~30% coarse to fine grained sand, ~15% shell deposits, ~15% fill debris (wood chips, nails), one 4 inch in diameter cobble, wet, dark gray.
-6								
-7								
-8		9.1						
-9								
-10	5.0'/ 5.0'	3.6						10-11 ft bgs: SAA.
-11						OH		11-15 ft bgs: ORGANIC CLAY (OH): soft organic clay and peat, ~15% wood debris with creosote-like staining on wood and clay, one 4 inch in diameter cobble, wet, organic odor, less fibrous peat and more shell deposits from 13-15 ft bgs, <5% wire debris.
-12								
-13		1.4						
-14								
-15	5.0'/ 5.0'	1.2						15-16 ft bgs: ORGANIC CLAY (OH): slightly dense silt, ~15% gravel, ~30% coarse to fine grained sand, ~15% shell deposits, ~15% fill debris (wood chips, nails), one 4 inch in diameter cobble, wet, dark gray.
-16								
-17								16-20 ft bgs: ORGANIC CLAY (OH): less soft organic clay, fibrous peat in bottom from 19-20 ft bgs, wet, dark gray, organic odor.
-18		1.6						
-19								
-20	5.0'/	12.4						20-23 ft bgs: SAA, <5% wood debris

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-24

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.16' NAVD 88
Date Pre-Cleared: 10/11/11	**Boring Diameter:** 8 inches	**Converted To Well (Y/N):** NO
Date Started/Completed: 10/11/11 - 10/12/11	**Logged By:** Luis Ferreira	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-21	5.0'							
-22								
-23		9.2				ML		23-25 ft bgs: SANDY SILT (ML): silt, ~30% medium to fine grained sand, wet, dark gray, no odor.
-24								
-25	5.0'/ 5.0'	2.0						25-27.5 ft bgs: SAA, no odor.
-26								
-27								
-28		1.7				SW		27.5-30 ft bgs: SILTY SAND (SM): medium to fine grained sand, ~30% silt, wet, brown, no odor.
-29								
-30	5.0'/ 5.0'	1.6						30-32.5 ft bgs: SAA.
-31								
-32								
-33		2.0				ML		32.5-35 ft bgs: SANDY SILT (ML): silt, ~15% fine grained sand, slightly dense, moist, reddish brown.
-34								
-35	4.0'/ 5.0'	3.0						35-40 ft bgs: SAA, wet.
-36								
-37								
-38								
-39								
-40	5.0'/ 5.0'	0.9						40-45 ft bgs: SAA, ~30% fine grained sand, wet.
-41								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-24

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.16' NAVD 88
Date Pre-Cleared: 10/11/11	**Boring Diameter:** 8 inches	**Converted To Well (Y/N):** NO
Date Started/Completed: 10/11/11 - 10/12/11	**Logged By:** Luis Ferreira	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-41								
-42								
-43		3.9						
-44								
-45	5.0'/ 5.0'	8.1						45-50 ft bgs: SANDY SILT (ML): silt, fine grained sand, wet, olive gray, no odor.
-46								
-47								
-48		8.8						
-49								
-50	5.0'/ 5.0'	9.0						50-52.5 ft bgs: SAA, moist.
-51								
-52								
-53		8.8				SW		52.5-55 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, ~30% silt, <5% gravel, moist, olive gray, no odor.
-54								
-55	4.0'/ 5.0'	10.6				SM		55-60 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, wet, olive gray, no odor.
-56								
-57								
-58		9.7						
-59								
-60	5.0'/ 5.0'	10.8				ML		60-62.5 ft bgs: SANDY SILT (ML): silt, fine grained sand, wet, olive gray, no odor.
-61								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-24

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.16' NAVD 88
Date Pre-Cleared: 10/11/11	**Boring Diameter:** 8 inches	**Converted To Well (Y/N):** NO
Date Started/Completed: 10/11/11 - 10/12/11	**Logged By:** Luis Ferreira	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-62								
-63		13.2				SM		62.5-65 ft bgs: SILTY SAND (SM):
-64								
-65	5.0'/ 5.0'	14.5			SB-24 65-67.5)			65-70 ft bgs: SAA, ~15% medium to fine grained sand, <5% gravel from 69-70 ft bgs.
-66								
-67								
-68		12.5						
-69								
-70	5.0'/ 5.0'	6.6				SW		70-71 ft bgs: WELL GRADED SAND (SW): silty sand, coarse to fine grained sand, ~15% gravel, moist, reddish brown, no odor.
-71		4.8				ML		71-73 ft bgs: SANDY SILT (ML): silt with fine grained sand, moist, reddish brown, no odor.
-72								
-73		4.2						73-75 ft bgs: SAA, ~15% fine grained sand, no odor.
-74								
-75	4.0'/ 5.0'	6.0						75-80 ft bgs: SANDY SILT (ML): sandy silt, fine grained sand, wet, light brown, no odor.
-76								
-77								
-78		9.6						
-79								
-80	4.0'/ 5.0'	10.0				SW		80-85 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand with silt, ~15% coarse grained sand, ~10% gravel, wet, light brown, no odor.
-81								
-82								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-24

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 8.16' NAVD 88
Date Pre-Cleared: 10/11/11	**Boring Diameter:** 8 inches	**Converted To Well (Y/N):** NO
Date Started/Completed: 10/11/11 - 10/12/11	**Logged By:** Luis Ferreira	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-82								
-83		2.2						
-84								
-85	5.0'/ 5.0'	2.5				SM		85-90 ft bgs: SANDY SILT (ML): sandy silt, wet, light brown, no odor, 4 inch diameter cobble from 85-86 ft bgs.
-86								
-87								
-88		3.4			SB-24 87.5-90)			
-89								
-90								End of Boring 90 ft bgs

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-25/MW-25

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.51 ft bgs
Date Pre-Cleared: 10/12/11	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/12/11 - 10/13/11	**Logged By:** Luis Ferreira	**Well ID:** MW-25S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-25S	Well Construction MW-25I
6	0	5.0'/ 5.0'	NA				FILL		0-0.25 ft bgs: ASPHALT 0.25-5 ft bgs: FILL: gravel, ~30% silt and sand, concrete and brick debris, no odor.	BENTONITE	
5	-1										
4	-2										
3	-3										
2	-4										
1	-5	4.5'/ 5.0'	1.2						5-9 ft bgs: FILL: soupy gravel with silt, ~30% medium to fine grained sand, ~15% wood and ceramic debris, wet.		
0	-6										
-1	-7		2.6								
-2	-8									SAND PACK	PVC RISER
-3	-9								9-10 ft bgs: FILL: silt, ~30% gravel, <5% debris, wet, olive gray.		
-4	-10	5.0'/ 5.0'	2.5						10-12.5 ft bgs: FILL: gravel, interbedded very soft clay, <5% wood and shell debris, wet, light brown, no odor.		BENTONITE
-5	-11										
-6	-12		2.2				OH		12.5-15 ft bgs: ORGANIC CLAY (OH): clay with interbedded gravel and coarse grained sand, very soft, wet,olive gray, slgiht organic odor.		
-7	-13										
-8	-14										
-9	-15	5.0'/ 5.0'	2.7						15 -16: ft bgs: SAA, <5% peat.		
-10	-16		2.0				CL		16-20 ft bgs: CLAY AND SILTY CLAY OF LOW PLASTICITY (CL): clay, very soft, wet, gray, no odor.		
-11	-17										
-12	-18		1.4								
-13	-19										
-14	-20	5.0'/	1.9						20-22.5 ft bgs: SAA, <5% gravel.		PVC RISER

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-25S/25I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-25/MW-25

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.51 ft bgs
Date Pre-Cleared: 10/12/11	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/12/11 - 10/13/11	**Logged By:** Luis Ferreira	**Well ID:** MW-25S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-25S / MW-25I
-14	-21	5.0'								
-15	-22									
-16	-23		1.1				ML		22.5-25 ft bgs: SANDY SILT (ML): silt, ~15% wood debris at 22.5 ft bgs, wet, olive gray, no odor.	
-17	-24									
-18	-25	5.0'/ 5.0'	2.2				SM		25-27.5 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, wet, light gray.	
-19	-26									
-20	-27									
-21	-28		2.6				ML		27.5-30 ft bgs: SANDY SILT (ML): silt, ~15% fine grained sand, slightly dense, wet, light gray.	
-22	-29									
-23	-30	5.0'/ 5.0'	4.6				SM		30-34.5 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, wet, light brown, no odor.	
-24	-31									
-25	-32									
-26	-33		2.0							
-27	-34									
-28	-35	4.5'/ 5.0'	3.5				ML		34.5-35 ft bgs: SANDY SILT (ML); silt with fine grained sand. 35-40 ft bgs: SAA.	
-29	-36									
-30	-37									
-31	-38		7.0							
-32	-39									
-33	-40	4.0'/ 5.0'	9.9				SM		40-45 ft bgs: SILTY SAND (SM): fine grained sand with silt, wet, light gray, no odor.	
-34	-41									

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-25S/25I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-25/MW-25

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.51 ft bgs
Date Pre-Cleared: 10/12/11	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/12/11 - 10/13/11	**Logged By:** Luis Ferreira	**Well ID:** MW-25S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-25S	Well Construction MW-25I
-35	-41										
-36	-42										
-37	-43		17.8								
-38	-44										
-39	-45	5.0'/ 5.0'	11.0				SW		45-50 ft bgs: WELL GRADED SAND (SW): medium to fine grained sand, ~15% coarse grained sand, ~15% silt, <5% gravel, wet, light brown, no odor.		
-40	-46										
-41	-47		16.3								
-42	-48										
-43	-49										
-44	-50	5.0'/ 5.0'	13.5						50-53 ft bgs: SAA, ~30% coarse grained sand, ~15% gravel.		
-45	-51										
-46	-52										
-47	-53		10.6				ML		53-55 ft bgs: SANDY SILT (ML): silt, slightly dense, wet, light gray, no odor.		
-48	-54										
-49	-55	3.0'/ 5.0'	12.0				SM		55-60 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, ~15% medium to fine grained sand, wet, light gray, no odor.		
-50	-56										
-51	-57		12.3								
-52	-58										
-53	-59										
-54	-60	5.0'/ 5.0'	15.3				SW		60-62 ft bgs: WELL GRADED SAND (SW): coarse to fine grained sand, ~15% gravel, wet, light gray.		
-55	-61										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-25S/25I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-25/MW-25

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.51 ft bgs
Date Pre-Cleared: 10/12/11	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/12/11 - 10/13/11	**Logged By:** Luis Ferreira	**Well ID:** MW-25S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-25S	Well Construction MW-25I
-55											
-56	-62		25.3				SM		62-65 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, ~15% medium to fine grained sand, wet, llight gray, no odor.		
-57	-63										
-58	-64										
-59	-65	5.0'/ 5.0'	27.0				SW		65-70 ft bgs: WELL GRADED SAND (SW): coarse to fine grained sand, ~30% silt, <5% gravel, wet, light gray, slight salt-like odor.		BENTONITE
-60	-66										
-61	-67										
-62	-68		40.0			SB-25 (67.5-70)					
-63	-69										
-64	-70	2.5'/ 5.0'	9.0				ML		70-70.5 ft bgs: SAA.		
-65	-71								70.5-75 ft bgs: SANDY SILT (ML): silt, ~15% fine grained sand, wet, light brown, no odor.		
-66	-72										
-67	-73										
-68	-74										
-69	-75	4.0'/ 5.0'	3.9				SM		75-80 ft bgs: SILTY SAND (SM): fine grained sand, ~30% silt, ~15% medium grained sand, moist, light brown, no odor.		
-70	-76										
-71	-77										
-72	-78		3.2								
-73	-79										
-74	-80	5.0'/ 5.0'	3.1						80-85 ft bgs: SAA.		
-75	-81										
	-82										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-25S/25I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-25/MW-25

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~5 ft bgs
Project Number: 60137361	**Drilling Method:** Sonic	**Total Depth:** 90 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 6.51 ft bgs
Date Pre-Cleared: 10/12/11	**Boring Diameter:** 8"	**Converted To Well (Y/N):** YES
Date Started/Completed: 10/12/11 - 10/13/11	**Logged By:** Luis Ferreira	**Well ID:** MW-25S/I

Elevation (ft)	Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description	Well Construction MW-25S	Well Construction MW-25I
-76	-82										
	-83		4.2								
-77											
	-84										
-78											
	-85	3.5'/ 5.0'	5.4						85-90 ft bgs: SAA.		
-79											
	-86										
-80											
	-87										
-81			4.4			SB-25 (87.5-90)					
	-88										
-82											
	-89										
-83									End of Boring 90 ft bgs.		
	-90										

Notes:
1) Location was hand cleared to 5 ft bgs.
2) Boring was converted into Monitoring Well: MW-25S/25I
3) Riser Pipe: PVC sch. 40, 2" diameter
4) Screen: PVC sch. 40, 2" diameter, 0.010 slot size
5) Sand pack #0
6) Meadow Mat Observed
7) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-26

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~12 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 12.35 ft NAVD88
Date Pre-Cleared: 3/12/12	**Boring Diameter:** TBD	**Converted To Well (Y/N):** No
Date Started/Completed: 3/12/12- 3/13/12	**Logged By:** Steve Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
0						FILL		0-3 ft bgs: FILL: fine to coarse grained silty sand with gravel, moist, non-plastic, non-cohesive, ~10% of cobbles and brick fragments.
-1								
-2								
-3	5'/ 5'	0				SM		3-5 ft bgs: SILTY SAND (SM): fine to coarse grained sand and silt, and ~5% fine to coarse gravel, non-plastic, non-cohesive, moist.
-4								
-5								5-10 ft bgs SAA
-6								
-7								
-8	4'/ 5'	0						
-9								
-10								10-15 ft bgs SILTY SAND (SM): fine grained silty sand, brown, gray at 14 ft bgs, wet at 12 ft bgs.
-11								
-12								
-13	3.4'/ 5'	0						
-14								
-15								15-17.5 ft bgs SAA
-16								
-17								
-18	5'/ 5'	0				PT		17.5-18.5 ft bgs FIBROUS AND FRIABLE PEAT (PT): peat, dark gray, wet.
-19						SP		18.5-20 ft bgs POORLY GRADED SAND (SP): fine grained silty sand, gray, wet.
-20								20 -23 ft bgs SAA, grading to brown, wet.

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-26

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~12 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 12.35 ft NAVD88
Date Pre-Cleared: 3/12/12	**Boring Diameter:** TBD	**Converted To Well (Y/N):** No
Date Started/Completed: 3/12/12- 3/13/12	**Logged By:** Steve Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-21								
-22								
-23	4'/ 5'	0				SM		23-25 ft bgs SILTY SAND (SM): sandy silty, brown, wet.
-24								
-25								25-28.5 ft bgs SAA.
-26								
-27								
-28	4'/ 5'	0						
-29								28.5-30 ft bgs SILTY SAND (SM): fine grained silty sand, brown, wet.
-30								30-34 ft bgs SAA, wet.
-31								
-32								
-33	4'/ 5'	0						
-34						CL		34-35 ft bgs CLAY AND SILTY CLAY OF LOW PLASTICITY (CL): clay, ~5% of fine sand, low plasticity, cohesive, dark gray, wet.
-35								35-37.5 ft bgs SAA
-36								
-37								
-38	4'/ 5'	0				SP		37.5-38.5 ft bgs POORLY GRADED SAND (SP): fine grained silty sand, grayish brown, wet.
-39						SM		38.5-47 ft bgs SILTY SAND (SM): sandy silt, ~5% clay, dark gray, wet.
-40								
-41								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-26

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~12 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 12.35 ft NAVD88
Date Pre-Cleared: 3/12/12	**Boring Diameter:** TBD	**Converted To Well (Y/N):** No
Date Started/Completed: 3/12/12- 3/13/12	**Logged By:** Steve Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-41								
-42								
-43	4'/ 5'	0						
-44								
-45								
-46								
-47					SB-26 (47-49)			47-49 ft bgs SILTY SAND (SM): silty fine grained sand, grey, wet.
-48	4'/ 5'	0						
-49								49-50 ft bgs SILTY SAND (SM): fine to medium grained sand, brown, wet, trace of silt
-50								50-55 ft bgs: SAA
-51								
-52								
-53	2.8'/ 5'	0						
-54								
-55								55-60 ft bgs: SAA
-56								
-57								
-58	3'/ 5'	0						
-59								
-60								60-68 ft bgs: SILTY SAND (SM): well graded sand, ~10% silt, trace of fine gravel, brown, wet.
-61								

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Boring ID: SB-26

Project Name: Metropolitan Former MGP	**Drilling Company:** Boart Longyear	**Water Level:** ~12 ft bgs
Project Number: 60137361-300	**Drilling Method:** Sonic	**Total Depth:** 70 ft bgs
Client: National Grid	**Sampling Method:** 5' disposable plastic liner	**Ground Elevation:** 12.35 ft NAVD88
Date Pre-Cleared: 3/12/12	**Boring Diameter:** TBD	**Converted To Well (Y/N):** No
Date Started/Completed: 3/12/12- 3/13/12	**Logged By:** Steve Wright	**Well ID:** NA

Depth (ft)	Recovery (ft)	PID (ppm)	Impacts	Interval Sampled	Sample ID	U.S.C.S	Lithology	Geologic Description
-62								
-63	2.5'/ 5'	0						
-64								
-65								
-66								
-67								
-68	3'/ 5'	0						68-68.5 ft bgs: SANDY SILT (SM) silt, ~<5% fine grained sand, wet.
-69					SB-26 (69-70)			68.5- 70 ft bgs SILTY SAND (SM): silty fine grained sand, brown
-70								END OF BORING 70 ft bgs

Notes:
1) The location was pre-cleared to 5 ft bgs by hand-digging
2) Meadow Mat Present
3) Impacts include visual and olfactory

Definitions:
1) NA - Not Applicable
2) ft - feet
3) bgs - below ground surface
4) U.S.C.S.- Unified Soil Classification System
5) NAVD 88 - North American Vertical Datum of 1988
6) SAA - Same As Above
7) PID - Photo Ionization Detector
8) ppm - parts per million
9) NAPL - Non-Aqueous Phase Liquid

Historical Boring Logs for Locations illustrated on RI Report Figures

1 inch = 100 feet

0 50 100 200 Feet

AECOM

National Grid
Former Metropolitan Works MGP Site
Brooklyn, NY

Historic Investigation and Remediation Locations

DATE: 11/7/2013 | DRWN: HKM | FIGURE 2-5

Path: J:\Rem Eng\Project Files\National Grid\1765-075 Metropolitan Former MGP\7.2 CADD & GIS\GIS\MXD\RI 2013 06\Figure 2-5 Previous Investigation Locations Prior to RI.mxd

NOTES:

1. TIDE MEASUREMENTS ARE FROM THE BATTERY, NY STATION ON JANUARY 29, 2006 AT 1:36 AM AND 7:42 AM (http://tidesandcurrents.noaa.gov).
2. SEDIMENT SURFACE ELEVATIONS OBTAINED DURING REMOTE SENSING SURVEY CONDUCTED IN OCTOBER 2005. SEDIMENT CORE LOCATIONS OBTAINED DURING CORING ACTIVITIES CONDUCTED IN DECEMBER 2005 AND JANUARY 2006.
3. GOWANUS CANAL BULKHEAD LOCATION BASED ON AERIAL PHOTOGRAPH OBTAINED FROM BLUE SKY INTERNATIONAL LTD. ALL RIGHTS RESERVED. COPYRIGHT 2006, SURFACE ELEVATIONS AND DEPTHS OF CANAL BULKHEAD ARE UNKNOWN.
4. HORIZONTAL DATUM: NEW YORK STATE PLANE COORDINATE SYSTEM COORDINATE SYSTEM (EAST ZONE, NORTH AMERICAN DATUM (NAD)83). VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM (NAVD) 88.
5. *SOIL BORING COMPLETED AS PART OF THE CARROLL GARDENS/PUBLIC PLACE (FORMER CITIZENS GAS WORKS MGP) REMEDIAL INVESTIGATION. GEOLOGY AND IMPACTS SHOWN ARE TO 40 FEET BELOW GROUND SURFACE.
6. **WATER SAMPLE ELEVATION DEPICTED IS APPROXIMATE.
7. PHYSICAL OBSERVATIONS AND GEOLOGIC INFORMATION PRESENTED ARE BASED UPON FIELD CONDITIONS OF SUBSURFACE MATERIALS ENCOUNTERED BY GEI DURING REMEDIAL INVESTIGATION ACTIVITIES.
8. LABORATORY ANALYTICAL RESULTS ARE SUMMARIZED IN TABLES 3 THROUGH 12 IN THE REMEDIAL INVESTIGATION TECHNICAL REPORT.
9. SEDIMENT SAMPLE DEPTH IS REFERENCED TO FEET BELOW THE BOTTOM OF THE GOWANUS CANAL. SUBSURFACE SOIL BORING SAMPLE DEPTH INFORMATION IS REFERENCED TO FEET BELOW GROUND SURFACE.

LEGEND

GEOLOGY

FILL MATERIAL

- FILL

ACCUMULATED SEDIMENT

- ORGANIC SILTS AND CLAYS

NATIVE MATERIAL

- PEAT
- CLAY
- SILT
- CLAYEY SAND
- SILTY SAND
- SAND
- CLAYEY GRAVEL
- SILTY GRAVEL
- GRAVEL

PHYSICAL OBSERVATIONS

- TAR SATURATED
- LENSES WITH TAR SATURATION AND TAR/NAPHTHALENE ODORS
- BLEBS, GLOBS, LENSES, COATINGS AND TAR/ NAPHTHALENE ODORS
- TAR STAINING, SHEEN, AND TAR/NAPHTHALENE ODORS
- TAR/ NAPHTHALENE-LIKE ODORS
- PETROLEUM SHEEN/ STAINING ODORS
- PETROLEUM ODORS
- S (19-20) — SOIL/SEDIMENT SAMPLE LOCATION (DEPTH IN FEET)
- F (10.5-11.5) — FORENSIC SOIL/SEDIMENT SAMPLE LOCATION (DEPTH IN FEET)
- GC-SW-05S — SURFACE WATER SAMPLE LOCATION
- HIGH TIDE — CANAL WATER ELEVATION AT HIGH TIDE ON 1/29/06
- LOW TIDE — CANAL WATER ELEVATION AT LOW TIDE ON 1/29/06

TRANSECT LOCATION MAP

SOURCES:

1. SANBORN MAPS (1886 THROUGH 1996)
2. PHOTOGRAPH OBTAINED FROM BLUE SKY INTERNATIONAL LTD. ALL RIGHTS RESERVED. COPYRIGHT 2006.
3. OCEAN SURVEYS, INCORPORATED, REMOTE SENSING SURVEY FOR UTILITY CROSSINGS GOWANUS CANAL, BROOKLYN, NEW YORK (OSI REPORT #05ES051) DATED DECEMBER 13, 2005.
4. OCEAN SURVEYS, INCORPORATED, FINAL REPORT GOWANUS CANAL CORING OPERATIONS BROOKLYN, NEW YORK DATED FEBRUARY 16, 2006.
5. SURVEY OF CARROLL GARDENS/PUBLIC PLACE SOIL BORINGS CONDUCTED BY GEI CONSULTANTS, INC. ON DECEMBER 3~4, 2002, MARCH 4, 2003, JUNE 4~6, 2003, JULY 10, 2003 AND JULY 19, 2006. SURVEYED BY NEW YORK STATE- LICENSED SURVEYOR NO. 050146..
6. FINAL REMEDIAL INVESTIGATION REPORT CARROLL GARDENS/PUBLIC PLACE PREPARED BY GEI CONSULTANTS INC., OCTOBER 2005.

0 10 20 — HORIZONTAL SCALE, FEET

0 5 10 — VERTICAL SCALE, FEET

VERTICAL EXAGGERATION = 2X

DRAFT

REMEDIAL INVESTIGATION TECHNICAL REPORT GOWANUS CANAL BOROUGH OF BROOKLYN, NEW YORK	GEI Consultants 455 WINDING BROOK DRIVE SUITE 201 GLASTONBURY, CONNECTICUT 06033	**GOWANUS CANAL: MIDDLE REACH CROSS SECTION OF TRANSECTS R, S AND T**
KEYSPAN CORPORATION		
PROJECT NO.: 061140-3-1205		March 2007 — Plate 14

KEYSPAN\GOWANUS CANAL\SEDIMENT\INVESTIGATION REPORT\FIGURES\GOWANUS CANAL-MIDDLE TRANSECTS.dwg

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-21
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
06:45	1D	0.0	40-29	Brown fine to coarse sand, some silt, trace			DRILLED	
12-18-00		2.0	32-31	gravel, brick (Fill) (SM)			AHEAD	
Monday	2D	2.0	9-20	Brown coarse to fine sand, some gravel,			4"	
		4.0	23-15	silt, trace brick (Fill) (SM)				
30°F						5		
	3D	5.0	1-3	Brown fine to coarse sand, some silt, trace				
		7.0	3-3	brick, cinders, vegetation (Fill) (SM)				
	4D	7.0	1-1	Brown gray peat, some silty clay (Pt)				WC=125
		9.0	1-1		F			
						10		
	5D	10.0	1-1	Brown peat, trace vegetation (Pt)				WC=281
		12.0	1-1					
	6D	12.0	5-7	Top 7": Do 5D, tr gravel, bricks, glass (Pt)				6D Top: WC=351
		14.0	9-6	Bot 12": Gray brown fine to medium sand,				
				some silt, trace gravel, mica (SM)		15		
	7D	15.0	1-1	Brown fine sand, some silt (SM)				Sample saturated
		17.0	2-2					with water.
	8D	17.0	3-1	Top 11" Do 7D, trace vegetation (SM)		17.9		
		19.0	2-2	Bot 13": Brown peat, trace vegetation (Pt)	O			8D Bot: WC=259
						19.5		
	9D	20.0	1-1	Gray silty fine sand, trace peat (SM)				
		22.0	2-1					
					S1			
						25		
	10D	25.0	10-12	Gray silty fine sand, trace mica (SM)				Petroleum odor.
		27.0	16-19					
						28.5		
						30		
	11D	30.0	5-3	Soft gray clayey silt, trace fine sand (ML)				WC=25
		32.0	6-5		M			
						35		
	12D	35.0	WH/12"	Top 10": Do 11D (ML)		36		12D Top: pp=0.5,
		37.0	13-17	Bot 7": Gray brown fine sand, some silt,	S1			WC=33
				mica (SM)				
						38.5		
						40		
	13D	40.0	WR-4	Soft gray clayey silt, some fine sand, trace	M			WC=32
		42.0	4-3	mica (ML)				
						43.5		
						45		
	14D	45.0	15-20	Brown fine sand, some silt, trace gravel				Petroleum odor;
		47.0	21-23	(SM)				sheens.
					S1			
						50		
	15D	50.0	18-26	Brown fine sand, some silt, trace mica (SM)				
		52.0	24-26					

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

BORING NO. B-21
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd								
12-18-00								
Monday								
30°F						55		
	16D	55.0	16-19	Brown fine sand, some silt, vegetation, mica (SM)				Petroleum odor.
		57.0	28-21					
						60		
	17D	60.0	17-19	Brown fine sand, some silt, mica (SM)				
		62.0	22-24					
					S1			
						65		
	18D	65.0	16-18	Brown fine to medium sand, some silt, trace gravel (SM)				
		67.0	22-20					
						70		
	19D	70.0	19-18	Brown gravelly coarse to fine sand, some silt (SM)				Heavy petroleum odor.
		72.0	26-31					
						75		
	20D	75.0	36-37	Do 19D (SM)				
		77.0	48-36					
						80		
	21D	80.0	50-100/3"	Brown silty fine to coarse sand, some gravel (SM)		80.8		REC=5"
		80.8						End of Boring at 80.8'.
						85		pp=Pocket Penetrometer Unconfined Compressive Strength in tsf.
						90		WC=Water Content in percent of dry weight.
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-21
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NEW YORK
BORING LOCATION SEE PLAN

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED	[X] YES [ ] NO		
TRUCK	CME-55	MECHANICAL		DIA., IN	4	DEPTH, FT. FROM 0	TO 20
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM	TO
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM	TO
OTHER							

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. SPLIT SPOON
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3-7/8
TYPE OF DRILLING MUD QUIK - GEL

AUGER USED [ ] YES [X] NO
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

*SAFETY HAMMER USED.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	82	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER:	

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
DRILLER RAY LYNCH HELPERS EDWIN FELICIANO
REMARKS BOREHOLE GROUTED UPON COMPLETION.
RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-18-00

BORING NO. B-21

GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid
PROJECT: Citizens OU-2
CITY/STATE: Brooklyn, New York
GEI PROJECT NUMBER: 093250-2-1201

BORING LOG

CGSB-146

LOCATION:
NORTHING (FT): **EASTING (FT):**
TOTAL DEPTH (FT): 80.0
DRILLED BY: Boart Longyear / Frank Gardella
DATUM VERT. / HORZ.: NAVD 88 / NAD 83
LOGGED BY: Chris Anastasiou
DATE START / END: 11/6/2012 - 11/7/2012
DRILLING DETAILS:
WATER LEVEL DEPTHS (FT): ▽ 20.00 11/7/2012
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN/REC IN./IN.	PID (PPM)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0		60/NM						(0'- 0.1') ASPHALT. (0.1'- 4.5') SILTY SAND WITH GRAVEL (SM); ~55% sand, fine to coarse, ~25% gravel, fine to coarse, ~20% fines; moist, brown, brick fragments. FILL.
	5		60/48	1325			PLO		(4.5'- 5') BRICK. (5'- 6.9') SILTY SAND WITH GRAVEL (SM); ~40% sand, fine to coarse, ~30% gravel, fine to coarse, ~30% fines; moderate petroleum-like odor, black.
							PLO PLO		(6.9'- 7.3') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines; moderate petroleum-like odor, dark brown. (7.3'- 8.3') SILTY SAND (SM); ~85% sand, fine, ~15% fines; moderate petroleum-like odor, dark black.
								CGSB-146 (9-10)	(8.3'- 10') SILTY SAND (SM); ~85% sand, fine, ~15% fines; tan and brown.
	10		60/48	372			PLO		(10'- 11.9') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines; moderate petroleum-like odor, black staining.
							PLO PLO		(11.9'- 12.5') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines; moderate petroleum-like odor, dark brown. (12.5'- 15') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines; moderate petroleum-like odor, brown.
	15		60/48	32.3					(15'- 18') BOG MATERIAL.
									(18'- 20') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines; gray.
▽	20		60/48	104.3					(20'- 25') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines; brown.

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IN. = INCHES
FT. = FEET

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GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid
PROJECT: Citizens OU-2
CITY/STATE: Brooklyn, New York
GEI PROJECT NUMBER: 093250-2-1201

BORING LOG

CGSB-146

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN/REC IN./IN.	PID (PPM)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	25		60/48	61.3					(25'- 30') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines; wet, brown.
	30		60/48						(30'- 33.8') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines; wet, brown.
									(33.8'- 35') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines; wet, brown.
	35		60/48						(35'- 37.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines; brown, orange band of iron.
									(37.5'- 38.8') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines; gray.
									(38.8'- 40') SANDY SILT (ML); ~50% sand, fine, ~50% fines; gray.
	40		60/48					CGSB-146 (40-45)	(40'- 42.7') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines; grayish brown.
									(42.7'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; brownish orange.
	45		60/48						(45'- 46.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; wet, brown.
									(46.7'- 47.5') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines; wet, brown.
									(47.5'- 50') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines; brown.
	50		60/48						(50'- 55') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; wet, brown.

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GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid
PROJECT: Citizens OU-2
CITY/STATE: Brooklyn, New York
GEI PROJECT NUMBER: 093250-2-1201

BORING LOG

CGSB-146

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN/REC IN./IN.	PID (PPM)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	55		60/36						(55'- 56.7') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines; wet, brown.
									(56.7'- 57.2') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines; wet, red. (57.2'- 60') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines; wet, brown.
	60		60/30						(60'- 65') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines; wet, brown.
	65		60/48						(65'- 75') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% gravel, fine to coarse, ~60% sand, fine to coarse; brown.
	70		60/44						
	75		60/48						(75'- 80') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines; light brown.
	80								End of Boring at 80 feet.

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GEI PROJECT NUMBER: 093250-2-1201

BORING LOG

CGSB-147

LOCATION:
NORTHING (FT): **EASTING (FT):**
TOTAL DEPTH (FT): 80.0
DRILLED BY: Boart Longyear / Frank Gardella
DATUM VERT. / HORZ.: NAVD 88 / NAD 83
LOGGED BY: Chris Anastasiou
DATE START / END: 11/8/2012 - 11/8/2012
DRILLING DETAILS:
WATER LEVEL DEPTHS (FT): ▽ 20.00 11/8/2012
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN/REC IN./IN.	PID (PPM)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0		60/NM						(0'- 0.1') ASPHALT. (0.1'- 5') WIDLEY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~30% sand, fine to coarse; FILL.
	5		60/36	181			NLO	CGSB-147 (7-8)	(5'- 8.6') ~40% sand, fine to coarse; moderate naphthalene-like odor, black tar staining. FILL.
							NLO		(8.6'- 10') SANDY SILT (ML); ~60% fines, ~40% sand, fine to coarse; moderate naphthalene-like odor, black staining.
	10		60/48				OLO		(10'- 15') SILT (ML); ~100% fines; moderate organic-like odor, gray.
	15		60/48	25.2					(15'- 20') SILT (ML); ~100% fines.
▽	20		60/24	38					(20'- 25') NARROWLY GRADED SAND (SP); ~95% sand, fine to medium, ~5% fines; wet, gray.

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BORING LOG

CGSB-147

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN/REC IN./IN.	PID (PPM)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	25		60/38	33.5			NLO NLO/		(25'- 25.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; slight naphthalene-like odor, gray. (25.7'- 25.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; slight naphthalene-like odor, gray, tar band. (25.8'- 28.2') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines; brown.
							NLO		(28.2'- 30') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines; slight naphthalene-like odor, gray.
	30		60/48						(30'- 31.3') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines; brown. (31.3'- 35') SILTY SAND (SM); ~85% sand, fine, ~15% fines; brown.
	35		60/40						(35'- 36.5') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; brown. (36.5'- 37.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; gray. (37.3'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; brown.
								CGSB-147 (38-40)	
	40		60/48						
	45		60/48						
	50		60/36						(50'- 55') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines; brown.

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BORING LOG

CGSB-147

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN/REC IN./IN.	PID (PPM)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	55		60/40						
	60		60/48						(60'- 65') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~25% gravel, fine to coarse, ~5% fines; brown.
	65		60/48						(65'- 70') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines; brown.
	70		60/34						(70'- 75') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines; brown.
	75		60/48						(75'- 80') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine, ~10% fines; brown.
	80								End of Boring at 80 feet.

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: MW-2/DP-1

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	28 Feet
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	HOLLOW STEM AUGER/GEOPROB		
FIELD PARTY:	CHRIS BOSS		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/14/2000 DATE COMPLETED: 12/14/2000		

STATIC WATER LEVEL (BLS)		
Depth (ft)	5.3	
Time	12:35	
Date	12/22/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		ND		FILL: concrete and red brick fragments, ash, gray silty sand.		
	2		ND		FILL: concrete and red brick fragments, ash, gray silty sand.		
10.0	3		ND		SILTY SAND		
	4		ND		SILTY SAND		
	5		ND		SILTY SAND		
20.0					PEAT: clay		
	6		ND		SILT		
	7		ND		SILTY SAND		

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: DP-2

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	28 Feet
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	GEOPROBE		
FIELD PARTY:	CHRIS BOSS/JAY SEALE		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/14/2000 DATE COMPLETED: 12/14/2000		

STATIC WATER LEVEL (BLS)		
Depth (ft)	5.0	
Time	10:10	
Date	12/14/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		ND		FILL: concrete and red brick fragments, ash, black silty sand.		
	2		83	Strong odor			
10.0	3		4				
	4		ND				
					PEAT: With Clay		
	5		36				
20.0	6		40		SILT: Brownish gray to gray SILT		
	7		ND				
					SAND: Fine to medium SAND		

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FIELD BOREHOLE LOG

BOREHOLE NUMBER
MW-3/DP-9

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	40 FEET
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	HOLLOW STEM AUGER/GEOPROBE		
FIELD PARTY:	JAY SALE		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/12/2000 DATE COMPLETED: 12/12/2000		

STATIC WATER LEVEL (BLS)		
Depth (ft)	5.15	
Time	11:20	
Date	12/23/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		9		FILL: red brick and coal fragments, ash, black silty sand.		
	2		7		SILTY SAND: dark black		
10.0	3		ND		CLAY		
	4		ND		PEAT: Clay		
	5		ND		SILTY SAND		
20.0	6		ND		CLAY		
	7		43	Strong odor, free product	SILTY SAND		
30.0	8		94				
	9		10	slight petroleum odor			
	10		13	slight petroleum odor	SILT: Dense reddish brown silt		
40.0							

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: DP- 10

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	28 Feet
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	GEOPROBE		
FIELD PARTY:	JAY SEALE		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/13/2000 DATE COMPLETED: 12/13/2000		

STATIC WATER LEVEL (BLS)		
Depth (ft)	5.0	
Time	10:10	
Date	12/13/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		ND		FILL: concrete and red brick fragments, ash, black silty sand.		
	2		89	Strong odor	SILTY SAND: Gray Silty Sand changed to reddish brown Silty SAnd		
	3		26	Strong odor	SILY SAND: Reddish brown Silty Sand with some pebbles		
10.0	4				SILTY SAND: Black		
			40	Free product	CLAY: Dense		
	5				CLAY: With little SAND		
			27	Free product	CLAY: Dense		
20.0	6		45	Free product	Refusal: Location moved 15 feet north		
	7				CLAY: Dense		
			189	Free Product	SILT: Reddish Brown SILT		
					SAND: Fine to medium SAND		

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: MW-5/DP-11

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	32 Feet
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	HOLLOW STEM AUGER/GEOPROBE		
FIELD PARTY:	CHRIS MIGLIORE/JAY SEAL		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/08/200	DATE COMPLETED:	12/08/2000

STATIC WATER LEVEL (BLS)		
Depth (ft)	5.3	
Time	2:45	
Date	12/22/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		202	strong odor	FILL: Coal and red brick fragments, ash, black silty sand.		
	2		ND				
10.0	3		ND				
	4		ND		CLAY: With little Silt		
	5		ND				
20.0					CLAY: With little Peat		
	6		ND		CLAY		
			ND		SANDY CLAY		
	7				SAND		
30.0							

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: MW-6/DP-12

PROJECT NUMBER: 80030-0002
PROJECT NAME: 124-136 SECOND AVENUE
LOCATION: BROOKLYN, NEW YORK
DRILLING CO: FENLEY & NICOL
DRILLING METHOD: HOLLOW STEM AUGER/GEOPROBE
FIELD PARTY: CHRIS MIGLIORE/JAY SEAL
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 12/6/2000 DATE COMPLETED: 12/6/2000

FIELD BOOK NO: 301
TOTAL DEPTH: 32 Feet
GROUND SURFACE ELEVATION: 0.0

STATIC WATER LEVEL (BLS)		
Depth (ft)	4.95	
Time	10:30	
Date	12/23/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		ND		FILL: Coal and red brick fragments, ash, black silty sand.		
	2		ND				
10.0	3						
			ND		CLAY: With little Silt		
	4		ND				
	5		ND				
20.0	6		ND		GLAY: Shell fragments		
			ND				
	7				CLAY: With little Silt		
30.0			ND		PEAT: With Clay		
			200	Free product	SILTY SAND		

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: MW-7/DP-13

PROJECT NUMBER:	80030-0002	FIELD BOOK NO:	301
PROJECT NAME:	124-136 SECOND AVENUE	TOTAL DEPTH:	32 Feet
LOCATION:	BROOKLYN, NEW YORK	GROUND SURFACE ELEVATION:	0.0
DRILLING CO:	FENLEY & NICOL		
DRILLING METHOD:	HOLLOW STEM AUGER/GEOPROBE		
FIELD PARTY:	CHRIS MIGLIORE/JAY SEAL		
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	12/06/2000 DATE COMPLETED: 12/06/2000		

STATIC WATER LEVEL (BLS)		
Depth (ft)	2.8	
Time	1:15	
Date	12/22/2000	

DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION
0.0	1		ND		FILL: Coal and red brick fragments, ash, black silty sand.		
	2		ND				
10.0	3		ND		CLAY		
	4		ND				
					PEAT		
	5		ND		No Recovery		
20.0	6		ND		CLAY: With Peat		
	7		ND		SILTY SAND		
30.0	8		ND		SAND: Medium to coarse brown SAND with some Gravel		

Log of Well: GCMW-44

Project No: SERAS-059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 118 2nd Ave., Brooklyn, NY
Logged By: J. Bolduc

GCMW-44S Northing (ft): 184458.534
GCMW-44S Easting (ft): 985077.566
GCMW-44I Northing (ft): 184458.434
GCMW-44I Easting (ft): 985077.808
GCMW-44S Elevation (ft AMSL): 4.72
GCMW-44I Elevation (ft AMSL): 4.73

SUBSURFACE PROFILE / SAMPLE

Depth (ft)	Depth (m)	Symbol	Description	Elev. (ft.)	Number	Type	Recovery	PID Readings (ppmv)
0	0		Ground Surface	0.00				
			Asphalt 1/4-foot thick.					
			Gravel With Sand (SW-GW) Fill Dark grayish brown to dark gray, fine to coarse angular gravel, some fine to coarse-grained sand, little silt, copper nails, wood, glass, clay pot fragments, spotty petroleum hydrocarbon sheens, no odor.					
				-12.50				
			Silty Clay (CL) Dark gray, low plasticity, soft, plant remains and shell fragments throughout, micaceous, wet, no stain, no odor.					
				-25.00				

Sample intervals: 059-2122, 059-2123, 059-2124

PID Readings (ppmv): 0.0

Drill Method: A300 Rotary Sonic
Start Date: 1300 6/8/10
Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear
End Date: 1630 6/8/10
Sheet: 1 of 2

Project No: SERAS-059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 118 2nd Ave., Brooklyn, NY
Logged By: J. Bolduc

GCMW-44S Northing (ft): 184458.534
GCMW-44S Easting (ft): 985077.566
GCMW-44I Northing (ft): 184458.434
GCMW-44I Easting (ft): 985077.808
GCMW-44S Elevation (ft AMSL): 4.72
GCMW-44I Elevation (ft AMSL): 4.73

Log of Well: GCMW-44

SUBSURFACE PROFILE / SAMPLE

Depth	Symbol	Description	Elev. (ft.)	Number	Type	Recovery	PID Readings (ppmv)
		Clayey Sand (SC) Dark gray, fine to medium grained, some clay, little silt, shell fragments, wet, no stain, no odor.	-26.00	059-2125			0.0, 0.6, 0.6
		Sand (SW) Dark gray, fine to coarse grained, trace silt, micaceous, wet, no stain, no odor.	-28.00				0.0, 0.0
		Silty Clay (CL) Dark gray, trace fine to medium-grained sand, low plasticity, soft, micaceous, moist, no stain, no odor.	-31.00	059-2126			0.0, 0.0
		Silt (ML) Very dark grayish brown, clayey, trace fine-grained sand, occasional plant and shell fragments, micaceous, slightly moist, no stain, no odor.	-35.00				0.0, 0.0, 0.0, 0.0, 0.0
		Sand (SW) Light brownish gray, fine to coarse grained, trace silt, micaceous, wet, no stain, no odor.	-43.00	059-2127, 059-2128, 059-2129			0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
		No Recovery No recovery between 43 and 45 feet.	-50.00				

Depth scale: 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50; 8, 9, 10, 11, 12, 13, 14, 15

PID Readings (ppmv): 0, 20, 40, 60, 80, 100

Well Completion Details

Drill Method: A300 Rotary Sonic
Start Date: 1300 6/8/10
Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear
End Date: 1630 6/8/10
Sheet: 2 of 2

Log of Well: GCMW-45

Project No: SERAS-059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: Lowes, Brooklyn, NY
Logged By: J. Bolduc

GCMW-45S Northing (ft): 184648.833
GCMW-45S Easting (ft): 985200.254
GCMW-45I Northing (ft): 184648.804
GCMW-45I Easting (ft): 985199.988
GCMW-45S Elevation (ft AMSL): 4.49
GCMW-45I Elevation (ft AMSL): 4.50

SUBSURFACE PROFILE / SAMPLE

Depth (ft)	Depth (m)	Symbol	Description	Elev. (ft.)	Number	Type	Recovery	PID Readings (ppmv)
0	0		Ground Surface	0.00				
			Asphalt 1/4-foot thick.					
			Sand With Gravel (SW-GP) Fill Dark gray, fine to coarse grained, little silt, some fine gravel, coal, brick, and wood fragments throughout, wet, no stain, no odor.					
7	2							0.0
8								0.0
9								0.0
10	3				059-2114			13.0
11				-11.00				0.0
			Peat (PT) Brown, trace clay, fibrous, wet, no stain, no odor.					
12								0.0
13	4			-13.00				1.0
			Silty Clay (CL) Dark gray, trace fine sand, low plasticity, soft, plant and shell fragments, no plant fragments below 17 feet, wet, no stain, no odor.					
14								0.0
15					059-2115			0.0
16	5							0.0
17								0.0
18								0.0
19								0.0
20	6				059-2116			0.0
21								0.0
22								0.0
23	7		Several fine sand stringers from 1 to 3 inches thick from 24 to 26 feet.					0.0
24								0.0
25				-25.10	059-2117			0.0

Well Completion Details

Drill Method: A300 Rotary Sonic
Start Date: 0813 6/8/10
Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear
End Date: 1025 6/8/10
Sheet: 1 of 2

Project No: SERAS-059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: Lowes, Brooklyn, NY
Logged By: J. Bolduc

GCMW-45S Northing (ft): 184648.833
GCMW-45S Easting (ft): 985200.254
GCMW-45I Northing (ft): 184648.804
GCMW-45I Easting (ft): 985199.988
GCMW-45S Elevation (ft AMSL): 4.49
GCMW-45I Elevation (ft AMSL): 4.50

Log of Well: GCMW-45

SUBSURFACE PROFILE / SAMPLE

Depth	Symbol	Description	Elev. (ft.)	Number	Type	Recovery	PID Readings (ppmv)
		Silty Clay (CL) As Above					0.0, 0.0, 0.0
			-28.00				25.0, 25.0
		Clayey Sand (SC) **Dark gray, fine to medium grained, shell fragments, wet, petroleum hydrocarbon sheen and low viscosity petroleum hydrocarbon saturated throughout, faint petroleum hydrocarbon odor.**	-30.00	059-2118			40.0, 30.0
		Silty Clay (CL) **Dark gray, little fine-grained sand, occasional plant fragments, micaceous, wet, no stain, no odor.**	-33.00				9.0, 8.0, 0.0
		Clayey Sand (SC) **Dark gray to black, fine to coarse grained, thin clay stringers from 33 to 37 feet, wet, low viscosity petroleum hydrocarbon saturated, dark brown petroleum hydrocarbon staining, faint petroleum hydrocarbon odor.**		059-2119			13.0
			-37.00				
		Sand With Silt (SP-SM) **Dark gray, fine to medium grained, little silt, clay stringer at 37 feet, low viscosity petroleum hydrocarbon saturated, spotty PHC sheens throughout, moderate petroleum hydrocarbon**		059-2120			25.0, 50.0
			-50.00				

Depth scale: 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50; 8, 9, 10, 11, 12, 13, 14, 15

PID Readings (ppmv): 0, 20, 40, 60, 80, 100

Well Completion Details

Drill Method: A300 Rotary Sonic
Start Date: 0813 6/8/10
Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear
End Date: 1025 6/8/10
Sheet: 2 of 2

Project No: SERAS-059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 118 2nd Ave., Brooklyn, NY
Logged By: C. Sklaney

GCMW-46I Northing (ft): 184593.888
GCMW-46I Easting (ft): 985167.173
GCMW-46I Elevation (ft AMSL): 4.76

Log of Well: GCMW-46

SUBSURFACE PROFILE / SAMPLE

Depth (ft)	Depth (m)	Symbol	Description	Elev. (ft.)	Number	Type	Recovery	PID Readings (ppmv)
0	0		Ground Surface	0.00				
			Not Logged Air knifed to clear borehole of underground utilities to 7 feet. Subsurface materials not logged during air knifing.					
				-7.00				
			Gravel With Sand (GP-SP) Fill Dark grayish brown, fine gravel, some medium to coarse-grained sand, little fines, gravel consists of fly ash, slag, and construction debris (concrete and brick), shell fragments.		059-2167			0.0
				-15.00				
			Clay (CL) Very dark grayish brown, moderate plasticity, soft, little woody material (twigs, mulch, and chips), moist.		059-2168			0.0
					059-2169			0.0
					059-2170			0.0
				-30.10	059-2171			0.0

PID Readings (ppmv): 0, 20, 40, 60, 80, 100

Well Completion Details

Drill Method: A300 Rotary Sonic
Start Date: 1415 6/15/10
Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear
End Date: 1620 6/15/10
Sheet: 1 of 2

Project No: SERAS-059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 118 2nd Ave., Brooklyn, NY
Logged By: C. Sklaney

GCMW-46I Northing (ft): 184593.888
GCMW-46I Easting (ft): 985167.173
GCMW-46I Elevation (ft AMSL): 4.76

Log of Well: GCMW-46

SUBSURFACE PROFILE

Depth	Symbol	Description	Elev. (ft.)
		Clay (CL) As Above	-32.00
		Clayey Sand (SC) Gray, fine to medium grained, clayey, little silt, wet.	-33.00
		Sand (SP) Very dark gray, medium grained, trace fines, wet.	-35.50
		Sand (ML) Very dark gray, very fine grained, trace silt, wet.	-42.00
		Sand (SP) Very dark gray, medium grained, subrounded to rounded, trace fines, wet. Sand becomes well rounded between 47 and 54 feet.	-54.00
		Sand With Gravel (SP-GP) Very dark gray, coarse grained, and fine subrounded to rounded gravel, little fines, wet.	-55.00
		Sand (ML) Very dark gray, very fine grained, silty, wet.	-60.00

SAMPLE

Number	Type	Recovery
059-2172		
059-2173		
059-2174		
059-2175		
059-2176		

PID Readings (ppmv)

0 20 40 60 80 100

0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 1.0, 1.0, 1.0, 1.0, 1.0

Well Completion Details

Drill Method: A300 Rotary Sonic
Start Date: 1415 6/15/10
Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear
End Date: 1620 6/15/10
Sheet: 2 of 2

Log of Well: GCMW-47

Project No: SERAS-059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 118 2nd Ave., Brooklyn, NY
Logged By: C. Sklaney

GCMW-47S Northing (ft): 184690.704
GCMW-47S Easting (ft): 985209.243
GCMW-47I Northing (ft): 184690.893
GCMW-47I Easting (ft): 985209.050
GCMW-47S Elevation (ft AMSL): 4.53
GCMW-47I Elevation (ft AMSL): 4.62

SUBSURFACE PROFILE / SAMPLE

Depth (ft)	Depth (m)	Description	Elev. (ft.)	Sample Number	Type	Recovery
0	0	Ground Surface	0.00			
		Not Logged Air knifed to clear underground utilities to 7 feet. Subsurface materials not logged during air knifing.				
		Sand With Silt and Gravel (SW-SM) Fill Very dark grayish brown, fine to coarse grained, some gravel, some cobbles, some silt, shell fragments, wet.	-7.00			
		Silty Clay (CL) Fill Very dark grayish brown, silty, medium stiff, some roots, plant remains, peat, faint sulfur-like odor.	-14.50	059-2234		
		Sand With Silt and Gravel (SW-SM) Fill Very dark grayish brown, fine to coarse grained, some gravel, some cobbles, some silt, shell fragments, wet.	-16.00			
		Silty Clay (CL) Very dark grayish brown, medium stiff, some roots, plant remains, peat, faint sulfur-like odor.	-17.00	059-2235		
		Sand With Silt (SP-SM) Very dark gray, fine to medium grained, little fines, petroleum hydrocarbon staining, sheen and saturation present, strong petroleum hydrocarbon odor.	-23.00	059-2236		
		Sandy Silt (ML) Very dark grayish brown, sandy, little peat, petroleum hydrocarbon staining and sheen present.	-28.00			
			-30.00			

PID Readings (ppmv)

0 20 40 60 80 100

0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 7.0, 7.0, 25.0, 10.0, 15.0, 40.0

Well Completion Details

Drill Method: A300 Rotary Sonic
Start Date: 0935 6/28/10
Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear
End Date: 1430 6/28/10
Sheet: 1 of 2

Project No: SERAS-059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 118 2nd Ave., Brooklyn, NY
Logged By: C. Sklaney

GCMW-47S Northing (ft): 184690.704
GCMW-47S Easting (ft): 985209.243
GCMW-47I Northing (ft): 184690.893
GCMW-47I Easting (ft): 985209.050
GCMW-47S Elevation (ft AMSL): 4.53
GCMW-47I Elevation (ft AMSL): 4.62

Log of Well: GCMW-47

SUBSURFACE PROFILE / SAMPLE

Depth	Symbol	Description	Elev. (ft.)	Number	Type	Recovery	PID Readings (ppmv)
		Sand (SP) Very dark grayish brown, medium grained, petroleum hydrocarbon stain, sheen, and odor present.	-31.00	059-2237			10.0
		Clay (CL) Very dark brown, low plasticity, very stiff, abundant peat.	-34.00				
		Sand (SP) Very dark grayish brown, medium to coarse grained, loose, petroleum hydrocarbon staining, sheen, high saturation from 34 to 37 feet, and odor present.		059-2238			40.0
		Spotty petroleum hydrocarbon saturation between 37 and 43.5 feet.					
		No visible or olfactory evidence of petroleum hydrocarbon presence between 43.5 and 47 feet.		059-2239			
				059-2240			
			-60.00				

PID Readings (ppmv): 0, 20, 40, 60, 80, 100

Depth scale: 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60; 10, 11, 12, 13, 14, 15, 16, 17, 18

Well Completion Details

Drill Method: A300 Rotary Sonic
Start Date: 0935 6/28/10
Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear
End Date: 1430 6/28/10
Sheet: 2 of 2

AKRF, INC.
Environmental Consultants

FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-6

PROJECT NUMBER:	80030-0003	START TIME	0850
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	0925
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/21/01	DATE COMPLETED:	02/21/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0				refusal at -11 ft.; three attempts made; refusal at 7 ft. and 4 ft.; sampling location 5 ft. SE of flag	fill: light brown medium coarse sand and gravel	
4.0						
			0.5		sand: black/dark brown medium sand and silt; wet at -6 ft.	
8.0	GP6				silt: black/dark brown silt and medium coarse sand with small cobbles	
					silt: brown/tan silt and medium coarse sand with small cobbles	
12.0			1.9		silt: black silt and medium coarse sand with small cobbles	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-17

PROJECT NUMBER:	80030-0003	START TIME	1045
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1130
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/22/01	DATE COMPLETED:	

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/4	8		fill: ash, brick fragments	
8.0		48/0		no recovery	(no recovery)	
12.0	GP17	48/36			peat: dark brown peat	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-18

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/22/01 DATE COMPLETED: 02/22/01

START TIME 1135
END TIME 1215
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/42	16.0		fill: red bricks, coal fragments, ash, black silty sand	
8.0	GP18	48/20	2.5	FREE PRODUCT	silty sand: black silty sand, free product	
12.0		48/24	7.0	FREE PRODUCT	silty sand: brownish gray silty sand	
16.0					peat	

AKRF, INC.
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FIELD BOREHOLE LOG

BOREHOLE NUMBER
GP-19

PROJECT NUMBER:	80030-0003	START TIME	1330
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1415
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/22/01	DATE COMPLETED:	02/22/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/40	3.0		fill: ash, coal fragments, red bricks, black to brownish gray silty sand	
8.0		48/36	2.5			
12.0	GP19	48/36	3.0			
16.0					peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-20

PROJECT NUMBER:	80030-0003	START TIME	1420
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1515
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/22/01	DATE COMPLETED:	02/22/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY (in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0						
4.0		48/48			fill: coal fragments, ash, red bricks, black silty sand	
8.0		48/36			silty sand: brownish gray silty sand, dense, peat at tip of sampler	
12.0	GP20	48/48			clay and peat: dense peat and clay	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-21

PROJECT NUMBER:	80030-0003	START TIME	0815
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	0830
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/27/01	DATE COMPLETED:	02/27/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/46	2		fill: red brick fragments, ash, coal fragments	
8.0		48/24	12		fill: red brick fragments, ash, coal fragments, free product in lower 6 in.	
	GP21			FREE PRODUCT		
12.0		48/42	9		clay: very dense gray clay	
					silt: dense brownish grey silt, peat at tip of liner	
16.0						

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-22

PROJECT NUMBER:	80030-0003	START TIME	0835
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	0850
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/27/01	DATE COMPLETED:	02/27/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0	GP22	48/42	65	FREE PRODUCT	fill: ash, coal fragments, black silty sand, loose, free product	
8.0		48/36	11	FREE PRODUCT	fill: ash, coal fragments, black silty sand, loose, free product	
12.0		48/48	ND		clay and peat: very dense clay and peat	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-25

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/27/01 DATE COMPLETED: 02/27/01

START TIME 1000
END TIME 1045
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/46	55	FREE PRODUCT	fill: ash, coal fragments, wood, black silty sand stained with free product	
8.0		48/36	22	FREE PRODUCT	fill: ash, coal fragments, wood, black silty sand stained with free product	
12.0	GP25	48/48	76		silt: brownish gray dense silt	
				FREE PRODUCT	clay and peat: dense clay and peat	
16.0					silty sand: black silty sand with free product	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-27

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/27/01 DATE COMPLETED: 02/2701

START TIME 1130
END TIME 1215
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/24	ND		fill: red bricks, concrete [and] coal fragments, ash	
8.0		48/0		no recovery	(no recovery, void)	
12.0		48/48	ND		silt: light gray dense silt; peat at tip of sampler	
16.0					peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-28

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/27/01 DATE COMPLETED: 02/27/01

START TIME 1230
END TIME 1255
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/46	ND		fill: red brick, concrete, ash, wood;	
8.0		48/48	ND		silt: brownish gray to light gray dense silt	
12.0		48/48	14			
	GP28				clay and peat: dense clay and peat	
16.0						

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-30

PROJECT NUMBER:	80030-0003	START TIME	1305
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1320
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	02/27/01	DATE COMPLETED:	02/27/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/48	ND		fill: brick, concrete, wood	
					clay and peat: dense clay and peat	
8.0		48/46	ND		clay and peat	
12.0				end of boring		
16.0						

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FIELD BOREHOLE LOG

BOREHOLE NUMBER: GP-32

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/21/01 DATE COMPLETED: 02/21/01

START TIME: 1255
END TIME: 1345
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0				2 ft. NW of flag--refusal at -4 ft.; [sampling location] 3 ft. SW of flag	fill, not sampled	
4.0	GP32	48/42	382	odor; sheen on liner	sand: black sand--strong odor, some dark brown sand and silt at -4 ft., fine gravel at -8 ft.; sheen on liner	
8.0		48/12	63.8	odor	sand: black sand--odor	
12.0		48/48	0		sand and silt: silt and fine to medium sand, black	
16.0					peat: tan peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-33

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 02/21/01 DATE COMPLETED: 02/21/01

START TIME 1215
END TIME 1250
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0				[sampling location] 3 ft. SE of flag	fill, not sampled	
4.0	GP33	48/48	14	staining	sand: dark brown sand; some staining at 6 ft.; 2 in of wet peat or other organic at -6 ft.	
					sand: medium coarse sand and fine gravel	
8.0		48/12	4.4		gravel: gray/black fine gravel and sand	
12.0		48/30	1.9			
					peat: brown/tan peat	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-41

PROJECT NUMBER:	80030-0003	START TIME	1300
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1345
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0
DRILLING CO:			
DRILLING METHOD:	GeoProbe		
FIELD PARTY:			
GEOLOGIST:	MOHAMED AHMED		
DATE BEGUN:	03/01/01	DATE COMPLETED:	03/01/01

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/36	ND		fill: red brick, gray silty sand	
					fill: cinders, ash, coal fragments, black silty sand	
8.0		48/48	ND			
					silt: reddish briown dense silt	
12.0		48/24	ND			
16.0		48/40	ND			
					clay and peat: dense clay and peat	
					peat	
20.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-42

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/01/01 DATE COMPLETED: 03/01/01

START TIME 1400
END TIME 1405
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/24	ND		fill: cinders, ash, coal fragments	
8.0		48/24	ND		fill: black silty sand, red bricks	
12.0		48/10	ND		silt: reddish brown loose silt	
16.0		48/40	ND		clay and peat	
20.0					peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-44

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/01/01 DATE COMPLETED: 03/01/01

START TIME 1440
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/20	9.0		fill: red brick, glass, ash, gray silty sand	
				FREE PRODUCT	silty sand: black silty sand, free product	
8.0	GP44	48/46		FREE PRODUCT		
			30		silt: gray loose silt	
12.0		48/46	1.6	FREE PRODUCT	silt: reddish brown silt, free product; peat at tip of liner	
16.0					peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-45

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/02/01 DATE COMPLETED: 03/02/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/44	ND		fill: ash, red bricks, gray silty sand	
8.0		48/42	ND		silt: reddish brown loose silt	
12.0		48/48	ND			
16.0		48/48	ND			
					clay and peat	
20.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-46

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/01/01 DATE COMPLETED: 03/01/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0	GP46	48/46	46		fill: concrete, ash , red bricks	
					sand: black to reddish gray silty sand	
8.0		48/42	ND		silt: reddish brown loose silt; peat at lower 3 in.	
12.0		48/24	ND			
16.0		48/24	ND			
20.0					peat	

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-47

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/02/01 DATE COMPLETED: 03/02/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/42	ND		fill: concrete, ash, red brick, yellow silt	
8.0		48/30	ND		silt: gray loose silt	
12.0		48/15	ND		silt: reddish brown loose silt	
16.0		48/48	ND		clay and peat	
20.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-48

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/02/01 DATE COMPLETED: 03/02/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/46	ND		fill: cinders, ash, wood, red bricks, concrete chips	
8.0		48/46	ND		silt: reddish brown loose silt	
12.0		48/44	ND		clay and peat	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-49

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/02/01 DATE COMPLETED: 03/02/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/48	ND		fill: concrete chips, ash, gray silty sand	
					clay: dense clay; peat at tip of sampler	
8.0		48/48	ND		clay and peat	
12.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-50

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: DATE COMPLETED:

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/30	ND		fill: concrete, red brick, black silty sand	
8.0		48/36	ND			
12.0		48/36	ND		silt: reddish/brown loose silt	
16.0		48/40	ND		clay and peat	
20.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-51

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/02/01 DATE COMPLETED: 03/02/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/36	ND		fill: concrete, red brick, ash, gray silty sand	
8.0		48/48	ND		silt: reddish brown loose silt	
12.0		48/24	ND			
16.0		48/48	ND		clay: dense clay	
					clay and peat	
20.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-53

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: DATE COMPLETED:

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0		48/48	ND		fill: concrete chips, cinder, ash, gray silty sand	
8.0		48/48	ND			
12.0					clay and peat	
16.0						

AKRF, INC. Environmental Consultants	FIELD BOREHOLE LOG	BOREHOLE NUMBER GP-54

PROJECT NUMBER: 80030-0003
PROJECT NAME: 124-136 Second Ave. (Gowanus)
LOCATION: Brooklyn, NY
DRILLING CO:
DRILLING METHOD: GeoProbe
FIELD PARTY:
GEOLOGIST: MOHAMED AHMED
DATE BEGUN: 03/02/01 DATE COMPLETED: 03/02/01

START TIME
END TIME
GROUND SURFACE ELEVATION: 0

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY
0.0					fill, not sampled	
4.0	GP54	48/46	324	FREE PRODUCT	silty sand: dark black silty sand, fill, red brick, free product	
8.0		48/24	159	FREE PRODUCT	silty sand: dark black silty sand, fill, red brick, free product	
12.0		48/24	227	FREE PRODUCT	silty sand: dark black silty sand, fill, red brick, free product	
16.0						

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LOG OF BORING LB1

SHEET 1 OF 2

PROJECT	Loews @ Gowanus
LOCATION	Brooklyn, NY
DRILLING EQUIPMENT	Davey Kent DK50RA Track Rig
SIZE AND TYPE OF BIT	4 7/8" and 3 7/8" Tri-Cone Roller Bits
CASING DIAMETER (in)	4 1/2" OD 4" ID
CASING DEPTH (ft)	18.5
SAMPLER	Standard Split Spoon (SS) or Shelby Tube (ST)
SAMPLER HAMMER	WEIGHT (lbs) 140 / DROP (in) 30
PROJECT NO.	1531601
ELEVATION AND DATUM	approx. el 11 [BBHDD]
DATE STARTED	12/9/98
DATE FINISHED	12/11/98
COMPLETION DEPTH	81 ft.
NUMBER OF SAMPLES	DIST. 21 / UNDIST. ---- / CORE ----
WATER LEVEL (ft.)	FIRST ---- / COMPL. ---- / 24 HR. 8.5
DRILLING FOREMAN	Tom Gregory/Kurt Conlon
INSPECTING ENGINEER	Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
el 11	Inferred 4.5" CONCRETE								*New York City BC Classification numbers in parenthesis
	Brown f.-m. SAND, trace c. sand, f. gravel, and silt (11-65)*			S1	SS	4.5	10 24 24 100/3"	48	Hard slow drilling on concrete first 4.5' S1 SS Tip plugged with rocklike material (in S1 jar) PID = 580 ppm Added water D=0.25' Spoon refusal D=2' Rig chatter D=2'
	Brown f.-m. SAND, trace c. sand (11-65)		5	S2	SS	8	10 11 7 8	18	Petroleum like material floating in wash tub D=5' PID = 820 ppm
	Brown f.-m. SAND, trace c. sand (11-65)		10	S3 S4	SS	11	2 3 3 2	6	Started casing D=10' PID = 320 ppm PID = 420 ppm
0.0	Brown f.-m. SAND, trace organics/root, f.-m. gravel, clay, silt, and c. sand (11-65)								Advanced casing D=10'-13.5'
	Gray silty CLAY, some organics/root (11-65)		15	S5	SS	16	2 1 1 2	2	PP = 0.3-0.6 tsf PID = 150 ppm
	Gray silty CLAY, trace organics/root (11-65)			T1	ST	30	PUSH PUSH PUSH PUSH WOH		PP = 0.2-0.3 tsf TV = 0.23 tsf WOH : Weight of Hammer
	Gray silty CLAY, trace organics/root (11-65)		20	S6	SS	24	2 3 2	5	PP = 0.2-0.3 tsf PID = 480 ppm
	Brown SILT, trace f. sand and clay (10-65)		25	S7	SS	17	8 7 14 21	21	PID = 860 ppm
	Brown/gray CLAY and SILT, trace f. sand (10-65)		30	S8 S9	SS	18	8 8 7 10	15	S8 4" Lense of Brown f. SAND, trace silt and clay (8-65) w/ PID = 580 ppm in top of SS PP = 1.2-2.1 tsf PID = 720 ppm S10 2" Gray f. SAND, trace clay and silt w/ PID = 850 ppm in bottom of SS Visible petroleum like material D=30'-32'
	Brown f. SAND, trace silt and clay (8-65)		35	S11	SS	15	14 20 22 18	42	PID = 380 ppm
	Brown f. SAND, trace silt and clay (8-65)		40	S12	SS	16	12 13 12 13	25	Brown f. sandy SILT, trace clay in SS tip PID = 330 ppm Trace visible petroleum like material

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LOG OF BORING LB1

SHEET 2 OF 2

PROJECT	Loews @ Gowanus
LOCATION	Brooklyn, NY
PROJECT NO.	1531601
ELEVATION AND DATUM	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE (ft)	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. Bl./6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown f. sandy SILT, trace clay (10-65)		45	S13	SS	17	17 17 15 20	32	PID = 570 ppm
	Brown SILT, trace clay and f. sand (10-65)		50	S14 S15	SS	15	14 15 22 26	37	PID = 540 ppm PID = 650 ppm Trace visible petroleum like material
	Brown f. SAND, trace silt (8-65)								
	Brown f. SAND, trace m. sand (7-65)		55	S16	SS	14.5	11 16 16 17	32	PID = 710 ppm
	Gray f. SAND, trace m.-c. sand (7-65)		60	S17	SS	13.5	15 22 20 23	42	Brown/gray SILT, trace f. sand and clay in SS tip PID = 530 ppm Trace visible petroleum like material near bottom of SS tip Minor on/off rig chatter D=60.5'-63'
	Brown f. sandy SILT, trace clay (10-65)		65	S18	SS	13	19 23 23 26	46	PID = 1240 ppm
	Red brown f. sandy SILT, some f. sand, trace clay (10-65)		70	S19	SS	15.5	20 29 28 28	57	PID = 950 ppm
	Inferred Red brown f.-c. SAND, trace f.-m. gravel (7-65)								On/off rig chatter D=73'-74.5' Slow/hard drilling D=74.5'-75.5' w/ rig chatter
	Inferred BOULDER (6-65)		75						
	Red brown f. SAND, trace silt, f. gravel, m.-c. sand, and clay (6-65)			S20	SS	13	51 55 100/5"	155/11"	PID = 900 ppm Spoon refusal D=77.5' Slow/hard drilling D=77.5'-78.75'
	Inferred BOULDER (6-65)								
	Red brown and brown f.-m. SAND, trace f.-m. gravel, c. sand, silt, and clay		80	S21	SS	24	19 41 36 36	77	PID = 1200 ppm
	Boring terminated D=81'		85						
			90						

BORING 1531601 GPJ LANGANFL.GDT 22/12/08

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LOG OF BORING LB2

SHEET 1 OF 2

PROJECT	Loews @ Gowanus
LOCATION	Brooklyn, NY
DRILLING EQUIPMENT	Davey Kent DK50RA Track Rig
SIZE AND TYPE OF BIT	4 7/8" and 3 7/8" Tri-Cone Roller Bits
CASING DIAMETER (in)	4 1/2" OD 4" ID
CASING DEPTH (ft)	13.5
SAMPLER	2" OD 1 3/4" ID Split Spoon (SS)
SAMPLER HAMMER	WEIGHT (lbs) 140 / DROP (in) 30
PROJECT NO.	1531601
ELEVATION AND DATUM	approx. el 11 [BBHDD]
DATE STARTED	12/8/98
DATE FINISHED	12/9/98
COMPLETION DEPTH	80 ft.
NUMBER OF SAMPLES	DIST. 20 / UNDIST. ---- / CORE ----
WATER LEVEL (ft.)	FIRST ---- / COMPL. ---- / 24 HR. 6.5
DRILLING FOREMAN	Tom Gregory/Kurt Conlon
INSPECTING ENGINEER	Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
								*New York City BC Classification numbers in parenthesis
approx. el 11	4" CONCRETE							Started drilling w/ water
	Brown and black f. SAND, trace silt, f.-c. sand, f. gravel, and coal (11-65)*		S1	SS	13.5	32 28 24 24	52	PID = 650 ppm On/off rig chatter D = 0.75'-5'
	Black and brown c. SAND and f. GRAVEL/COAL, trace f.-m. sand and silt (11-65)	5	S2	SS	13	10 7 9 7	16	PID = 102 ppm
0.0	Gray silty CLAY, some brown peat, trace f. sand (11-65)	10	S3 S4	SS	8	2 1 4 8	5	PID = 9 ppm PID = 10.2 ppm
	Brown/black f. SAND, some silt, trace clay (11-65)							
	Brown f. sandy SILT, trace clay (11-65)	15	S5 S6	SS	18	3 3 3 4	6	PID = 19.6 ppm PID = 400 ppm Added mud D = .15'
	Gray/brown PEAT, trace f. sand, silt, and clay (11-65)							
	Gray silty CLAY, trace organics/root (11-65)	20	S7 S8	SS	24	1 3 5 5	8	PP = 0.6 - 1.25 tsf PID = 19.7 ppm PID = 40 ppm
	Gray f. SAND, some clay, trace silt (8-65)							
	Brown/gray f. SAND, some silt, trace clay (8-65)	25	S9	SS	15	4 4 5 7	9	PID = 9 ppm
	Brown f.-m. sandy SILT, trace clay (10-65)	30	S10	SS	19.5	11 10 8 7	18	PID = 330 ppm Visible petroleum like material
	Brown f. SAND, trace m. sand (7-65)	35	S11	SS	16	14 16 22 24	38	PID = 800 ppm
	Brown/gray f. SAND, trace m. sand, clay, and silt (8-65)	40	S12	SS	18	5 7 12 18	19	PID = 20 ppm

BORING 1531601.GPJ LANGANFL.GDT 22/12/98

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LOG OF BORING LB2

SHEET 2 OF 2

PROJECT	Loews @ Gowanus	PROJECT NO.	1531601
LOCATION	Brooklyn, NY	ELEVATION AND DATUM	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BLOWS/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown f. sandy SILT, trace clay (10-65)		45	S13	SS	18	8 10 11 13	21	PID – 500 ppm
	Brown f. sandy SILT, trace clay (10-65)		50	S14	SS	14	16 19 22 28	41	PID = 1020 ppm
	Brown SILT, trace f. sand and clay (10-65)		55	S15	SS	17	19 24 24 25	48	PID – 830 ppm Gray/brown f. SAND, trace silt in S15 SS tip
	Brown f. SAND, trace m. sand and silt (7-65)		60	S16	SS	18	11 17 17 17	34	PID = 50 ppm Slightly visible petroleum like material
	Brown f. SAND, trace m.-c. sand, f. gravel, and silt (7-65)		65	S17	SS	14	17 44 44 24	88	PID = 600 ppm Visible petroleum like material
	Brown f.-m. SAND, trace c. sand, f. gravel, and silt (7-65)		70	S18	SS	5.5	14 13 16 22	29	PID = 880 ppm Rig chatter D = 72.5' - 75' Very slow/hard drilling D = 72.5' - 73.5'
	Inferred boulder (6-65)								
	Red brown f. SAND, some m.-c. gravel, trace silt, m.-c. sand, f. gravel, and clay (6-65)		75	S19	SS	11	22 26 32 23	58	PID = 500 ppm
	Red brown f. SAND, trace silt and clay (8-65)			S20	SS	6	32 32 25 25	57	PID > 2000 ppm
	Boring terminated D = 80'		80						Borehole grouted upon completion
			85						
			90						

BORING 1531601.GPJ LANGANFL.GDT 22/12/98

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LOG OF BORING LB3

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 12/8/98 · DATE FINISHED: 12/9/98 · COMPLETION DEPTH: 80.5 ft.
SIZE AND TYPE OF BIT: HW Rock Core and Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 18 · UNDIST. ---- · CORE ----
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH (ft): 19.5	WATER LEVEL (ft.): FIRST ---- · COMPL. ---- · 24 HR. 2.6
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Gus Suri/Mike Chizmar
SAMPLER HAMMER: WEIGHT (lbs) 140 · DROP (in) 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	6" CONCRETE w/ wire mesh								*New York City BC Classification numbers in parenthesis
	Inferred miscellaneous FILL (11-65)*								Started coring w/ water
	Black/gray f.-m. SAND, trace silt, c. sand, f. gravel, and coal (11-65)			S1	SS	8	25 33 44 93	77	PID = 125 ppm Slightly visible petroleum like material On/off rig charter D = 1' - 5'
	Brown f.-m. SAND, trace red brick and silt (11-65)		5	S2	SS	3	21 28 20 12	48	Petroleum like material floating in wash tub D = 5' PID = 84 ppm
	Brown c. SAND, some f. gravel, trace clay, silt, and f.-m. sand (11-65)		10	S3	SS	8	15 4 4 7	8	PID = 155 ppm Slightly visible petroleum like material
	Brown f.-c. SAND, some gravel, trace clay and silt (11-65)		15	S4	SS	4	5 2 3 4	5	Added mud D = 15' PID = 55 ppm Slightly visible petroleum like material
	Brown f.-c. SAND and f. GRAVEL, some clay, trace silt (11-65)		20	S5	SS	2.5	102/2.5	Refusal	Refusal D = 20' Hard drilling D = 20.25' - 20.75' PID = 340 ppm Visible petroleum like material Added mud D = 20'
	Inferred CONCRETE								
	Brown SILT, trace clay, f. sand, and f. gravel (10-65)		25	S6	SS	7	6 10 8 13	18	PID = 220 ppm
	Brown/gray SILT, trace clay and f. sand (10-65)		30	S7	SS	11	5 8 7 7	15	Hole too tight D = 23' to get rods down so removed existing casing and drilled to D = 30' w/ 4 7/8" bit, then spun/cored casing to D = 19.5' PID = 45 ppm Slightly visible petroleum like material
	Brown f. SAND, trace silt and clay (8-65)		35	S8	SS	10	3 4 4 12	8	PID = 460 ppm
	Brown f. sandy SILT, trace clay (10-65)		40	S9	SS	14	7 12 12 14	24	PID = 640 ppm

BORING 1531601.GPJ LANGAKFL.GDT 22/12/93

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LOG OF BORING LB3

SHEET 2 OF 2

PROJECT	Loews @ Gowanus	PROJECT NO.	1531601
LOCATION	Brooklyn, NY	ELEVATION AND DATUM	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST Bl./6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown f. SAND, trace silt (8-65)		45	S10 S11	SS	12	11 10 10 10	20	PID 25 ppm S11 4" Lense of brown SILT, trace clay and f. sand (10-65) w/ PID = 55 ppm in bottom of SS
	Brown f.-m. SAND (7-65)		50	S12	SS	14	10 11 12 17	23	PID = 90 ppm
	Brown f. SAND, trace m.-c. sand (7-65)		55	S13	SS	8.5	11 14 19 17	33	PID = 9.8 ppm
	Brown f. SAND, trace m.-c. sand and silt (7-65)		60	S14 S15	SS	11.5	15 17 17 19	34	PID = 280 ppm PID = 210 ppm
	Brown/gray SILT, trace clay and f. sand (10-65)								
	Red brown f. SAND, some silt, trace f. gravel, m.-c. sand, and clay (7-65)		65	S16	SS	5	23 100/3"	100/3"	Spoon refusal D = 66' w/ bouncing Rig chatter D = 68' PID = 95 ppm
	Red brown f.-m. SAND, trace c. sand and f. gravel (7-65)		70	S17 S18	SS	8	17 40 22 21	62	PID = 510 ppm PID = 800 ppm
	Red brown SILT, trace f. gravel, f.-c. sand, and clay (10-65)								Minor on/off rig chatter D = 72' - 76.5'
	Inferred BOULDER		75						Slow/hard drilling D = 76.5' - 79' w/ minor rig chatter
	Inferred Red brown f.-c. SAND, trace f. gravel, silt, and clay (7-65)		80		SS	0	58 53 100/3"	53/11"	Spoon refusal D = 80.5' Borehole grouted upon completion
	Boring terminated D=80.5'		85						
			90						

BORING 1531601.GPJ LANGANFLGDT 2/11/2/98

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LOG OF BORING LB4

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 12/3/98 / DATE FINISHED: 12/7/98 / COMPLETION DEPTH: 80 ft.
SIZE AND TYPE OF BIT: HW and NQ Rock Cores and Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 16 / UNDIST. ---- / CORE ----
CASING DIAMETER (in): 4 1/2" OD 4" ID / CASING DEPTH (ft): 24	WATER LEVEL (ft.): FIRST ---- / COMPL. ---- / 24 HR. 6.7
SAMPLER: Standard Split Spoon (SS) or Shelby Tube (ST)	DRILLING FOREMAN: Gus Suri/Mike Chizmar
SAMPLER HAMMER: WEIGHT (lbs) 140 / DROP (in) 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS/6in	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	5.5" CONCRETE w/ wire mesh								"New York City BC Classification numbers in parenthesis
	Inferred miscellaneous FILL (11-65)*								Started coring with water
0.0	Black/brown f.-c. SAND, trace silt, red brick, f.-c. gravel/coal (11-65)			S1	SS	8	17 92 85/1.5"	57/7.5	Spoon refusal D=2'
									PID = 400 ppm
	Very c. CONCRETE								COBBLE fragment in D=1'-3' SS tip
			5						Lost majority of water D=2'-12'
			10						
	Inferred CONCRETE								Hard/slow drilling D=12'-13.5'
									Broke through concrete D=13.5'
	Inferred WOOD (11-65)		15						WOOD in wash D=13.5'-25' w/ slow drilling
									One bend/dent in end of tube D=17'-19'
	WOOD FIBERS, trace gray f. sand (11-65)			S2	ST	5	PUSH PUSH PUSH PUSH		PID = 58 ppm
									Petroleum like material odor
			20						Added mud D=20'
	WOOD FIBERS (11-65)			S3	SS	3	12 10 10 11	20	PID = 7.2 ppm
									Petroleum like material odor
			25						Petroleum like material odor D=25'-25.5'
	WOOD FIBERS (11-65)			S4	SS	14	19 22 23 24	45	PID = 5.4 ppm
	Brown f. SAND, trace silt and clay (8-65)								
			30						
	Brown f. SAND, trace silt (8-65)			S5	SS	10	13 20 20 15	40	PID = 148 ppm Visible petroleum like material
									Visible petroleum like material
			35						
	Brown f. SAND, trace silt (8-65)			S6	SS	7	9 8 8 7	16	PID = 90 ppm Visible petroleum like material
									Visible petroleum like material
			40						
	Brown f. SAND, trace m. sand, silt, and clay (7-65)			S7	SS	14.5	10 10 12 12	22	PID = 9.2 ppm

BORING 1531601 GPJ LANGANFL.GDT 22/1/98

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LOG OF BORING LB4

SHEET 2 OF 2

PROJECT	Loews @ Gowanus	PROJECT NO.	1531601
LOCATION	Brooklyn, NY	ELEVATION AND DATUM	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown f. SAND, trace silt and clay (8-65)		45	S8	SS	16	9 12 17 12	29	PID = 1.8 ppm
	Brown SILT, some f. sand, trace m. sand and clay (10-65)		50	S9	SS	15.5	13 15 21 21	36	PID = 368 ppm
	Brown f. sandy SILT, trace m. sand (10-65)		55	S10 S11	SS	11	13 19 18 18	36	PID = 7 ppm PID = 13.5 ppm
	Brown f. SAND, trace m. sand and silt (7-65)								
	Brown/gray f. SAND, trace m. sand and silt (7-65)		60	S12	SS	11	12 16 16 15	32	PID = 5.2 ppm Slightly visible petroleum like material Rig chatter D=64.5'-65'
	Red brown f.-m. SAND, trace f. gravel, c. sand, silt, and clay (7-65)		65	S13	SS	11	25 39 33 45	72	PID = 780 ppm On/off rig chatter D=65'-70'
	Red brown f.-m. SAND, trace f.-m. gravel, c. sand, and silt (7-65)		70	S14	SS	12	32 55 56 87	111	Added mud D = 70' PID = 1 ppm On/off rig chatter D=70'-75'
	Red brown c. SAND, some f.-m. sand and f.-m. gravel, trace silt (6-65)		75	S15	SS	2.5	100/4.5	R*	*Spoon refusal D=75.5' PID = 4.6 ppm On/off rig chatter D=75'-78'
	Red brown f.-m. gravelly f.-m. SAND, trace c. sand and silt (6-65)			S16	SS	14.5	40 53 87 102	140	C. GRAVEL in S16 SS tip PID = 0.4 ppm Borehole grouted upon completion
	Boring terminated D=80'		80						
			85						
			90						

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LOG OF BORING LB5

SHEET 1 OF 2

PROJECT	Loews @ Gowanus
PROJECT NO.	1531601
LOCATION	Brooklyn, NY
ELEVATION AND DATUM	approx. el 11 [BBHDD]
DRILLING EQUIPMENT	Davey Kent DK50RA Track Rig
DATE STARTED	12/4/98
DATE FINISHED	12/8/98
COMPLETION DEPTH	80 ft.
SIZE AND TYPE OF BIT	4 7/8" and 3 7/8" Tri-Cone Roller Bits
NUMBER OF SAMPLES	DIST. 15 / UNDIST. ---- / CORE ----
CASING DIAMETER (in)	4 1/2" OD 4" ID
CASING DEPTH(ft)	30.5
WATER LEVEL (ft.)	FIRST ---- / COMPL. ---- / 24 HR. 6.4
SAMPLER	2" OD 1 3/4" ID Split Spoon (SS)
DRILLING FOREMAN	Tom Gregory/Kurt Conlon
SAMPLER HAMMER	WEIGHT(lbs) 140 / DROP(in) 30
INSPECTING ENGINEER	Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	4.5" CONCRETE						
	5.5" DENSE GRADED AGGREGATE						
	3.5" CONCRETE						
0.0	2.5" DENSE GRADED AGGREGATE						
	Red BRICK (11-65)*						
	Inferred Red BRICK						
	(Red f.-c. SAND, trace silt and clay) Inferred red BRICK (11-65)	S1	SS	0	50/0.5"	R*	*New York City BC Classification numbers in parenthesis Began drilling with water *Spoon refusal D=1' 50/0.5" w/ bouncing PID = 49 ppm Sample S1 Gray f.-c. SAND and c. GRAVEL FRAGMENT, trace silt from SS tip
		S2	SS	4	90/4"	R*	Hard/slow drilling w/ on/off rig chatter D=1'-5' and Red wash water D=2.5'-5' *Spoon refusal D=5.5' 90/4" w/ bouncing PID = 20 + ppm Hard/slow drilling w/ on/off rig chatter and red wash water D=5'-10'
	(Red f.-c. SAND, trace f. gravel and silt) Inferred red BRICK (11-65)	S3	SS	3	100/3"	R*	*Spoon refusal D=10' 100/3" w/ bouncing PID = 21 ppm Hard/slow drilling w/ on/off rig chatter and red wash water D=10'-27.5'
	Inferred red BRICK (11-65)						
	Inferred red BRICK (11-65)						
	Inferred red BRICK (11-65)						Petroleum like material in wash water D=27.5' Hard drilling D=28'-28.5'
	Gray f.-m. SAND, trace c. sand (11-65)	S4	SS	17	3 3 9 18	12	PID = 20 ppm Visible petroleum like material Gray f. sandy SILT, trace clay and m. sand in S4 SS tip Added mud D=30'
	Gray silty CLAY, trace f. sand (11-65)	S6 SS	SS	19	4 5 23 28	28	PP = 1.2-1.5 tsf PID = 9.8 ppm PID = 180 ppm
	Gray/brown f. SAND, trace m. sand and silt (7-65)						
	Brown/gray silty f. SAND (8-65)	S7	SS	13	11 11 13 11	24	PID = 1.1 ppm

SYMBOL LOG / DEPTH SCALE: 5, 10, 15, 20, 25, 30, 35, 40

BORING 1531601.GPJ LANGANFI.GDT 7/1/99

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LOG OF BORING LB5

SHEET 2 OF 2

PROJECT	Loews @ Gowanus
LOCATION	Brooklyn, NY
PROJECT NO.	1531601
ELEVATION AND DATUM	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown/gray SILT, some f. sand, trace clay (10-65)		45	SB	SS	12.5	11 15 15 24	34	PP = No reading PID = 400 ppm
	Gray/brown f. SAND, some silt, trace m. sand (7-65)		50	S9	SS	15	13 19 22 23	41	PID = 1.2 ppm
	Gray/brown f.-m. SAND, trace silt (7-65)		55	S10	SS	8	6 16 19 22	35	PID = 2.2 ppm Hard drilling D=58'-60'
	Brown f.-c. SAND, trace f.-m. gravel and silt (6-65)		60	S11	SS	9	12 17 27 28	44	PID = 0.4 ppm On/off rig chatter D=60'-65'
	Red brown f. SAND, some silt, trace m.-c. sand and f. gravel (7-65)		65	S12	SS	15	19 20 25 25	45	PID = 8.2 ppm On/off rig chatter D=65'-70'
	Red brown f.-m. SAND, some f.-m. gravel, trace c. sand and silt (6-65)		70	S13	SS	6	62 35 57 31	102	PID = 3.3 ppm On/off rig chatter D = 70'-75'
	Red brown f.-c. SAND, trace f.-m. gravel and silt (6-65)		75	S14	SS	7	22 49 25 13	74	PID = 0.4 ppm On/off rig chatter D=75'-78'
	Red brown f.-m. SAND, trace silt, c. sand, and f. gravel (7-65)			S15	SS	8	26 24 28 15	52	PID = 340 ppm Borehole grouted upon completion
	Boring terminated D=80'		80						
			85						
			90						

BORING 1531601.GPJ LANGANFL.GDT 7/1/09

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LOG OF BORING LB6

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 11/24/98; DATE FINISHED: 11/25/98; COMPLETION DEPTH: 77 ft.
SIZE AND TYPE OF BIT: HW Rock Core and Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 16; UNDIST. ----; CORE ----
CASING DIAMETER (in): 4 1/2" OD 4" ID; CASING DEPTH (ft): 13.5	WATER LEVEL (ft.): FIRST ----; COMPL. ----; 24 HR. 3.8
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Gus Surl/Mike Chizmar
SAMPLER HAMMER: WEIGHT (lbs) 140; DROP (in) 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	5" CONCRETE w/ wire mesh								*New York City BC Classification numbers in parenthesis
	Inferred Miscellaneous FILL (11-65)* Black/brown f.-c. SAND, trace f.-c. gravel/coal and silt (11-65)			S1	SS	14	24 21 14 12	35	Started coring w/ water; PID = 16.4 ppm
	Brown f.-c. SAND, trace f.-m. gravel/coal and silt (11-65)		5	S2	SS	4	7 7 5 5	12	Trace wood and red brick in wash D=6.25'-10'; PID = 5.5 ppm
									Rig chatter D=7.25'-8.25'; Lost some water D=7.25'-10'; Added mud D=10'
	Brown/black f.-c. SAND, trace silt, c. gravel/coal, and organics/wood fibers (11-65)		10	S3	SS	11.5	12 4 5 20	9	PID = 11.8 ppm
	Brown f.-c. SAND, some silt and clay, trace f.-m. gravel (11-65)		15	S5 S4	SS	16	1 2 2 2	4	PID = 4.2 ppm; PID = 18.3 ppm
	Brown, gray, and black PEAT, trace silt and clay (11-65)								
	Brown f. SAND, some silt, trace clay (8-65)		20	S6	SS	17	2 1 2 2	3	PID = 5 ppm
	Gray/brown f. SAND, trace silt (8-65)		25	S7	SS	13	11 12 16 15	28	PID = 20 ppm
	Brown and gray f.-m. SAND, some silt, trace clay (7-65)		30	S8	SS	14.5	7 8 8 7	16	PID = 30 ppm
	Gray/brown f.-m. SAND (7-65)		35	S9	SS	17	4 6 17 20	23	PP = 0.9-1.4 tsf; PID = 11.2 ppm
	Gray CLAY, trace f. sand and silt (9-65)								
	Brown f. SAND, trace silt (8-65)		40	S10	SS	16.5	10 17 15 16	32	0.5" of Gray CLAY, trace f. sand and silt (9-65) in top of S10 SS sample; PID = 550 ppm

BORING 1531601.GPJ LANGANFL.GDT 2/21/99

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LOG OF BORING LB6

SHEET 2 OF 2

PROJECT	Loews @ Gowanus	PROJECT NO.	1531601
LOCATION	Brooklyn, NY	ELEVATION AND DATUM	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS/FOOT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown SILT, some f. sand, trace clay (10-65)		45	S11	SS	14	16 19 13 14	32	PID = 1.4 ppm
	Gray/black f.-m. SAND, trace silt (7-65)		50	S12	SS	18	20 24 25 22	49	PID = 1.2 ppm
									Rig chatter D=53.75'-55'
	Inferred COBBLE (6-65)		55	-	SS	0	162/4"	R*	*Spoon refusal D=55' Rig chatter D=55'-55.25'
									Minor rig chatter D=58.75'
	Red brown f. SAND, some f.-c. gravel, trace m.-c. sand and silt (6-65)		60	S13	SS	111	150 58 51 65	109	PID = 400 ppm Slow/hard drilling D=62.25'-62.5' On/off rig chatter D=60'-65'
	Red brown f. SAND, some f.-c. gravel, trace m.-c. sand and silt (6-65)		65	S14	SS	6	96 39 25 26	65	PID = 155 ppm On/off rig chatter D=65'-70'
	Red brown f. SAND, some f.-m. gravel, trace m.-c. sand and silt (6-65)		70	S15	SS	13	62 100 93 93	193	PID = 410 ppm Minor on/off rig chatter D=70'-75'
	Red brown f.-c. GRAVEL and f.-c. SAND, trace silt (6-65)		75	S16	SS	14	100 88 77 55	165	PID = 380 ppm Borehole grouted upon completion
	Boring terminated D=77'		80						
			85						
			90						

BORING 1531601.GPJ LANGANFL.GDT 22/12/98

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LOG OF BORING LB7

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 11/19/98 · DATE FINISHED: 11/24/98 · COMPLETION DEPTH: 77 ft.
SIZE AND TYPE OF BIT: HW and NQ Rock Cores and Tri-Cone Roller Bit	NUMBER OF SAMPLES: DIST. 18 · UNDIST. 1 · CORE ----
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH (ft): 7	WATER LEVEL (ft.): FIRST ---- · COMPL. ---- · 24 HR. 6.5
SAMPLER: Standard Split Spoon (SS) or Shelby Tube (ST)	DRILLING FOREMAN: Gus Suri/Mike Chizmar
SAMPLER HAMMER · WEIGHT (lbs): 140 · DROP (in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	5" CONCRETE w/ wire mesh								*New York City BC Classification numbers in parenthesis
	5" CONCRETE								Started coring w/ water
	Inferred miscellaneous FILL (11-65)*								Lost some water D = 1.5'
	Gray/black f.-c. SAND, some silt (11-65)			S1	SS	7	28 47 54 20	101	PID = 400 ppm
									Petroleum like material odor
									On/off rig chatter D = 1.5' - 4.5'
	Black SILT/PETROLEUM LIKE MATERIAL, some c. sand, and white cement fragments, trace f.-m. sand and clay (11-65)		5						Petroleum like material in wash D = 4.75'
				S2	SS	2	4 2 1 50/1"	3	Spoon refusal 50/1" w/ bouncing D = 6'
0.0	Piece of STEEL								PID = 480 ppm
	Inferred miscellaneous FILL (11-65)								A 16" x 4" x 1/4" piece of vertical steel on a 1/2" thick base plate D = 7' w/ 2" wide horizontal pieces of steel, which were cut, at the top inside and bottom outside D = 6' - 7'
0.0	0.5" STEEL			S3					
0.0	CONCRETE								
	Petroleum like material treated WOOD (11-65)		10						Lost some water D = 8' - 9.25'
	Inferred WOOD (11-65)								Added mud D = 9.25'
	Inferred Brown PEAT, some silt (11-65)			-	SS	0	WOR WOR WOR WOR	WOR	Drilled through WOOD and lost circulation D = 9.75'
									WOR: Weight of rods
									WOR went from D = 10' - 15'
	Inferred Brown PEAT, some silt (11-65)		15	S4	SS	0	WOH WOH WOH WOH	WOH	WOH: Weight of hammer
									Sample S4 SS tip material
									PID = 590 ppm
									WOH went from D = 15' - 17.5'
	Brown PEAT, some silt (11-65)			T1	ST	24	PUSH PUSH PUSH PUSH	PUSH	Visible petroleum like material w/ odor
	Brown/gray f. SAND, some silt (8-65)								Pushing became more difficult D = 19.25'
	Brown f. SAND, some silt (8-65)		20	S5	SS	19	1 3 3 4	6	Added mud D = 20'
									PID = 920 ppm
	Brown f. SAND, trace silt and clay (8-65)		25	S6	SS	11	34 42 33 40	75	PID = 700 ppm
									Trace wood fibers in wash D = 27' - 30.5'
									Tight fit for bit D = 27' - 30.5'
	Brown f.-m. SAND, trace silt (7-65)		30	S8 S7	SS	7	18 19 11 12	30	1" of WOOD FIBERS, trace f.-m. sand w/
									PID = 170 ppm in top of SS
									PID = 750 ppm
									Brown SILT, trace clay and f. sand in SS tip D = 32.5'
	Brown SILT, trace clay and f. sand (10-65)		35	S10 S9	SS	18	3 3 2 3	5	PP = 0.1 - 0.3 tsf
									PID = 640 ppm
	Gray CLAY, some silt (9-65)								PP = 0.6 - 0.9 tsf
									PID = 320 ppm
	Gray/brown CLAY, some silt, trace f. sand (9-65)		40	S11	SS	17	WOR 2 2 4	4	PP = 0.4 - 0.65 tsf
									PID > 2000 ppm

BORING 1531601.GPJ LANGANFL.GDT 22/12/98

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LOG OF BORING LB7

SHEET 2 OF 2

PROJECT	PROJECT NO.
Loews @ Gowanus	1531601
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BLOWS	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown CLAY, some silt, trace f. sand (9-65)		45	S12	SS	13	8 4 4 4	8	PP = 0.5 - 0.65 tsf PID = 170 ppm
	Brown f. SAND, trace silt (8-65)		50	S13	SS	14	19 31 25 19	56	PID = 550 ppm Rig chatter D = 52.25' - 53'
	Brown f.-c. SAND, trace silt and f.-m. gravel (6-65)			S14	SS	10.5	20 20 24 24	44	PID = 710 ppm
			55						Added mud D = 57' - 58' Rig chatter D = 57.5 - 58'
	Red brown f.-c. SAND, trace silt and f.-m. gravel (6-65)		60	S15	SS	8	19 36 31 22	67	PID = 40 ppm On/off rig chatter D = 60' - 65'
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		65	S16	SS	8	28 42 22 19	64	PID = 640 ppm On/off rig chatter D = 65' - 70'
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		70	S17	SS	7.5	45 26 22 24	46	PID = 20 ppm On/off rig chatter D = 70' - 75'
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		75	S18	SS	8	50 28 22 25	50	PID = 540 ppm Borehole grouted upon completion
	Boring terminated D = 77'		80						
			85						
			90						

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LOG OF BORING LB8

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 11/18/98 · DATE FINISHED: 11/19/98 · COMPLETION DEPTH: 55 ft.
SIZE AND TYPE OF BIT: HW and NQ Rock Cores and Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 14 · UNDIST. ---- · CORE ----
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH(ft): 19.5	WATER LEVEL (ft.): FIRST ---- · COMPL. ---- · 24 HR. 3.6
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Gus Suri/Mike Chizmar
SAMPLER HAMMER · WEIGHT(lbs): 140 · DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BLOWS	N-VALUE BLOWS PER 6"	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	5" CONCRETE w/ wire mesh								*New York City BC Classification numbers in parenthesis
	CONCRETE DEBRIS and Inferred miscellaneous FILL (11-65)*								Started coring w/ water
	Red BRICK, some gray c. sand, trace f. gravel, concrete, tan brick, gray f.-m. sand, and white tile (11-65)			S1	SS	4.5	12 9 10 24	19	Lost some water D = 2' PID = 82 ppm
0.0	Red BRICK, some c. sand, trace f.-m. sand and gravel (11-65)		5	S2	SS	1	25/5"	R*	Lost water D = 2' - 6.5' *Spoon refusal 28/5" w/ bouncing D = 4.5' Hard/slow drilling w/ rig chatter D = 4.5' - 5' PID = 135 ppm
0.0	CONCRETE Inferred reinforced CONCRETE								
	Gray c. SAND, trace coal, concrete, red brick, gray f.-m. sand, f.-m. gravel, and glass (11-65)			S3	SS	3	9 7 4 4	11	PID = 15 ppm
			10						
	Gray c. SAND, trace coal, red brick, gray f.-m. sand, silt, and f. gravel (11-65)			S4	SS	1	5 3 2 4	5	PID = 260 ppm
	Gray c. SAND, some coal, trace red brick, gray f.-m. sand, silt, and f. gravel (11-65)		15	S5	SS	9	2 2 3 5	5	PID = 52 ppm
	Brown PEAT (11-65)								Added mud D = 20"
	Brown f. sandy SILT, trace clay (10-65)		20	S6	SS	6	4 4 6 5	10	PID = 30 ppm
	Brown f.-m. SAND, trace silt (7-65)		25	S7	SS	6	29 31 33 28	64	PID = 11 ppm
	Gray/brown SILT, some f. sand, trace m. sand and clay (10-65)		30	S8	SS	5	WOH 5 6 5	13	WOH: Weight of hammer Over drilled to D = 30'-5' resulting in WOH blow count PID = 36 ppm
	Brown/gray SILT, some clay, trace f. sand (10-65)		35	S10 S9	SS	17	4 3 3 6	6	PP = No reading PID = 420 ppm PP = 0.4 tsf PID = 340 ppm
	Brown/gray silty CLAY, trace f. sand (9-65)								
	Brown/gray silty CLAY, trace f. sand (9-65)		40	S11	SS	19	2 4 2 5	6	PP = 0.3 - 0.4 tsf PID = 108 ppm

BORING 1531601.GPJ LANGANFL.GDT 7/1/99

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LOG OF BORING LB8

SHEET 2 OF 2

PROJECT	PROJECT NO.
Loews @ Gowanus	1531601
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown/gray silty CLAY, trace f. sand (9-65)		45	S12	SS	19	2 1 WOH 1	1	PP = No reading - 0.2 tsf PID = 810 ppm
	Brown/gray silty CLAY, trace f. sand (9-65)		50	S13	SS	17	WOH WOH 9 17	9	PP = 0.2 - 0.7 tsf PID = 400 ppm
	Brown f.-m. SAND, trace gray silt and clay (7-65)			S14	SS	11	14 14 13 15	27	PID = 520 ppm
	Boring terminated D = 55'		55						Borehole grouted upon completion
			60						
			65						
			70						
			75						
			80						
			85						
			90						

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LOG OF BORING LB9

SHEET 1 OF 2

PROJECT: Loews @ Gowanus	PROJECT NO.: 1531601
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: approx. el 11 [BBHDD]
DRILLING EQUIPMENT: Davey Kent DK50RA Track Rig	DATE STARTED: 11/16/98 · DATE FINISHED: 11/18/98 · COMPLETION DEPTH: 57 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0' - 5') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 14 · UNDIST. ---- · CORE ----
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH (ft): 13.5	WATER LEVEL (ft.): FIRST ---- · COMPL. ---- · 24 HR. 4.6
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Gus Suri/Mike Chizmar
SAMPLER HAMMER · WEIGHT (lbs): 140 · DROP (in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
pprox. el 11	4" CONCRETE Inferred DENSE GRADED AGGREGATE CONCRETE								*New York City BC Classification numbers in parenthesis Started drilling w/ water Lost some water D=2.5' D=0'-4.5' : Slow/hard drilling and wash water Gray cement/concrete color NX Rock Core Barrel used D=4'-4.5' : 6" Concrete core recovered Lost some water D=4.5'
0.0	Inferred miscellaneous FILL (11-65)*		5	S1	SS	0	4 7 5 4	12	Attempted a 2nd SS to acquire some form a sample: Only gray sand wash was recovered, Sample S1
	Inferred Gray c. SAND/COAL, trace silt, f.-m. sand, clay, f. gravel, and organics (11-65)			S2	SS	0	3 2 2 2	4	PID = 2 ppm Overdrove SS 7'-10' to aid in recovery Sample S2 SS tip material
	Gray c. SAND/COAL, trace f.-m. sand, silt, and f. gravel (11-65)		10	S3	SS	4	2 3 2 2	5	Overdrove SS D=10'-13' to aid in recovery PID = 3.3 ppm
									Added mud D=15'
	Gray silty, organic/rooty CLAY (11-65)		15	S5 S4	SS	16.5	3 2 2 2	4	PID = 0 ppm PID = 0 ppm
	Brown/gray PEAT (11-65)								
	Brown SILT, trace clay and f. sand (10-65)		20	S6	SS	10.5	5 7 12 10	19	PID = 38 ppm
	Inferred Brown/gray f.-m. SAND, trace silt (7-65)		25	-	SS	0	27 32 37 34	59	
	Brown/gray f.-m. SAND, trace silt (7-65)			S7	SS	17	24 26 39	65	PID = 0 ppm
	Brown f.-m. SAND, trace silt and clay		30	S8	SS	7	11 11 9 10	20	PID = 0 ppm
	Gray/brown silty CLAY, trace f.-m. sand (9-65)		35	S9	SS	17.5	3 4 6 7	10	PID = 0.2 ppm
	Brown/gray f.-m. SAND, trace silt (7-65)		40	S10	SS	10.5	16 10 10 10	20	PID = 0 ppm

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LOG OF BORING LB9

SHEET 2 OF 2

PROJECT	PROJECT NO.
Loews @ Gowanus	1531601
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	approx. el 11 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BLS/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown/gray SILT, some f. sand, trace clay (10-65)		45	S11	SS	19	7 6 6 6	12	PID = 0 ppm
	Brown/gray f. sandy SILT, trace f. gravel (10-65)		50	S13 S12	SS	15	15 18 15 17	31	PID = 0 ppm
	Brown/gray f.-m. SAND, trace silt (7-65)								PID = 0 ppm
	Brown f.-m. SAND, trace silt (7-65)		55	S14	SS	15	17 19 23 32	42	PID = 0 ppm
	Boring terminated D=57'								Borehole grouted upon completion
			60						
			65						
			70						
			75						
			80						
			85						
			90						

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LOG OF BORING RB1

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 7.4 [BBHDD]
DRILLING EQUIPMENT: Mobile B61 Truck Mounted Rig	DATE STARTED: 10/20/98 / DATE FINISHED: 10/20/98 / COMPLETION DEPTH: 80 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 16 / UNDIST. -------- / CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID / CASING DEPTH(ft): 18	WATER LEVEL (ft.): FIRST ▽ 8 / COMPL. ▼ ----- / 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Ernest Thomas/Desmond Williams
SAMPLER HAMMER / WEIGHT(lbs): 140 / DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
pprox. el. 7.4	Surficial ASPHALT								* New York City BC Classification numbers in parenthesis Added water D = 0'
	Brown f.-c. SAND, trace silt and red brick (11-65)*		5	S1	SS	14	4 3 3 2	6	PID = 0 ppm
	Brown f.-c. SAND, trace f.-m. gravel/coal, silt, and red brick (11-65)		10	S2	SS	4	1 6 2 2	8	PID = 196 ppm, visible "Copper" brown petroleum like material Trace wood in wash
	Brown f.-c. SAND, trace silt, f.-m gravel, and wood (11-65)		15	S3	SS	13	8 5 3 2	8	PID = 290 ppm, visible petroleum like material Added mud D = 15'
	Inferred WOOD FIBERS and brown clayey SILT, trace f. sand (11-65)		20	S4	SS	0	6 2 2 1	4	PID = 25 ppm Sample S4 spoon tip material
	WOOD FIBERS, trace brown silt and f. sand (11-65)		25	S5	SS	9	21 29 38 41	67	PID = 52 ppm Very slow/hard drilling and wood fibers in wash D = 23' - 28'
	Green brown SILT, trace clay, wood fibers, and f.-m. sand (11-65)		30	S6	SS	16	8 10 11 12	21	PID = 9.6 ppm
	Brown/gray f.-m SAND, some silt and clay (7-65)		35	S7	SS	19	4 7 15 13	22	PID = 168 ppm, slightly visible petroleum like material
	Brown silty f. SAND (8-65)		40	S8	SS	14.5	10 13 10 10	23	PID = 20 ppm

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LOG OF BORING RB1

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 7.4 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Gray/brown f.-m SAND (7-65)		45	S9	SS	13	9 12 15 21	27	PID = 410 ppm, petroleum like material very visible
	Gray/brown f.-m. SAND, trace silt (8-65)		50	S10	SS	15	12 15 18 20	33	PID = 188 ppm, visible petroleum like material
	Brown f.-m. SAND (7-65)		55	S11	SS	12	6 9 11 11	20	PID = 7.1 ppm, visible petroleum like material
	Brown f.-m. SAND, trace silt (7-65)		60	S12	SS	16	11 14 16 18	30	PID = 330 ppm, very visible petroleum like material
									Rig chatter D = 62'
	Red/gray f.-c. GRAVEL and f.-c. SAND, trace silt (6-65)		65	S13	SS	4	77 62 22 18	84	Slow/hard drilling D = 62' - 63' PID = 25 ppm Minor rig chatter D = 63' to 68'
	Inferred Gray f.-c. GRAVEL, some red/brown silty clay and f.-c. sand (6-65)		70	S14	SS	0	21 28 22 26	50	Petroleum like material floating on the surface of wash tub PID = 19.8 ppm Sample S14 spooon tip material
	Red brown f.-c. SAND, trace silt, f.-m. gravel, and clay (6-65)		75	S15	SS	12	33 27 19 19	46	PID = 3 ppm
									Rig chatter D = 77'
	Red brown f.-c. SAND, some clay, trace silt and f.-m. gravel (6-65)		80	S16	SS	9.5	14 12 14 12	26	PID = 5.1 ppm
	Boring terminated D = 80'		85 90						Borehole grouted upon completion

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LOG OF BORING RB2

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 9.0 [BBHDD]
DRILLING EQUIPMENT: CME 75 Truck Mounted Rig	DATE STARTED: 10/19/98 · DATE FINISHED: 10/20/98 · COMPLETION DEPTH: 85 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 16 · UNDIST. -------- · CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH(ft): 14	WATER LEVEL (ft.): FIRST ▽ 10 · COMPL. ▼ ----- · 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Tommy Gregorey/Chris Mitchell
SAMPLER HAMMER · WEIGHT(lbs): 140 · DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
Approx. el. 9.0	Surficial ASPHALT								*New York City BC Classification numbers in parenthesis Added water D = 2'
	Brown f.-c. GRAVEL, trace f.-c. sand, silt, and red brick (11-65)*		5	S1	SS	4	4 4 5 5	9	PID = 0.1 ppm
	Brown/black f.-m. SAND, trace silt, coarse sand, and f. gravel/coal (11-65)	▽	10	S2	SS	3.5	4 2 5 2	7	PID = 14 ppm
	Gray silty CLAY, trace roots and shell (11-65)		15	S3	SS	24	2 1 1 1	2	PID = 0.4 ppm
	Gray silty CLAY, some roots/wood (11-65)		20	S4	SS	24	WOH WOH 2 1	2	WOH: Weight of hammer Added mud D = 20' PID = 0.2 ppm
	Brown f.-m. SAND, trace silt and m. gravel (7-65)		25	S5	SS	13	9 14 18 19	32	PID = 17.2 ppm, visible petroleum like material sheen
	Brown f.-m. SAND (7-65)		30	S6	SS	24	19 29 38 30	67	PID = 250 ppm, visible petroleum like material
	Brown silty f. SAND (8-65)		35	S7	SS	17	10 16 13 14	29	PID = 40 ppm, visible petroleum like material
	Brown SILT, trace f. sand and clay (10-65)		40	S8	SS	15	20 17 17 18	34	PID = 32 ppm

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LOG OF BORING RB2

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 9.0 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG.	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Gray/brown f.-m. SAND, trace silt (7-65)		45	S9	SS	17	7 6 12 14	18	PID = 8 ppm, visible petroleum like material Minor rig chatter
	Gray/brown f.-m. SAND (7-65)		50	S10	SS	20	12 13 13 15	26	PID = 20 ppm, slightly visible petroleum like material
	Gray/brown f.-m. SAND (7-65)		55	S11	SS	20	9 7 8 10	15	PID = 10.8 ppm
	Brown f.-m. SAND, some silt, trace clay (7-65)		60	S12	SS	18	9 12 10 11	22	PID = 5.9 ppm
	Red brown f.-c. sandy SILT, some clay, trace f. gravel (10-65)		65	S13	SS	15	31 16 19 27	35	Rig chatter D = 63.5' - 65' "Copper" brown petroleum like material floating on the surface of wash tub PID = 6.2 ppm Major rig chatter D = 65' - 70'
	Red brown f.-m. SAND,trace silt, clay, and m. gravel (7-65)		70	S14	SS	14	24 29 27 21	56	PID = 8.6 ppm Minor rig chatter D = 70' - 75'
	Red brown f.-m. SAND, trace silt, clay, and f. gravel (7-65)		75	S15	SS	14	23 22 21 28	43	PID = 43 ppm Rig chatter D = 75' - 83'
	Red brown f.-m. SAND, trace silt, clay, and c. sand (7-65)		80	S16	SS		43 30 39 38	69	PID = 6 ppm
	Boring terminated D = 85'		85 90						Borehole grouted upon completion

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LOG OF BORING RB3A

SHEET 1 OF 1

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx el. 10.1 [BBHDD]
DRILLING EQUIPMENT: Mobile B61 Truck Mounted Rig	DATE STARTED: 10/19/98 / DATE FINISHED: 10/19/98 / COMPLETION DEPTH: 1 ft.
SIZE AND TYPE OF BIT: 4 7/8" Tri-Cone Roller Bits w/water	NUMBER OF SAMPLES: DIST. -------- / UNDIST. ------- / CORE --------
CASING DIAMETER (in): ----- / CASING DEPTH(ft):	WATER LEVEL (ft.): FIRST ----- / COMPL. ----- / 24 HR. -----
SAMPLER: --------	DRILLING FOREMAN: Ernest Thomas/Desmond Williams
SAMPLER HAMMER / WEIGHT(lbs): ----- / DROP(in): -----	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
pprox el. 10.1	2.5" ASPHALT 6.5" Black f.-c. SAND and GRAVEL (11-65)* 3" COBBLE/BOULDER (6-65)								*New York City BC Classification numbers in parenthesis Added water D = 0.5' Hard/slow drilling D = 0.75' - 1' Drill equiptment refusal D = 1'
	Boring terminated D = 1'		5						
			10						
			15						
			20						
			25						
			30						
			35						
			40						

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LOG OF BORING RB3B

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 10.1 [BBHDD]
DRILLING EQUIPMENT: Mobile B61 Truck Mounted Rig	DATE STARTED: 10/19/98; DATE FINISHED: 10/19/98; COMPLETION DEPTH: 80 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 13; UNDIST. --------; CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID; CASING DEPTH(ft): 13	WATER LEVEL (ft.): FIRST ▽ 8; COMPL. ▼ -----; 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Ernest Thomas/Desmond Williams
SAMPLER HAMMER; WEIGHT(lbs): 140; DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
Approx. el. 10.1	Surficial ASPAHLT								*New York City BC Classification numbers in parenthesis Rig chatter D = 0' - 3'
	Black f.-c. SAND, trace silt, f. gravel, and red brick (11-65)*		5	S1	SS	13	10 6 9 8	15	PID = 5 ppm, petroleum like material oder
	Inferred miscellaneous FILL (11-65)		10	-	SS	0	2 1 1 1	2	Added mud D = 10'
	Gray/brown organic SILT/PEAT, trace f. gravel (11-65)		15	S2	SS	10	2 2 2 1	4	PID = 0.1 ppm, petroleum like material oder
	Gray silty CLAY, trace shell and organics/root (11-65)		20	S3	SS	21	WOH WOH WOH WOH	WOH	WOH: Weight of hammer PID = 0 ppm
	Gray silty CLAY, trace shell and organics (11-65)		25	S4	SS	15	2 2 2 2	4	PID = 0 ppm
	Brown silty f. SAND, trace clay (8-65)		30	S5	SS	15	3 4 7 8	11	PID = 0.5 ppm, slight pertroleum like material oder
	Gray f.-m. SAND (7-65)		35	S6	SS	20	13 18 18 15	36	PID = 95 ppm, visible petroleum like material w/oder
	Brown/gray f. sandy SILT, trace clay (10-65)		40	S7	SS	15	9 12 9 16	21	PID = 8 ppm, petroleum like material oder

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LOG OF BORING RB3B

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 10.1 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown silty f. SAND, trace clay (8-65)		45	S8	SS	14	8 11 13 14	24	PID = 5.2 ppm, petroleum like material oder
	Brown silty f.-m. SAND, trace clay (7-65)		50	S9	SS	17	12 13 18 24	31	PID = 6.5 ppm, petroleum like material oder
	Brown/gray f.-c. SAND, trace f. gravel (7-65)		55	S10	SS	13	9 12 14 15	26	PID = 0.6 ppm, slight petroleum like material oder
	Gray/brown f.-c. SAND (7-65)		60	S11	SS	14	13 18 18 20	36	PID = 1.2 ppm, petroleum like material oder
	Gray/brown SILT, some clay, trace f. sand (10-65)		65	S12	SS	15	10 9 18 20	27	PID = 0.2 ppm
	Red brown f.-c. SAND, trace silt and f. gravel (6-65)		70	S13	SS	7	21 24 80 100/3"	104	PID = 0.7 ppm, petroleum like material oder Spoon refusal D = 69.5' Rig chatter D = 69.5' and 73'
	Red brown f.-c. SAND, some silt and clay, trace f. gravel (7-65)		75	S14	SS	7	28 21 15 18	36	PID = 0.1 ppm Minor rig chatter D = 73' - 78'
	Red brown clayey SILT, trace f. sand, trace m. gravel (10-65)		80	S15	SS	18	18 19 13	32	PID = 0.3 ppm, petroleum like material oder
	Boring terminated D = 80'		85 90						Borehole grouted upon completion

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LOG OF BORING RB4

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 10.4 [BBHDD]
DRILLING EQUIPMENT: CME 75 Truck Mounted Rig	DATE STARTED: 10/16/98 / DATE FINISHED: 10/19/98 / COMPLETION DEPTH: 73 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 14 / UNDIST. -------- / CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID / CASING DEPTH(ft): 10	WATER LEVEL (ft.): FIRST ----- / COMPL. ----- / 24 HR. 6.5
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Tommy Gregorey/Chris Mitchell
SAMPLER HAMMER / WEIGHT(lbs): 140 / DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
prox. el. 10.4	Surficial ASPHALT								*New York City BC Classification numbers in parenthesis Black drill water w/ petroleum like material oder D = 1.5' - 5'
	Black/brown f.-c. SAND, some silt, trace f. gravel/coal, wood/organics, and red brick (11-65)*		5	S1	SS	5	2 8 6 8	14	PID = 0.2 ppm, petroleum like material oder
	Black and white f. GRAVEL/COAL, trace m.-c. sand (11-65)		10	S2	SS	TRACE	1 1 WOH WOH	1	WOH: Weight of hammer PID = 3 ppm, petroleum like material oder Over drove spoon to aid in Sample recovery
	Black and white f. GRAVEL/COAL, trace m.-c. sand and glass (11-65)		15	S3	SS	TRACE	1 2 1 1	3	PID = 4 ppm, petroleum like material oder Added mud D = 15'
	Gray silty CLAY, trace shell and f. gravel (11-65)		20	S4	SS	14	1 WOH WOH WOH	WOH	PID = 0.4 ppm, petroleum like material oder
	Gray silty CLAY, trace shell (11-65)		25	S5	SS	8	1 WOH WOH WOH	WOH	PID = 7.2 ppm, petroleum like material oder
	Gray SILT, trace clay, f.-m. sand, f.-m. gravel/coal, and shell (10-65)		30	S6	SS	22	9 12 12 9	24	PID = 8 ppm, slight petroleum like material odor
	Brown f.-m. SAND (7-65)		35	S7	SS	16	22 23 22 13	45	PID = 190 ppm, visible petroleum like material w/ oder
	Brown f.-m. SAND, trace silt and coal (7-65)		40	S8	SS	19	20 15 15 20	30	PID = 2.5 ppm, petroleum like material

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LOG OF BORING RB4

SHEET 2 OF 2

PROJECT	Gowanus Development	PROJECT NO.	1503701
LOCATION	Brooklyn, NY	ELEVATION AND DATUM	Approx. el. 10.4 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
			45	S9	SS	15	16 14 18 16	32	PID = 5 ppm, petroleum like material oder Added mud D = 46'
	Brown f. SAND, trace silt (8-65)		50	S10	SS	12	18 20 26 28	46	PID = 1.6 ppm, petroleum like material oder
	Gray f.-m. SAND (7-65)		55	S11	SS	24	17 14 15 21	29	PID = 1 ppm, petroleum like material oder
	Brown f.-c. SAND (7-65)		60	S12	SS	13	29 32 25 21	57	PID = 9 ppm, petroleum like material oder
	Gray/brown f.-c. SAND, trace f.-m. gravel (6-65)		65	S13	SS	13	28 41 59 63	100	PID = 0.6 ppm, slight petroleum like material oder Rig chatter D = 66.5' - 68.5'
	Red brown SILT, some f. sand, trace clay (10-65)								
	Red brown f.-c. SAND, trace silt, f.-m. gravel, and clay (6-65)		70	S14	SS	10	30 37 47 50	84	Rig chatter D = 70' - 73' PID = 0.9 ppm, slight petroleum like material odor Very hard/slow drilling D = 72' - 73' Drilling equiptment refusal D = 73'
	Boring terminated D = 73'		75						Bore hole grouted upon completion
			80						
			85						
			90						

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LOG OF BORING RB5

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 10.6 [BBHDD]
DRILLING EQUIPMENT: Mobile B61 Truck Mounted Rig	DATE STARTED: 10/15/98 · DATE FINISHED: 10/16/98 · COMPLETION DEPTH: 79.5 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-1') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 16 · UNDIST. -------- · CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH (ft): 13	WATER LEVEL (ft.): FIRST ▽ 9 · COMPL. ▼ ----- · 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Ernest Thomas/Desmond Williams
SAMPLER HAMMER · WEIGHT (lbs): 140 · DROP (in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
prox. el. 10.6	Surficial ASPHALT								*New York City BC Classification numbers in parenthesis Added water D = 0.5' Rig chatter D = 1' Petroleum like material/oder and color in drill water D = 1' to 3'
	Black/gray f.-c. SAND, some f-c. gravel/coal, trace silt and red brick (11-65)*		5	S1	SS	10	13 14 4 3	18	PID = 6 ppm, petroleum like material odor Trace wood in wash WOH: Weight of hammer
	Inferred Black/gray f.-c. GRAVEL, trace f.-c. sand, silt, and metal (11-65)	▽	10	S2	SS	0	2 1 WOH 1	1	PID = 3 ppm, petroleum like material oder Sample S2 spoon tip material
	Gray silty CLAY, some woody roots, trace shell (11-65)		15	S3	SS	17	2 2 2 2	4	PID = 1 ppm, petroleum like material oder WOR: Weight of rods
	Gray silty CLAY, trace organics/root (11-65)		20	S4	SS	14	WOR WOR WOR WOR	WOR	PID = 0.2 ppm, petroleum like material oder
	Brown f. SAND, trace silt and wood (8-65)		25	S5	SS	18	5 8 12 13	20	PID = 6.5 ppm, petroleum like material oder
	Brown/gray f.-c. SAND (7-65)		30	S6	SS	18	13 14 10 6	24	PID = 4 ppm, visible petroleum like material and odor
	Gray/brown f. SAND (8-65)		35	S7	SS	13	9 18 21 20	39	PID = 13 ppm, petroleum like material oder
	Brown/gray f.-m. SAND (7-65)		40	S8	SS	17	11 14 8 13	22	PID = 0.4 ppm, petroleum like material oder

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LOG OF BORING RB5

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 10.6 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT.	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Gray/brown f. SAND, trace silt (8-65)		45	S9	SS	18	13 13 14 15	27	PID = 3.9 ppm, petroleum like material oder
	Brown f.-m. SAND, trace silt (7-65)		50	S10	SS	18	10 12 15 18	27	PID = 0.5 ppm, slight petroleum like material oder
	Brown SILT, trace f. sand and clay (10-65)		55	S11	SS	18	11 14 18 20	32	PID = 0.3 ppm, slight petroleum like material oder
	Brown f.-m. SAND, trace silt (7-65)		60	S12	SS	14	17 21 100/3"	121/9"	PID = 0.4 ppm, petroleum like material oder Spoon refusal D = 59' Major rig chatter D = 60'
	Red brown f.-c. SAND, some f.-m. gravel, trace silt and clay (6-65)		65	S13	SS	14	35 51 62 24	113	Rig chatter D = 60' - 63' PID = 0.2 ppm, slight petroleum like material oder Rig chatter D = 63' - 68'
	Red brown f.-c. SAND, trace f.-m. gravel, silt, and clay (7-65)		70	S14	SS	14	41 40 66 100	106	Rig chatter D = 68' - 73' PID = 0.4 ppm, slight petroleum like material oder
	Red brown f.-c. SAND, trace silt, f.-m. gravel, and clay (6-65)		75	S15	SS	16	56 35 50 35	85	PID = 0.1 ppm Major rig chatter D = 76' - 77'
	Red brown f.-c. SAND, trace silt, f. gravel, and clay (6-65)		80	S16	SS	10	41 89 100/5"	189/11"	Spoon refusal D = 79.5' PID = 0 ppm, slight petroleum like material oder
	Boring terminated D = 79.5'		85 90						Borehole grouted upon completion

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LOG OF BORING RB6

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 10.6 [BBHDD]
DRILLING EQUIPMENT: CME 75 Truck Mounted Rig	DATE STARTED: 10/15/98; DATE FINISHED: 10/16/98; COMPLETION DEPTH: 82 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 16; UNDIST. --------; CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID; CASING DEPTH(ft):	WATER LEVEL (ft.): FIRST ----- ; COMPL. ----- ; 24 HR. 8
SAMPLER: 2" OD 1 3/4" ID Split Spoon (SS)	DRILLING FOREMAN: Robert Danielson/Tommy Gregorey/Chris Mitchell
SAMPLER HAMMER; WEIGHT(lbs): 140; DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA: NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
prox. el. 10.6	Surficial ASPHALT								*New York City BC Classification numbers in parenthesis Added water D = 3'
	Inferred miscellaneous FILL with coal (11-65)*		5	S1	SS	0	3 1 1 1	2	Sample S1 spoon tip material
									WOH: Weight of hammer
	Black/gray f.-m. GRAVEL/COAL, trace f.-c. sand and wood (11-65)		10	S2	SS	2	1 1 WOH WOH	1	PID = 40 ppm, petroleum light material odor
	Gray silty CLAY, some wood/root, trace shell (11-65)		15	S3	SS	24	1 WOH 1 1	1	PID = 0.1 ppm, petroleum like material odor
	Gray silty CLAY, trace root (11-65)		20	S4	SS	22	1 1 1 1	2	PID = 0 ppm
	Brown/gray f.-m. SAND, trace silt (7-65)		25	S5	SS	20	16 20 19 18	39	PID = 0.2 ppm Added mud D = 27'
	Gray/brown clayey SILT, trace f.-m. sand (10-65)		30	S6	SS	12	6 9 8 13	17	PID = 0.2 ppm
	Gray f.-m. SAND (7-65)		35	S7	SS	12	20 22 18 19	40	PID = 0.1 ppm, slight petroleum like material odor
	Gray f.-m. SAND (7-65)		40	S8	SS	14	11 13 12 12	25	PID = 0.5 ppm, petroleum like material odor

NG 1503701.GPJ LANGANFL.GDT 24/11/98

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LOG OF BORING RB6

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 10.6 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Gray/brown f.-m. SAND, trace silt (7-65)		45	S9	SS	14	S13 12 8 7	20	PID = 0.2 ppm, slight petroleum like material odor
	Brown f. SAND (8-65)		50	S10	SS	15	12 15 25 27	40	PID = 0.4 ppm, petroleum like material odor
	Brown f.-m. SAND, trace silt (8-65)		55	S11	SS	18	18 30 34 41	64	PID = 0.2 ppm
	Brown SILT, trace f. sand and clay (10-65)		60	S12	SS	15	25 34 31 44	65	PID = 0.8 ppm, petroleum like material odor Rig chatter D = 63.5'
	Red brown c.-f. SAND, some f.-c. gravel, trace silt and clay (6-65)		65	S13	SS	12	82 64 50 54	114	PID = 0.6 ppm Rig chatter D = 65' - 70'
	Red brown silty f.-m. SAND, trace f.-m. gravel and clay (6-65)		70	S14	SS	8	34 50 100/5"	150/11"	PID = 0 ppm Spoon refusal D = 71.5' Rig chatter and slow drilling D = 70' - 75'
	Red brown f.-c. SAND and GRAVEL, trace silt and clay (6-65)		75	S15	SS	3	100/3"	R"	PID = 0.7 ppm Major rig chatter Slow drilling
	Red brown fine GRAVEL and f.-c. SAND, some silt, trace clay (6-65)		80	S16	SS	7	38 72 100	172	PID = 0.6 ppm, slight petroleum like material odor
	Boring terminated D = 82'		85						Borehole grouted upon completion
			90						

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LOG OF BORING RB7

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 10.6 [BBHDD]
DRILLING EQUIPMENT: Mobile B61 Truck Mounted Rig	DATE STARTED: 10/15/98; DATE FINISHED: 10/15/98; COMPLETION DEPTH: 80 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 17; UNDIST. --------; CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID; CASING DEPTH (ft): 13	WATER LEVEL (ft.): FIRST ▽ 8; COMPL. ▼ -----; 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon	DRILLING FOREMAN: Ernest Thomas/Desmond Williams
SAMPLER HAMMER; WEIGHT (lbs): 140; DROP (in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in.	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
Approx. el. 10.6	Surficial ASPHALT								*New York City BC Classification numbers in parenthesis Added water D = 0'
	Brown/black f.-c. SAND, trace silt, m. gravel/coal, and red brick (11-65)*		5	S1	SS	5	2 3 3 2	6	PID = 0.1 ppm
	Gray/black f.-c. SAND, trace silt, f. gravel/coal, and glass (11-65)		10	S2	SS	5	4 3 2 2	5	PID = 0 ppm
	Brown/black PEAT (11-65)		15	S3	SS	0	4 1 1 1	2	PID = 0.9 ppm, organic odor Sample S3 from second recovery attempt WOH: Weight of hammer
	Gray/brown/black f.-m. sandy PEAT, trace silt (11-65)		20	S4	SS	24	WOH 4 3 6	7	PID = 0 ppm PID = 0 ppm
	Gray/brown f. SAND, trace silt (8-65)								Sample S5 6" Lense of Gray/brown SILT, trace clay and f. sand in top of sample
	Brown f.-m. SAND, trace silt (7-65)		25	S6	SS	18	12 16 18 17	34	PID = 0 ppm PID = 0 ppm
	Brown f.-m. SAND (7-65)		30	S7	SS	15	9 10 10 5	20	
	Gray f.-m. SAND, some clay, trace silt (7-65)		35	S8	SS	19	3 3 8 14	11	
	Brown/gray f.-m. SAND (7-65)		40	S9	SS	16	8 14 18 18	32	

NG 1503701.GPJ LANGANFL.GDT 24/11/98

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LOG OF BORING RB7

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 10.6 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Gray f.-m. SAND (7-65)			S10	SS	16	12 14 19 16	33	
			45						
	Gray/brown f.-m. SAND, trace silt (7-65)			S11	SS	24	10 9 7 8	16	Sample S11 12" Lense of Gray/brown silty CLAY, trace f. sand in bottom of sample
			50						
	Brown/gray f.-m. SAND, trace silt (7-65)			S12	SS	16	17 21 27 30	48	
			55						
	Brown/gray f.-c. SAND, trace f.-m. gravel and silt (6-65)			S13	SS	15	27 40 31 33	71	
			60						
	Red brown silty f.-c. SAND, trace f.-m. gravel (6-65)			S14	SS	8	19 29 38 30	67	
			65						
	Red brown f.-c. SAND, trace f.-m. gravel, silt, and clay (6-65)			S15	SS	8	50 95 28 37	123	
			70						Rig chatter
	Red brown f.-c. SAND, trace silt, clay, and f.-c. gravel (6-65)			S16	SS	12	37 48 33 40	81	
			75						Rig chatter
	Red brown f.-c. SAND, trace f.-c. gravel, silt, and clay (6-65)			S17	SS	9	21 37 62 48	99	
			80						
	Boring terminated D = 80'								Borehole grouted upon completion
			85						
			90						

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LOG OF BORING RB8

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 10.9 [BBHDD]
DRILLING EQUIPMENT: CME 75 Truck Mounted Rig	DATE STARTED: 10/14/98 · DATE FINISHED: 10/15/98 · COMPLETION DEPTH: 82 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-4') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 19 · UNDIST. -------- · CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH(ft): 8	WATER LEVEL (ft.): FIRST ▽ 8 · COMPL. ▼ ----- · 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon	DRILLING FOREMAN: Greg Marney/Robert Danielson/Tommy Gregorey
SAMPLER HAMMER · WEIGHT(lbs): 140 · DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
prox. el. 10.9	2" ASPHALT								
	Black f.-c. SAND, some f.-m. gravel/coal and red brick, trace silt (11-65)*			S1	SS	6	25 26 39	65	*New York City BC Classification numbers in parenthesis PID = 21 ppm, petroleum like material odor
	Black f.-c. SAND, trace f.-m. gravel/coal, red brick, silt, and wood (11-65)			S2	SS	7	80 85 42 47	127	PID = 4.5 ppm, petroleum like material odor Added water/mud D = 4'
	Black/brown f.-m. GRAVEL/COAL, some f.-c. sand, trace silt and glass (11-65)		5	S3	SS	7	8 11 2 2	13	PID = 4.5 ppm, petroleum like material odor
	Black/brown f.-c. silty SAND, trace f. gravel/coal (11-65)			S4	SS	3.5	3 3 2 3	5	PID = 1.5 ppm, petroleum like material odor
	Black/gray f.-c. SAND, some silt and wood, trace f. gravel/coal (11-65)			S5	SS	3	4 3 3 3	6	PID = 0 ppm, petroleum like material odor
			10						
	WOOD, some black/gray f.-c. sand and f. gravel/coal, trace silt and glass (11-65)		15	S6	SS	2	6 3 3 2	6	PID = 2 ppm, petroleum like material odor
	Gray/brown f. sandy SILT, trace roots, shell, and clay (11-65)		20	S7	SS	18	2 3 6 6	9	PID = 0 ppm
	Brown f.-m. SAND (7-65)		25	S8	SS	22	20 19 17 17	36	PID = 0 ppm
									Sample S9 6" Lense brown clayey SILT, trace f. sand (10-65) in bottom of sample
	Brown f.-m. SAND (7-65)		30	S9	SS	11	10 5 7 8	12	PID = 0.1 ppm
	Gray f.-m. SAND, trace silt and clay (7-65)		35	S10	SS	20	8 11 13 13	24	PID = 0.1 ppm
	Brown/gray f.-m. SAND (7-65)		40	S11	SS	16	8 8 7 6	15	PID = 0.3 ppm

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LOG OF BORING RB8

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 10.9 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown/gray silty f. SAND sand, trace clay (8-65)		45	S12	SS	19	6 7 8 8	15	PID = 0.2 ppm PID = 0.3 ppm
	Brown/gray f.-m. SAND, trace silt (7-65)								
	Brown/gray clayey SILT, trace f.-m. sand (10-65)		50	S13	SS	19	3 3 4 5	7	PID = 0.1 ppm Rig chatter D = 53'
	Inferred Red brown f.-c. SAND, some f.-m. gravel, trace silt and clay (6-65)		55	S14	SS	0	40 39 39 35	78	Sample S14 spoon tip material Rig chatter D = 55' - 60'
	Red brown f.-c. SAND, some silt, trace f.-m. gravel and clay (6-65)		60	S15	SS	4	27 43 37 39	80	PID = 0 ppm Rig chatter D = 60' - 65'
	Red brown silty f.-c. SAND, some f.-c. gravel, trace clay (6-65)		65	S16	SS	4	26 33 34 41	67	
	Red brown f.-m. GRAVEL, some f.-c. sand, trace silt (6-65)		70	S17	SS	3	29 65 54 76	119	
	Red brown f.-m. GRAVEL, trace f.-c. sand, silt, and clay (6-65)		75	S18	SS	2	29 58 52 73	110	
	Red brown f.-c. GRAVEL, some f.-c. sand, trace silt and clay (6-65)		80	S19	SS	3	31 32 47 36	79	
	Boring terminated D = 82'		85						Borehole grouted upon completion
			90						

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LOG OF BORING RB9

SHEET 1 OF 2

PROJECT: Gowanus Development	PROJECT NO.: 1503701
LOCATION: Brooklyn, NY	ELEVATION AND DATUM: Approx. el. 11.2 [BBHDD]
DRILLING EQUIPMENT: Mobile B61 Truck Mounted Rig	DATE STARTED: 10/14/98 · DATE FINISHED: 10/15/98 · COMPLETION DEPTH: 82 ft.
SIZE AND TYPE OF BIT: 4 7/8" (0'-4') and 3 7/8" Tri-Cone Roller Bits	NUMBER OF SAMPLES: DIST. 19 · UNDIST. -------- · CORE --------
CASING DIAMETER (in): 4 1/2" OD 4" ID · CASING DEPTH(ft): 14	WATER LEVEL (ft.): FIRST ▽ 6 · COMPL. ▼ ----- · 24 HR. ▼ -----
SAMPLER: 2" OD 1 3/4" ID Split Spoon	DRILLING FOREMAN: Ernest Thomas/Desmond Williams
SAMPLER HAMMER · WEIGHT(lbs): 140 · DROP(in): 30	INSPECTING ENGINEER: Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
Approx. el. 11.2	3" ASPHALT			S2	SS	7	28 21 100	121	"New York City BC Classification numbers in parenthesis Added water D = 0.5'
	Black/brown f.-c. GRAVEL/COAL, some f.-c. sand, trace silt (11-65)*								PID = 11 ppm, petroleum like material odor
	Black/brown f.-c. SAND, trace f.-m. gravel/coal, silt, and metal (11-65)			S2	SS	10	7 8 2 2	10	PID = 0.2 ppm, petroleum like material odor
	Black/brown f.-m. GRAVEL/COAL and f.-c. SAND, trace silt (11-65)		5	S3	SS	6	3 4 2 3	6	PID = 0.3 ppm, petroleum like material odor
	Gray/brown f.-c. SAND, some silt, trace f.-m. gravel/coal, one seed (11-65)			S4	SS	0.5	4 3 3 4	6	PID = 0 ppm
	Inferred miscellaneous FILL (11-65)			-	SS	0	4 2 2 2	4	
			10						
									Very hard drilling Added mud D = 14' - 15'
	Brown f.-c. SAND, trace f. gravel and silt (11-65)		15	S6 S5	SS	14	5 4 3 4	7	PID = 0.1 ppm, petroleum like material odor
	Brown/black PEAT (11-65)								PID = 1 ppm, petroleum like material odor
			20						
	Brown-silty f. SAND, trace clay (8-65)			S7	SS	10	2 2 5 7	7	PID = 0 ppm, petroleum like material odor
	Brown f. SAND, trace silt (8-65)		25	S8	SS	20	13 14 15 17	29	PID = 0.1 ppm
	Gray/brown f. SAND, some silt (8-65)		30	S9	SS	21	5 3 2 4	5	PID = 0 ppm Sample S9 10" Lense Gray clayey SILT, trace f. sand (10-65) w/ PID = 0 ppm in bottom of sample
	Gray clayey f.-m. SAND, trace silt (7-65)		35	S10	SS	19	12 15 19 20	34	PID = 0 ppm
	Brown/gray f.-m. SAND (7-65)								PID = 0 ppm
	Brown/gray f.-m. SAND (7-65)		40	S11	SS	17	5 7 8 9	15	PID = 0 ppm

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LOG OF BORING RB9

SHEET 2 OF 2

PROJECT	PROJECT NO.
Gowanus Development	1503701
LOCATION	ELEVATION AND DATUM
Brooklyn, NY	Approx. el. 11.2 [BBHDD]

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
			45						
	Brown/gray f.-m. sandy SILT (10-65)			S12	SS	11119	2 3 5 7	8	PID = 0 ppm
			50						
	Brown/gray SILT, trace clay and f.-m. sand (10-65)			S13	SS	24	2 1 2 3	3	PID = 0 ppm
			55						
	Red brown silty f.-c. SAND, trace clay and f. gravel (7-65)			S14	SS	12	10 13 19 16	32	PID = 0 ppm PID = 0 ppm
									Slow/hard drilling D = 59'
	Red brown silty f.-c. SAND, some f.-m. gravel, trace clay (6-65)		60	S15	SS	16	17 25 26 28	51	PID = 0 ppm
	Red brown silty f.-c. SAND, some f.-m. gravel, trace clay (6-65)		65	S16	SS	16	21 49 67 100/5"	116	Spoon refusal D = 67'
	Red brown f.-c. SAND, some f.-m. gravel and silt, trace clay (6-65)		70	S17	SS	5	21 100/6"	100/6"	Spoon refusal 100/6" D = 71'
									Rig chatter
	Red brown f.-c. SAND, some f.-m. gravel, trace silt and clay (6-65)		75	S18	SS	14	40 53 58 38	111	
	Gray f.-c. GRAVEL and red brown f.-c. SAND, trace silt and clay (6-65)		80	S19	SS		66 83 100/5"	183/11"	Spoon refusal D = 81.5'
	Boring terminated D = 82'								Borehole grouted upon completion
			85						
			90						

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WELL CONSTRUCTION LOG

WELL NO. **RW-1**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / S. Miller**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **Mobile Drill B-61 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/18/02-4/1/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, some Gravel, trace Brick; dry to wet (fill)			
5				Strong odor
	Brown fine to coarse SAND, some Silt, little Gravel, trace Brick; dry to wet (fill)		21.8	Sheen and strong odor
	No recovery			
10				
	Brown to dark brown fine to coarse Sand, and Gravel, little Silt, little Wood; wet (fill)		29.3	Sheen and strong odor
	Brown to red fine to coarse SAND, some Silt, little Gravel, trace Brick, trace Concrete; wet (fill)		13.7	
15	Green to grey PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
	Dark gray Silt and fine Sand; wet		4.5	Strong odor
20				
	Dark gray Silt and fine Sand; wet		5.8	
25				
	Dark gray Silt and fine Sand, trace Gravel; wet		10.4	
30				
	Brown Silt and fine Sand; wet			Sheen and strong odor
35				
	Brown Silt and fine Sand; wet		79.4	Sheen and strong odor
40				
	Brown Silt and fine Sand; wet			Trace free product
45				
	Brown Silt and fine Sand; wet		30.1	Bottom of well 47.5 feet below land surface
50				

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WELL CONSTRUCTION LOG

WELL NO. **RW-2**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / S. Miller**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **Mobile Drill B-61 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/21/02-3/29/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, little Gravel, trace Silt, trace Brick, trace Coal Fragments; dry to wet (fill)			
5					
10					
		Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		0.3	
		Brown fine to medium SAND, trace Silt, trace Gravel; wet (fill)		0.3	
15		Brown fine to medium SAND, trace Silt, trace Gravel; wet (fill)		0.6	
		Brown fine to medium SAND, trace Silt, trace Gravel, trace Wood; wet (fill)		0.1	
		Brown fine to medium SAND, trace Silt, trace Gravel, trace Wood; wet (fill)		0.1	
20		Brown Silt and fine Sand, little coarse Gravel; wet			Strong odor
				126	
25		Brown Silt and fine Sand, little Gravel; wet			Strong odor
				303	
30		Brown Silt and fine Sand, little Gravel; wet			Trace free product
				493	
				274	
35		Brown Silt and fine Sand, little Gravel; wet			Free product
				311	
40		Brown Silt and fine Sand, little Gravel; wet			Free product
				893	
45		Dark gray to brown fine SAND, little Silt; wet			Free product
				>2000	
					Bottom of well 47.5 feet below land surface
50					

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WELL CONSTRUCTION LOG

WELL NO. **RW-3**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/21/02-3/28/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **35.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Gravel, trace Brick; wet at 5 (fill)			
5				
10				
	Brown fine to coarse SAND, little Gravel, little Brick, trace Silt; wet (fill)		0.0	
	Brown fine to coarse SAND, little Gravel, little Brick, trace Silt; wet (fill)		0.0	
15	Brown fine to coarse SAND, trace Gravel, trace Silt; wet (fill)		1.4	
	Brown fine to medium SAND, trace Silt, trace Gravel; wet (fill)		5.7	Strong odor and trace free product
	Brown fine to medium SAND, trace Silt, trace Gravel; wet (fill)		1.4	Trace free product
20	Brown fine to coarse SAND, little Silt; wet		27.4	Odor
25	Brown fine to coarse SAND, little Silt, trace Gravel; wet		15.1	Odor
30	Brown fine to coarse SAND, little Silt, trace Gravel; wet		152	Free product
35	Brown SILT, some fine Sand, trace coarse Sand; wet		98.1	Odor and free product
40	Brown fine SAND, little Silt, trace Gravel; wet		237	Odor and free product
45	Brown fine SAND, little Silt, trace Gravel; wet		1681	Free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-4**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/21/02-3/28/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **35.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet at 5 (fill)			
5				
10				
	Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet (fill)		0.1	
	Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet (fill)		1.6	Odor
15	Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet (fill)		1.6	Odor
	Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet (fill)		0.9	Slight odor
	Brown fine to medium SAND, trace Gravel, trace Silt; wet		1.9	
20				
	Brown fine to medium SAND, trace Gravel; wet (fill)		4.7	
	Gray fine SAND, little Wood; wet (fill)			Black staining and strong Odor
	Brown fine to coarse SAND, little Silt, trace Gravel; wet		26.8	
25				
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		7.2	Odor and trace free product
30				
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		5.6	Odor and trace free product
35				
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		14.9	Odor and trace free product
40				
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		35.1	Free product
45				
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		87.4	Free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-5**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / S. Miller**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **Mobile Drill B-61 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/21/02-3/27/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown coarse to fine SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5				5
10				10
	Brown fine SAND, trace Silt, trace Gravel; wet (fill)		0.0	
	Brown fine SAND, trace Silt, trace Gravel; wet (fill)		3.3	
15	Brown fine SAND, little Silt, trace Gravel; wet (fill)		9.5	Black staining 15
	No recovery			
	Green to gray Peat and Clay, trace Sand; wet		14.6	Thickness of peat interval interpreted from previous Site investigation
20				20
	Brown fine to coarse SAND, little Silt, little Gravel; wet		2.6	Strong odor
25				25
	Brown fine to coarse SAND, some Silt; wet		1.7	Strong odor
30				30
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		106	Strong odor
35				35
	Brown fine to coarse SAND, some Silt, trace Gravel; wet		134	Trace free product
40				40
	Brown fine to coarse SAND, some Silt; wet		281	Free product
45				45
	Brown Silt and fine Sand; wet		375	Odor and free product
50				50
				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-6**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/21/02-3/25/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5		Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
10		Brown fine SAND, little Silt, trace Brick; wet (fill)		1.6	Odor and Black Staining
		Green to gray Peat and Clay, trace brown Sand; moist		7.3	
15		Fine SAND, trace Gravel, trace Silt; wet		5.9	Thickness of peat interval interpreted from previous Site investigation Black staining Odor
20		Gray fine SAND, little Silt, trace Gravel; wet		1.9	Black staining Odor
25		Gray fine SAND, little Silt, trace Gravel; wet		4.7	Slight Odor
30		Grey SILT, Some fine Send; wet		156	Odor
35		Brown to green fine SAND, some Silt; wet		350	Odor
40		Brown to green fine SAND, some Silt; wet		1254	Odor
45		Brown to green fine SAND, some Silt; wet		1824	Odor
50					Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-7**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / S. Miller**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **Mobile Drill B-61 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/21/02-3/25/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5				5
	No recovery			
10	Fine SAND, some Gravel, trace Silt; wet (fill)		0.7	10 Black staining
	Brown fine SAND, little Silt; wet (fill)		1.4	Black staining
15	Brown fine SAND, little Silt; wet (fill)		1.9	15 Odor and black staining
	Green to gray Peat and Clay; wet		7.3	Odor Thickness of peat interval interpreted from previous Site Investigation
20	Brown fine to coarse SAND, some Silt, trace Gravel; wet		10.2	20 Odor
25	Brown fine to coarse SAND, some Silt, trace Gravel; wet		11.7	25 Odor
30	No recovery			30
35	Dark Gray fine to medium SAND, some Silt; wet		27.1	35
40	Dark Gray fine to medium SAND, some Silt, little Gravel; wet		21.0	40 Odor
45	Dark gray Silt and fine Sand; wet		30.6	45 Sheen and odor
50				50 Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-8**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / S. Miller**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **Mobile Drill B-61 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-4/2/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse fine SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5					5
10		Brown fine to coarse SAND, trace silt, trace concrete; wet (fill)			10
		Brown fine to medium SAND, trace Silt; wet (fill)			Black staining and trace free product
15		Brown PEAT; wet			Thickness of peat interval interpreted from previous Site investigation 15
		Brown fine to coarse SAND, little Silt, trace Gravel; wet		38.5	
20		Brown fine to coarse SAND, little Silt; wet		17.1	Strong odor and trace free product Slight odor and Sheen 20
25		Brown fine to coarse SAND, little Silt, trace Gravel; wet		0.0	Slight odor and Sheen 25
30		Brown to dark gray fine to medium SAND, some Silt, little Clay; wet		333	Odor 30
35		Brown to dark gray fine to medium SAND, some Silt, little Clay; wet		235	Odor 35
40		Dark gray to brown fine SAND, little Silt; wet		427	Odor 40
45		Dark gray to brown fine SAND, little Silt; wet		236	Odor 45
50					Bottom of well 49.5 feet below land surface 50

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WELL CONSTRUCTION LOG

WELL NO. **RW-9**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-4/2/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5				5
10	Brown WOOD; wet (fill)		120	Free product
	Brown fine SAND, little Silt, trace Gravel; wet (fill)		180	Black staining Odor and free product
15	Green to tan fine to medium SAND, little Silt; wet (fill)		109	Trace free product
	Green to brown fine SAND, some Silt, trace Peat; wet (fill)		57.6	
20	Brown PEAT; moist			
	Black fine to coarse SAND, little Gravel; wet		84.9	Thickness of peat interval interpreted from previous Site Investigation Odor and free product
25	Black fine to coarse SAND, some Silt, trace Gravel; wet		28.5	Black staining Trace free product
30	Black to gray SILT, little fine Sand; wet		66.8	Black staining Odor and trace free product
35	Brown Silt and fine Sand, trace coarse Sand; wet		28.2	Odor and sheen
40	Brown Silt and fine Sand, trace coarse Sand; wet		19.7	Odor and sheen
45	Brown Silt and fine Sand, trace coarse Sand; wet		27.1	Odor and sheen
50				Bottom of well 49.5 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-10**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **R. Kovacs**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-4/1/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; dry to wet (fill)			
5				5
10	Green to brown fine SAND, little Silt, trace Gravel; wet (fill)		8.2	Black staining
	Green to brown fine SAND, little Silt; wet (fill)		8.1	Black staining Slight Odor
15	Green to brown fine SAND, little Silt; wet (fill)		6.0	Black staining
	Green to brown fine to coarse SAND, little Silt, little Peat at 18; wet (fill)		8.7	Black staining
	Brown PEAT; moist		54.0	Thickness of peat interval interpreted from previous Site investigation
20				20
	Brown to light brown fine SAND, some Silt; wet		59.0	Odor and sheen
25	Brown to reddish brown fine to medium SAND, some Silt; wet		96.5	Free product
30	Brown to light brown fine to medium SAND, some Silt; wet		219	Odor and free product
35	Brown fine to medium SAND, some Silt; wet		110	Odor and free product
40	Brown SILT, some medium Sand; wet		172	Odor and free product
45	Brown SILT, some fine to medium Sand; wet		162	Odor and free product
50				50
				Bottom of well 50 feet below land surface

BORING/WELL RECOVE-1.GPJ ROUX.GDT 6/11/02

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WELL CONSTRUCTION LOG

WELL NO. **RW-11**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-3/29/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, little Gravel, trace Brick, trace Silt; wet at 6 (fill)			
5				5
10				10
	Brown fine to coarse SAND, little Gravel, trace Brick, trace Silt; wet (fill)		50.0	Black staining
	Brown fine to coarse SAND, little Gravel, trace Brick, trace Silt; wet (fill)		71.9	Black staining
15	Brown fine to medium SAND, little Gravel, little Silt; wet (fill)		43.9	15
	Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; wet (fill)		31.2	
	Brown PEAT; moist		138	
20				Thickness of peat interval interpreted from previous Site investigation 20
	Brown fine to coarse SAND, little Silt, trace Gravel; wet		7.2	
25				25
	Brown fine to coarse SAND, some Silt; wet		7.2	Odor and trace free product
30				30
	Brown fine to coarse SAND, some Silt; wet		23.2	Trace free product
35				35
	Brown fine to coarse SAND, some Silt; wet		17.6	Trace free product
40				40
	Brown Silt and fine Sand, trace coarse Sand, trace Gravel; wet		1124	Trace free product
45				45
	Brown Silt and fine Sand, trace coarse Sand, trace Gravel; wet		280	
50				50
				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-12**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-3/27/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC**	TOTAL LENGTH **25.0**	DIA. **4-inch** SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; dry to moist (fill)			
5	BRICK; dry (fill)			
	Brown fine to coarse SAND, some Gravel, trace Brick, trace Silt; wet at 7 (fill)			
10	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)			Sheen and odor
	Brown fine to coarse SAND, little Silt, little Gravel; wet (fill)		55.3	Slight odor
15	Brown fine to coarse SAND, little Silt, little Gravel; wet (fill)		72.2	Slight odor
	Brown fine to coarse SAND, some Gravel, little Silt; wet (fill)		74.9	
	Brown PEAT; moist		1.7	Thickness of peat interval interpreted from previous Site Investigation
20	Brown fine to coarse SAND, some Silt, trace Gravel; wet		11.7	
25	Brown fine to coarse SAND, some Silt, trace Gravel; wet		19.3	
30	Brown fine to coarse SAND, some Silt, trace Gravel; wet		4.1	
35	Brown fine to coarse SAND, some Silt, trace Gravel; wet		35.1	Odor
40	Brown fine to coarse SAND, some Silt, trace Gravel; wet		174	Odor and trace free product
45	Brown fine to coarse SAND, some Silt, trace Gravel; wet		294	Odor and trace free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-13**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-3/26/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; dry to moist (fill)			
5	Brick and Concrete; dry (fill)			
	Brown fine to coarse Sand and Brick; wet (fill)		80.8	Black staining
	Brown PEAT; moist			
	Brown PEAT; moist			
10	Brown PEAT; moist		73.9	
	Fine SAND, some Silt, trace Gravel; wet			Black staining
15			21.7	Odor
	Brown to green fine SAND, some Silt; wet			Odor
			17.1	
20	Brown fine SAND, little Silt; wet			Slight odor
			9.7	
25	Brown SILT, little fine Sand, trace Gravel; wet			Odor and trace free product
			118	
30	Brown SILT, little fine Sand, trace Gravel; wet			Odor and trace free product
			15.6	
35	Brown fine SAND, some Silt; wet			Odor
			5.3	
40	Brown to green SILT, little fine Sand; wet			Odor and trace free product
			459	
45	Brown SILT, some Sand; wet			Odor
			154	
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-14**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / S. Miller**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **Mobile Drill B-61 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **3/22/02-3/26/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown fine to coarse SAND, little Gravel, trace Silt; dry (fill)			
5	Brown fine to coarse SAND, little Gravel, trace Silt; dry to moist (fill)		49.5	5
	Brown fine to coarse SAND, little Gravel, trace Silt; wet (fill)		45.9	
	Brown PEAT; moist			
10	Brown PEAT; moist to wet			10
			1.3	
15	Dark brown SAND, some Silt, trace Peat; wet			15
			2.7	
20	Dark brown PEAT; moist to wet			20
			125	
25	Dark brown fine SAND, little Silt; wet			25 Odor and trace free product
			147	
30	Dark brown fine SAND, little Silt; wet			30 Sheen
			413	
35	Dark brown fine SAND, little Silt; wet			35 Trace free product
			475	
40	Dark brown fine SAND, little Silt; wet		>2000	40 Sheen
45	Dark brown fine SAND, little Silt; wet			45
			524	
50				50 Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-15**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/4/02-4/4/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	CONCRETE			
	Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5				5
	Brown to green fine SAND, little Silt, trace Gravel, trace Brick, trace Concrete; wet (fill)		73.7	Odor and sheen
10	Brown fine SAND, little Silt, trace coarse SAND, trace Gravel; wet (fill)		147	10
	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		51.8	
	Brown fine SAND, some Silt, trace coarse SAND; wet (fill)		7.1	
15	Brown PEAT; moist			15
				Thickness of peat interval interpreted from previous Site investigation
	Brown fine SAND, little Silt, trace coarse Sand; wet		29.2	
20				20
	Brown fine Sand and Silt, trace coarse Sand; wet		89.7	Slight odor
25				25
	Brown fine SAND, little Silt, trace coarse Sand; wet		154	Slight odor
30				30
	Brown fine SAND, little Silt, trace Coarse Sand; wet		243	
35				35
	Brown fine SAND, little Silt, trace Coarse Sand; wet		172	Trace free product
40				40
	Brown fine SAND, little Silt, trace Coarse Sand; wet		612	Trace free product
45				45
	Brown fine Sand and Silt; wet		684	Odor and trace free product
50				50
				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-16**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/5/02-4/5/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	CONCRETE			
	Brown to dark brown fine to coarse SAND, some Gravel, trace Silt; wet at 4 (fill)			
5	Dark gray fine to coarse Sand and Gravel, little Silt; wet (fill)		7.9	Slight odor
10	Brown to dark gray GRAVEL, some fine to coarse Sand, trace Silt, trace Ash, trace Cinders; wet (fill)		5.8	
	Brown to dark gray fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		4.1	
15	Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		26.4	
	Brown PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
20	Brown Silt and fine Sand, little Gravel; wet			
25	Brown Silt and fine Sand, little Gravel; wet		11.5	odor
30	Brown Silt and fine Sand, little Gravel; wet		6.1	odor
35	Brown Silt and fine Sand, little Gravel; wet		10.0	odor
40	Dark gray fine SAND, some Silt, little Clay; wet		62.3	
45	Dark gray fine SAND, some Silt, little Clay, little Gravel; wet		4.4	Trace free product
50				Bottom of well 49 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-17**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **R. Kovacs**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/9/02-4/9/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	CONCRETE			
	Brown to dark brown fine to coarse SAND, some Silt; wet (fill)		13.0	Slight odor
5				
	Brown to dark brown fine to medium SAND, some Silt; wet (fill)		14.0	Slight odor
10				
	Brown to dark brown fine Sand and Silt; wet (fill)		22.3	Slight odor
	Brown fine to medium SAND; wet (fill)		12.7	
	Brown fine Sand and Silt; wet (fill)		12.3	Slight odor
15	Brown to reddish brown fine to medium SAND; wet (fill)		10.7	Slight odor
	Brown PEAT; moist		7.4	Thickness of peat interval interpreted from previous Site investigation
	Brown fine to medium SAND; wet			Slight odor
20				
	Brown to dark brown fine SAND; wet		10.7	Slight odor
25				
	Brown to dark brown fine SAND; wet		11.9	Slight odor
30				
	Brown to dark brown fine SAND; wet		14.9	Slight odor
35				
	Brown fine to medium SAND; wet		9.7	Slight odor
40				
	Brown fine to medium SAND; wet		47.3	Odor and trace free product
45				
	Brown fine to medium SAND; wet		59.9	Odor and trace free product
50				Bottom of well 50 feet below land surface

BORING/WELL RECOVE-1.GPJ ROUX.GDT 6/11/02

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WELL CONSTRUCTION LOG

WELL NO. **RW-18**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/19/02-4/19/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
CONCRETE			
Brown fine to coarse SAND, little Silt, trace Brick, trace Gravel; wet at 4 (fill)			
Brown fine to coarse SAND, little Silt, trace Brick, traco Gravel; wet (fill)		0.0	
Brown fine to coarse SAND, little Silt, trace Brick, trace Gravel; wet (fill)		0.0	
Brown PEAT; moist		8.3	Strong organic odor Thickness of peat interval interpreted from previous Site investigation
Brown fine to coarse SAND, some Peat, little Silt, trace Gravel; wet		0.0	
Brown fine to coarse SAND, some Peat, some Silt, trace Gravel; wet		0.0	
Brown fine to coarse SAND, some Silt, trace Peat, trace Gravel; wet		0.0	
Brown fine to coarse SAND, some Silt, trace Peat, trace Gravel; wet		0.5	
Brown to dark gray fine SAND, little Silt, trace Gravel; wet			
Brown to dark gray fine SAND, little Silt, trace Gravel; wet		5.8	
Brown to dark gray fine SAND, little Silt, trace Gravel; wet		0.0	
			Bottom of well 50 feet below land surface

BORING/WELL RECOVE~1.GPJ ROUX.GDT 6/11/02

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WELL CONSTRUCTION LOG

WELL NO. **RW-19**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D.Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/18/02-4/18/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			
	Brown fine to coarse SAND, little Silt, trace Brick, trace Gravel; wet at 4 (fill)			
5				5
10				10
	Brown fine SAND, trace Silt, trace coarse Sand, trace Gravel; moist (fill)		0.9	
	Brown fine SAND, trace Silt; wet (fill)		0.7	
15	Peat and green-grey CLAY; moist			Thickness of peat interval intrepreted from previous Site investigation 15
	Brown fine SAND, little Silt, trace Gravel; wet		1.8	
20	Brown fine SAND, little Silt; wet		0.0	20
25	Brown fine SAND, little Silt; wet		0.0	Odor 25
30	Brown fine SAND, little Silt, trace coarse Sand; wet		0.7	Odor 30
35	Brown fine SAND, little Silt, trace coarse Sand; wet		0.0	Odor 35
40	Brown fine SAND, little Silt; wet		0.0	Odor 40
45	Brown fine SAND, little Silt; wet		0.0	Odor 45
50				50 Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-20**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **C. Battista**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/17/02-4/17/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	CONCRETE			
	Dark brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5				5
				Odor
			13.3	
10				10
	Brown to dark green fine to coarse SAND, little Gravel, trace Silt, trace Brick; wet (fill)		11.4	
	Brown fine to coarse SAND, little Gravel, trace Silt, trace Brick; wet (fill)		12.0	
15	Brown PEAT; moist			15
				Thickness of peat interval interpreted from previous Site investigation
	Brown medium to coarse SAND, little Silt, trace Gravel, trace Peat; wet		10.5	
				Slight odor
20				20
	Brown fine SAND, little Silt; wet			
			6.5	
25				25
	Brown fine SAND, little Silt; wet			Odor
			21.9	
30				30
	Brown fine SAND, little Silt; wet			
			3.8	
35				35
	Brown fine SAND, little Silt, trace Gravel; wet			
			6.4	
40				40
	Dark gray to light brown fine to medium SAND; wet			
			4.3	
45				45
	Dark gray to light brown fine to medium SAND, trace Silt, trace Gravel; wet			
			5.2	
50				50
				Bottom of well 49.5 feet below land surface.

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WELL CONSTRUCTION LOG

WELL NO. **RW-21**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/16/02-4/16/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		CONCRETE			
		Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
5					5
10		Brown fine SAND, little Silt, trace coarse Sand; wet (fill)		32.1	10
		Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		11.6	
15		Brown Peat and green to gray Silt and Clay; moist			15
				5.0	Thickness of peat interval interpreted from previous Site investigation
		Brown fine SAND, little Silt; wet			
20					20
		Brown fine SAND, little Silt, trace coarse Sand; wet		10.8	
25		Brown fine SAND, little Silt; wet			25
				52.9	Strong odor
30		Brown fine SAND, little Silt; wet			30
				87.4	Strong odor
35		Brown fine SAND, little Silt; wet			35
				28.6	Slight odor
40		Brown fine SAND, little Silt; wet			40
				18.8	Slight odor
45		Brown fine SAND, little Silt; wet			45
				16.4	Slight odor
50					50
					Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-22**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/15/02-4/15/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			
	Brown fine to coarse SAND, trace silt, trace Brick, trace Concrete, trace Gravel; dry to wet (fill)			
5				5
10	Brown fine SAND, trace Silt; wet (fill)		699	10
	Brown fine to coarse SAND, trace Silt; wet (fill)		>2000	Odor and black staining
15	Brown fine to coarse SAND, little silt; wet (fill)		5.7	15
	Brown fine SAND, little Silt; wet (fill)		3.7	
	PEAT, Green-Gray Clay and fine Sand		27.8	Thickness of peat interval interpreted from previous Site investigation
20	Brown to gray fine SAND, little Silt, trace coarse Sand, trace Gravel; wet		0.0	20
25	Brown to gray fine SAND, little Silt, trace coarse Sand, trace Gravel; wet		11.9	25
30	Brown to gray fine SAND, little Silt, trace coarse Sand, trace Gravel; wet		0.0	30
35	Brown to gray fine SAND, little Silt, trace coarse Sand, trace Gravel; wet		0.0	35
40	Brown fine SAND, little silt; wet		2.1	40
45	Brown fine SAND, little silt; wet		0.0	45
50				50

Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-23**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/10/02-4/10/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			
	Brown fine to coarse SAND, trace Brick, trace Concrete, trace Gravel; dry to wet (fill)			
5				5
10	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		1354	Odor and trace free product
	Brown fine Sand and Silt, trace coarse Sand; wet (fill)		72.8	Odor
15	Brown fine SAND, little Silt, trace Gravel; wet (fill)		352	Odor
	PEAT and Green-Gray CLAY, trace Shells; moist			Thickness of peat interval interpreted from previous Site investigation
	Brown fine to coarse SAND, little Silt, trace Gravel; wet		92.5	Odor
20	Brown fine to coarse SAND, little Silt, trace Gravel; wet		50.7	Odor
25	Brown fine to coarse SAND, little Silt, trace Gravel; wet		25.2	Odor
30	Brown fine to coarse SAND, little Silt; wet		40.1	Odor
35	Brown fine to coarse SAND, little Silt; wet		13.7	Odor
40	Brown fine to coarse SAND, little Silt; wet		9.6	Odor
45	Brown fine to coarse SAND, some Silt; wet		12.7	Odor
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-25**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/11/02-4/11/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Concrete			
		Brown fine to coarse SAND, trace Brick, trace Concrete, trace Gravel; dry to wet (fill)			
5					5
10		Brown fine SAND, little Silt, trace Gravel; wet (fill)		8.1	10
		Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		198	Odor
15		Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		478	Odor 15
		PEAT and Green-Gray CLAY; moist			Odor
					Thickness of peat interval interpreted from previous Site investigation
20		Brown fine to coarse SAND, little Silt, trace Gravel; wet		518	20
		Brown fine to coarse SAND, little Silt, trace Gravel; wet			Odor
				610	
25		Brown fine to coarse SAND, little Silt; wet			25
				31.4	
30		Brown fine to coarse SAND, little Silt; wet			30 Odor
				231	
35		Brown fine SAND, little Silt, trace coarse Sand; wet			35 Odor
				315	
40		Brown fine SAND, some Silt, trace coarse Sand; wet			40 Odor
				136	
45		Brown fine Sand and Silt; wet			45 Odor
				246	
50					50 Bottom of well at 50 feet below land surface

BORING/WELL RECOVE~1.GPJ ROUX.GDT 6/11/02

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WELL CONSTRUCTION LOG

WELL NO. **RW-27**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/12/02-4/12/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			
	Brown fine to coarse SAND, trace Brick, trace Concrete, trace Gravel; dry to wet (fill)			
5				5
10				10
	Brown fine to coarse SAND, little Gravel; wet (fill)		1.7	
	Brown fine to coarse SAND, little Gravel; wet (fill)		6.9	
	Brown fine to coarse SAND, little Gravel, trace Silt; wet (fill)		3.1	
15				15
	PEAT and Green-Gray CLAY; moist		2.7	Thickness of peat interval interpreted from previous Site investigation
	Brown fine SAND, little Silt, trace Gravel, trace coarse Sand; wet			
20				20
	Brown fine to coarse SAND, little Silt, trace Gravel; wet		17.7	
25				25
	Brown fine SAND, little Silt; wet		32.4	
30				30
	Brown fine SAND, little Silt, trace coarse Sand; wet		3.8	
35				35
	Brown fine SAND, little Silt, trace coarse Sand; wet		5.2	
40				40
	Brown fine SAND, some Silt; wet		3.8	
45				45
	Brown fine SAND, some Silt; wet		7.1	
50				50
				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-29**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/25/02-4/25/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
5		Black fine to coarse SAND, little Wood, trace Gravel; moist to wet (fill)		301	Odor and black staining
10		CONCRETE and WOOD; wet (fill)			Black staining
		Brown fine to medium SAND, little Silt, trace Gravel, wet (fill)		12.8	Black staining
15		Green to gray CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
		Gray fine SAND, little Silt, little Wood; wet		44.4	Black staining
20		Gray fine to coarse SAND, little Silt, trace Wood; wet		17.6	Odor and black staining
25		Gray fine SAND, some Silt, trace coarse SAND; wet		12.5	Odor and black staining
30		Gray to brown fine SAND, little Silt; wet		6.0	Odor
35		Gray to brown fine SAND, little Silt; wet		459	Odor
40		Brown fine to medium SAND, some Silt; wet		762	Odor and trace free product
45		Brown fine SAND, little Silt; wet		314	Odor
50					Bottom of well 50.5 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-30**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/26/02-4/26/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
5	Brown coarse to fine SAND, little Gravel; moist (fill)		228	Odor and black staining
10	Brown fine to coarse SAND, little Gravel, trace Wood, trace Brick; wet (fill)		5.7	
	Brown fine to medium SAND, trace Gravel, trece Silt; wet (fill)		6.2	
15	Brown fine SAND, little Silt, trace Gravel; wet (fill)		8.9	Odor and black staining
	Brown fine SAND, little Silt, trace Gravel; wet (fill)		8.7	Odor and black staining
	Gray fine to medium SAND, trace Silt, trace Peat; wet		10.4	Odor and black staining
20	Fine SAND, trace Silt; wet		22.2	Black staining
	Brown PEAT; moist			
	Brown fine SAND, little Silt; wet		13.3	Odor and black staining
25	Gray fine SAND, trace Silt; wet		12.7	Odor and black staining
30	Brown fine SAND, little Silt; wet		17.1	Odor and trace free product
35	Fine SAND, little Silt; wet		728	Odor, black staining, and free product
40	Fine SAND, little Silt; wet		1067	Odor, black staining, and free product
45	Fine SAND, little Silt; wet		840	Odor, black staining, and free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-31**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/29/02-4/29/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted** MAT. **SCH 40 PVC** TOTAL LENGTH **35.0** DIA. **4-inch** SLOT SIZE **20-Slot**			
ELEVATION OF: (FT.) GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE	GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
5	Fine SAND, trace Silt; wet (fill)		945	Odor, black staining, and sheen
10				
	Brown fine to medium SAND, trace Silt, trace Brick, trace Gravel, trace Wood, trace Coal Fragments; wet (fill)		35.9	
15	Brown fine to medium SAND, some Silt, trace Gravel; wet (fill)		26.3	
	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		>2000	Odor
	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		886	Odor, black staining, and trace free product
20	Brown PEAT; moist		>2000	Odor and free product
	Brown fine to coarse SAND, little Silt, trace Gravel; wet			
	Brown fine SAND, little Silt; wet		1349	
25	Gray to brown fine SAND, little Silt, trace coarse SAND; wet		257	Odor and trace free product
30	Gray to brown fine SAND, little Silt, trace coarse SAND; wet		192	Odor and trace free product
35	Gray to brown fine SAND, little Silt, trace coarse SAND; wet		254	Odor and trace free product
40	Gray to brown fine SAND, little Silt, trace coarse SAND; wet		415	Odor and trace free product
45	Gray to brown fine SAND, some Silt; wet		785	Odor and trace free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-32**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/30/02-4/30/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **35.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
5		Gray-brown fine to coarse SAND, trace Silt, trace Gravel; moist (fill)		21.1	
10		Gray-brown medium SAND, trace Silt, trace Gravel, trace coarse Sand; moist (fill)		13.8	Odor, sheen
15		Brown coarse to fine Sand, little Silt, trace Gravel; moist (fill)		6.5	Odor, trace black staining
		Brown fine to medium SAND, little Silt, trace coarse Sand; wet (fill)		7.3	Odor
		Brown fine to coarse SAND, little Silt; wet		15.3	
20		Gray-brown fine SAND, little Silt, trace coarse Sand; wet		36.0	Odor, sheen
25		Gray-brown fine SAND, little Silt, trace coarse Sand; wet		87.4	Odor, sheen
30		Gray-brown fine SAND, little Silt, trace coarse Sand; wet		118	Odor, sheen
35		Brown fine SAND, some Silt; wet		67.4	Odor
40		Brown fine to medium SAND, little Silt; wet		107	Odor
45		Brown fine SAND, some Silt; wet		68.9	Odor
50					Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-33**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along Pathmark Wall**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/1/02-5/1/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
5		Brown fine to coarse SAND, little Silt; wet (fill)		0.0	
10		Brown fine SAND, some Silt; wet (fill)		1.3	
15		Brown fine SAND, some Silt, trace coarse Sand, trace Gravel; wet (fill)		8.3	
		Brown to Black stained fine to coarse SAND, trace Gravel; wet (fill)		0.0	Trace free product
20		Gray-brown fine to medium SAND, little Silt, trace Gravel; Wet		0.0	
25		Brown fine SAND, little Silt, trace coarse Sand; wet		439	Odor
30		Brown fine SAND, little Silt, trace coarse Sand; wet		7.2	Odor
35		Brown fine SAND, some Silt; wet		18.4	
40		Brown fine SAND, some Silt; wet		79.5	Odor
45		Brown fine SAND, some Silt, trace coarse Sand; wet		194	Odor
50					Bottom of well 49.5 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-34**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/3/02-5/3/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, little Silt, trace Gravel; moist to wet at appoximately 7 ft bls (fill)			
5				31.2	
10		Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		10.3	
		Brown fine sand, little Silt, trace coarse Sand; wet (fill)		17.1	
15		Green-gray CLAY and PEAT; moist		47.4	Thickness of peat interval interpreted from previous Site investigation
		Brown fine SAND, little Silt, trace coarse Sand; wet			Odor
20		Gray-brown fine SAND, little Silt, trace Gravel; wet		26.9	Odor, sheen
25		Gray-brown fine SAND, some Silt; wet		16.6	Odor
30		Gray-brown fine SAND, some Silt; wet		24.3	Odor
35		Gray-brown fine SAND, some Silt, trace coarse Sand; wet		107	Odor, sheen
40		Brown fine SAND, little Silt; wet		126	Odor
45		Brown fine SAND, little Silt; wet		134	Odor
50					Bottom of well 49 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO.	NORTHING	EASTING		
RW-35				
PROJECT NO./NAME: 92401Y03 / FC Gowanus former MGP Site		LOCATION: 124-136 2nd Avenue		
APPROVED BY: G. Tyers	LOGGED BY: D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER: Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA: On Site Along 12th Street		
DRILL BIT DIAMETER/TYPE: 6.25-in. / Auger	BOREHOLE DIAMETER: 10-inches	DRILLING EQUIPMENT/METHOD: CME-75 / HSA	SAMPLING METHOD: 2" Split Spoon	START-FINISH DATE: 5/6/02-5/8/02
CASING MAT./DIA.: SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK #2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace silt, trace gravel, trace brick; moist (fill)			
5		Black fine SAND, trace Silt; moist to wet at approximately 5.5 ft bls (fill)		>2000	Odor, trace free product
		Black fine SAND, little Silt; wet (fill)		>2000	Odor, free product
		Green-gray CLAY and PEAT; moist			
		Black to brown fine SAND and SILT; wet		872	Odor, free product
10					
		Brown to black fine SAND, some Silt, trace coarse Sand; wet			
15				272	Odor
20		Gray-brown fine SAND, little Silt, trace Clay, trace Peat; wet		311	
25		Brown fine SAND, little Silt; wet		182	Odor
30		Brown fine SAND, little Silt; wet		158	Odor
35		Brown fine SAND, little Silt, trace coarse Sand; wet		552	Odor, trace free product
40		Gray-brown fine to medium SAND, little Silt; wet		918	Trace free product
45		Gray-brown fine to medium SAND, little Silt; wet		723	Trace free product
50					Bottom of well 49 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-36**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/6/02-5/7/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace silt, trace gravel, trace brick; moist (fill)			
5		Black fine SAND, some Silt; wet (fill)		94.3	Odor
		Brown to black fine SAND, some Silt, trace Clay, trace Coal, trace Shells, trace Gravel; wet (fill)		199	Odor
		Black fine SAND, little silt; wet(fill)		8.7	Odor, trace free product
10					
		Brown to black fine to coarse SAND, little Silt, trace Gravel; wet (fill)		35.0	Odor, trace free product, sheen
		Brown to black fine SAND, little Silt, trace Wood; wet (fill)		51.2	
15		Brown to black fine to medium SAND, little Silt; wet (fill)		109	Odor
		Grey-brown fine SAND, some Silt; wet (fill)		22.9	Odor
20		Brown fine to coarse SAND; wet (fill)		5.0	
		Green-grey CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
		Grey to black fine to coarse SAND, little Silt, trace Gravel; wet		>2000	Odor, trace free product
25		Grey to black fine to coarse SAND, little Silt, trace Gravel; wet		111	Odor, trace free product
30		Grey-brown fine to coarse SAND, little Silt, trace Gravel; wet		>2000	Odor, trace free product
35		Grey-brown fine to coarse SAND, little Silt, trace Gravel; wet		>2000	Odor, trace free product
40		Brown fine SAND, little Silt, trace coarse Sand; wet		1785	Odor, trace free product
45		Brown to light brown fine SAND, some Silt; wet		708	Odor, free Product
50					Bottom of well 50 feet below land surface

BORING/WELL RECOVE-1.GPJ ROUX.GDT 6/11/02

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WELL CONSTRUCTION LOG

WELL NO. **RW-37**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/9/02-5/9/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; moist to wet (fill)			
5					5
		Brown to black fine to medium SAND, little Silt, trace Gravel, trace Coal; wet (fill)		1271	Odor
10		Brown-green to black fine SAND, little Silt, trace Gravel, trace Wood; wet (fill)		1197	Odor 10
		Brown fine to medium SAND, trace Gravel, trace Silt; wet (fill)		380	
15		Brown-green fine SAND, some Silt; wet (fill)		158	15
		Green-grey CLAY and PEAT; moist		252	Thickness of peat interval interpreted from previous Site investigation
20		Brown fine SAND, little Silt, trace coarse SAND, trace Gravel; wet			20
		Brown fine SAND, little Silt, trace coarse SAND; wet		207	Odor
25		Brown fine SAND, little Silt, trace coarse SAND; wet		664	Odor 25
30		Brown fine SAND, little Silt; wet		775	Odor 30
35		Brown fine SAND, little Silt; wet		1345	Odor 35
40		Brown fine SAND, little Silt; wet		1489	Odor, trace free product 40
45		Brown fine SAND, little Silt; wet		1183	Odor, trace free product 45
50					Bottom of well at 50 ft bls 50

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WELL CONSTRUCTION LOG

WELL NO. **RW-38**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/10/02-5/10/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; moist (fill)			
5					
10		Brown fine to coarse SAND, little Silt, trace Gravel; moist (fill)		35.4	Odor
		Brown fine to coarse SAND, little Silt, trace Gravel; moist (fill)		867	Odor
15		Brown fine SAND, little Silt, trace coarse Sand; wet (fill)		>2000	Odor
		Brown fine SAND, little Silt, trace coarse Sand; wet (fill)		6.9	
		Green-gray CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
20		Gray-brown fine to coarse SAND, little Silt, trace Gravel; wet		96.6	Odor
25		Gray-brown fine to coarse SAND, little Silt, trace Gravel; wet		381	Odor
30		Gray-brown fine to coarse SAND, little Silt, trace Gravel; wet		874	Odor
35		Gray-brown fine to medium SAND, little Silt; wet		1341	Odor
40		Brown fine SAND, some Silt; wet		1033	Odor, trace free product
45		Gray-brown fine to medium SAND, little Silt; wet		1271	Odor, trace free product
50					Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-39**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **R. Kovacks**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/13/02-5/13/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown coarse to fine SAND, trace Gravel, trace Silt, trace Brick, trace Cobbles; moist (fill)			
5				5
10	Brown medium to fine SAND, trace Silt, trace Gravel; moist (fill)		19.9	Slight odor
	Brown to reddish brown fine SAND, some Silt; moist (fill)		762	Slight odor
15	Brown to reddish brown fine SAND, some Silt; wet (fill)		659	Odor
	Brown to reddish brown fine SAND, some Silt, trace coarse SAND; wet (fill)			Odor
	Peat			Thickness of peat interval interpreted from previous Site investigation
20	Gray to brown medium SAND, some Silt; wet			Odor
25	Gray-brown fine SAND, some Silt; wet		129	Odor
30	Gray-brown fine SAND, some Silt; wet		421	Odor
35	Gray-brown fine SAND, some Silt; wet		>2000	Odor
40	Gray-brown fine SAND, some Silt; wet		1200	Odor, trace free product
45	Gray-brown fine SAND, trace Silt, trace Gravel; wet		1421	Trace free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-40**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **On Site Along 12th Street**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/14/02-5/14/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown to black stained fine to medium SAND, little Silt, trace coarse SAND, trace Gravel; wet (fill)		17.1	
5				Odor
10	Gray-brown fine SAND, some Silt; wet (fill)		10.1	Odor
15	Brown fine to medium SAND, little Silt; wet (fill)		22.8	Odor
	Brown fine to coarse SAND, little Silt; wet (fill)		21.3	Odor
	Green-gray CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
20	Gray-brown fine to medium SAND, little Silt; wet		29.2	Odor
25	Gray-brown fine SAND, some Silt; wet		35.1	
30	Grey-brown fine SAND, some Silt; wet		65.2	Odor
35	Grey-brown fine SAND, some Silt; wet		149	Odor
40	Grey-brown fine SAND, some Silt; wet		78.1	Odor, trace free product
45	Brown fine SAND, little Silt; wet		522	Odor, trace free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-41**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/16/02-5/16/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC**	TOTAL LENGTH **25.0**	DIA. **4-inch** SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown to black stained fine to medium SAND, little Silt, trace coarse SAND, trace Gravel; wet (fill)			
5				5
10	Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		166	Odor
	Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		1526	Odor
15	Brown fine to coarse SAND, trace Silt; wet (fill)		713	Odor
	Green-gray CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site Investigation
20	Brown fine SAND, little Silt, trace coarse Sand; wet		23.5	Odor
25	Brown to black fine SAND, little Silt, trace coarse Sand; wet		1029	Odor
30	Brown fine SAND, little Silt, trace coarse Sand; wet		1785	Odor, trace free product
35	Brown fine SAND, little Silt, trace coarse Sand; wet		>2000	Odor, trace free product
40	Brown fine to medium SAND, little Silt; wet		1527	Odor, trace free product
45	Brown fine to medium SAND, little Silt; wet		>2000	Odor, trace free product
50				Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-42**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/17/02-5/17/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC**	TOTAL LENGTH **25.0**	DIA. **4-inch** SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Brown to black stained fine to medium SAND, little Silt, trace coarse SAND, trace Gravel; wet (fill)			
5				5
10				10
	Brown to black fine to medium SAND, trace Gravel, trace Silt, trace Coarse Sand; wet (fill)		>2000	Odor
15	PEAT; moist			Thickness of peat interval interpreted from previous Site investigation 15
	Brown fine to coarse SAND, trace Silt, trace Gravel; wet		>2000	
20	Gray-brown fine to medium SAND, little Silt, trace coarse Sand; wet		>2000	Odor 20
25	Gray-brown fine to medium SAND, little Silt, trace coarse Sand; wet		520	Odor 25
30	Gray-brown fine to medium SAND, little Silt, trace coarse Sand; wet		54.9	Odor, free product 30
35	Gray-brown fine SAND, little Silt, trace coarse Sand; wet		280	Odor, free product 35
40	Gray-brown fine to coarse SAND, little Silt; wet		>2000	Odor, free product 40
45	Gray-brown fine to coarse SAND, little Silt; wet		>2000	Odor, free product 45
50				Bottom of well 50 feet below land surface 50

BORING/WELL RECOVE-1.GPJ ROUX.GDT 6/11/02

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WELL CONSTRUCTION LOG

WELL NO. **RW-43**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **M. Kroll**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/20/02-5/20/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5		Brown to black stained fine to medium SAND, little Silt, trace coarse SAND, trace Gravel; wet (fill)			
10					
		Grey to light brown fine to medium SAND, some Silt, little Clay; wet		268	Slight odor, some staining
15		PEAT		>2000	Slight odor, some staining
		Brown fine to coarse SAND, some Silt; wet		>2000	
20		Brown fine to medium Sand and Silt, some Clay, trace Gravel; wet		907	Odor
25		Brown fine to medium Sand and Silt, some Clay, trace Gravel; moist		1235	Odor
30		Brown fine to coarse SAND, some Silt and Clay; wet		>2000	Odor
35		Brown fine to coarse SAND, some Silt and Clay; wet		1226	Odor
40		Brown fine to coarse SAND, some Silt and Clay; wet		>2000	Odor
45		Brown fine to coarse SAND, some Silt and Clay; wet		>2000	Odor
50					Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-44**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **5/21/02-5/21/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **25.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Silt and Gravel; wet (fill)		32.7	
5					
10					
		Brown gray fine to medium SAND, little Silt; wet		0.0	
15		Brown PEAT and green-gray Clay			
		Brown fine SAND, some Silt, trace coarse Sand and Gravel; wet		3.7	
20					
25		Brown fine SAND, some Silt, trace coarse Sand and Gravel; wet		41.7	
30		Brown fine SAND, some Silt; wet		45.3	Organic odor
35		Brown fine SAND, little silt, trace coarse Sand; wet		77.2	Odor
40		Brown fine SAND, some Silt; wet		137	Odor
45		Brown fine SAND, some Silt; wet		87.6	Odor, free product
50					Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-1S**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/22/02-4/22/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **10.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			
	Brown fine to coarse SAND, little Silt, trace Gravel, trace Concrete; dry to wet at 3 feet (fill)			
5	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		12.1	Odor
10	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)		23.8	Odor
15	PEAT and green-grey CLAY; moist			

Bottom of well at 16 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. **RW-2S**	NORTHING	EASTING		
PROJECT NO./NAME **92401Y03 / FC Gowanus former MGP Site**		LOCATION **124-136 2nd Avenue**		
APPROVED BY **G. Tyers**	LOGGED BY **D. Moss**	**Brooklyn, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling & Testing, Inc. / L. Adams**		GEOGRAPHIC AREA **Off Site 12th Street Sidewalk**		
DRILL BIT DIAMETER/TYPE **6.25-in. / Auger**	BOREHOLE DIAMETER **10-inches**	DRILLING EQUIPMENT/METHOD **CME-75 / HSA**	SAMPLING METHOD **2" Split Spoon**	START-FINISH DATE **4/22/02-4/22/02**
CASING MAT./DIA. **SCH 40 PVC / 4-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **10.0**	DIA. **4-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE / GRAVEL PACK **#2**

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			
	Brown fine to coarse SAND, little Silt, little Gravel, trace Concrete; dry to wet at 3 feet (fill)			
5	Brown fine to coarse SAND, little Silt, little Gravel; wet (fill)		28.6	
10	Brown fine to coarse SAND, little Silt, little Gravel; wet (fill)		27.2	Odor and sheen
15	PEAT and green-grey CLAY; moist			

Bottom of well at 16 feet below land surface

Appendix D

Well Development Logs

Well Development Record

Project Number:	60137361	Well ID:	MW - 1D
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/3/2010	Permit Number:	
Weather:	80°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	7.42
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	60.0
Pump Intake Setting* (feet):	60 - 72'	Total Depth* (feet):	70.5
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	63.08
Before Cap Removal:		Casing Volume (gal):	11.49
After Cap Removal:	12.3	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1420			10.01	3.591	16.36	1	23.9	-132.3	28.3	Clear
1430		2	9.01	2.588	16.3	0.14	80.3	-148.6	29	
1450		4	9.5	2.788	17.13	0.09	4076	-100.6	26.6	Brown, silty, thick
1500		6	8.5	3.165	18.07	0.12	250	-96.8	27.6	Brown, opaque
1530		9	8.43	3.276	17.53	0.7	241	-88.8	26.3	Brown, opaque
1545		11	8.02	3.43	17.64	0.11	137	-194.7	26.9	Brown, opaque
1610		14	8	3.091	18.43	0.64	88.9	-150	25.6	Brown, opaque
1620		16	7.86	3.563	17.53	0.12	38.2		22.8	

Start Purge Date/Time:	6/3/2010 14:20	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/3/2010 16:20	Start Sample Date/Time:	
Total Colume Purged (gal):	16 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):		Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Slow to pump

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 1I
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/3/2010	Permit Number:	
Weather:		Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	6.27
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	30.0
Pump Intake Setting* (feet):	30 - 42'	Total Depth* (feet):	43.2
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	13.7
Before Cap Removal:		Casing Volume (gal):	7.04
After Cap Removal:	42.0	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1243			7.66	2.433	17.84	0.21	54.5	-109.5	8.42	Dark brown, silty
1255		5	7.75	1.839	16.96	0.17	111	-65.4	25.1	White, opaque
1300		8	7.17	2.211	17.01	0.2	573	-57.9	25.7	Brown, silty
1305		10	7.09	2.465	17.07	0.48	39.1	-57.5	28.7	Light brown, silty
1310			7.07	2.436	17.16	0.83	57	-55.2	29.4	White, opaque
1315		12	7.05	2.457	17.25	1.39	14.8	-60.4	29.2	White, opaque
1320		13	7.01	2.641	17.12	0.67	2.32	-62.6	29.2	White, opaque
1325		16	7	2.672	17.13	0.6	2.3	-61	29.5	Clear

Start Purge Date/Time:	6/3/2010 12:43	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/3/2010 13:26	Start Sample Date/Time:	
Total Colume Purged (gal):	16 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):	29.5	Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

No odor

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 1S
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/3/2010	Permit Number:	
Weather:	80°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	3.45
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	3.0
Pump Intake Setting* (feet):	3 - 15'	Total Depth* (feet):	14.5
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	11.05
Before Cap Removal:		Casing Volume (gal):	2.36
After Cap Removal:	98.5	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depthto Water (ft)	Comments
1055			8.05	7.576	17.93	7.43		-179.3	8.55	Brown Silty
		Sample for turbidity was very goopy - meter read error								
1100			7.56							
			9.084	16.73	1.01	2329	-169.6	10.1		Brown Silty
1110		5	7.42	2.761	1630	0.68	1769	-144	13	Brown Silty
1111		Well went dry, let it recharge till 11:16								
1120		7	7.5	10.57	16.06	0.46	1477	-106.4	12.3'	
1123		Let well recharge till 1130								
1130			7.4	11.95	15.85	0.41		-107.3	12.8'	
		Well went dry before all readings could be finished.								
1145		Start pumping H20 7.43'								
1150		10	7.34	13.02	16.22	4.98	1661	-130.4	9.7	
1202		Start pumping again DTW 8.71'								
1205		12	7.39	12.74	15.64	0.4	1600	-126	12.5	
		Well went dry after 1 min of pumping, will move to nextlocation and come back to this one later								

Start Purge Date/Time:	6/3/2010 11:00	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/3/2010 13:00	Start Sample Date/Time:	
Total Colume Purged (gal):	12 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):		Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Well keeps going dry. 10 gal so far but turbidity still >1000. Note: dual-Phase pump is dead. Ordering a new one.

Well still turbid >1200. The well went dry 6 times.

Where depth to water after purge was not available, used initial depth to water to calculate water column

Well Development Record

Project Number:	60137361	Well ID:	MW - 2D
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/2/2010	Permit Number:	
Weather:	85°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	7.17
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	60
Pump Intake Setting* (feet):	60 - 72'	Total Depth* (feet):	71.5
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	62.3
Before Cap Removal:		Casing Volume (gal):	11.65
After Cap Removal:	3.0	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
735			8.08	1.509	15.94	1.44	234	-119.7	11.3	Dark brown, heavy silt
740			8.01	1.4	15.75	1.3	230	-124.2	11.7	White, opaque
745			7.6	2.667	16.08	0.58	201	-175.1	11.2	Light brown, silty
750			7.15	2.63	16.02	2.1	145	-76.8	11.5	Light brown, silty
755			7.09	2.649	16.02	0.9	96.8	-67.2	11.5	Light brown, silty
800			7.05	2.862	16.02	0.55	78.4	-55.1	11.8	Light brown, silty
805			7.01	2.671	16.07	0.3	48.4	-52.1	11.8	Grey, opaque
810			6.99	2.631	16.07	0.31	45.2	-48.2	11.8	Grey, opaque
820		40	6.96	2.637	16	0.24	25.4	-42.6	11.9	Clear to slightly opaque white

Start Purge Date/Time:	6/2/2010 7:35	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/2/2010 8:22	Start Sample Date/Time:	
Total Colume Purged (gal):	40 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):	9.2	Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

No sheen or odor.

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 3I
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/2/2010	Permit Number:	
Weather:	85°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	3.99
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	25.0
Pump Intake Setting* (feet):	25 - 52'	Total Depth* (feet):	50.8
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	43.9
Before Cap Removal:		Casing Volume (gal):	8.28
After Cap Removal:	31.2	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1450			6.98	2.012	15.04	5.53	193	-85.4	7.6	Grey, silty
1455			7.05	4.25	15.01	0.97	170	-90.7	7.8	Grey, silty
1500		12	7.05	4.212	15.04	0.72	42.1	-92.5	7.8	Grey, silty
1505		16	6.94	3.972	15.49	0.45	106.8	-95.1	7.7	Grey, silty
1510		24	6.95	4.314	15.27	0.26	170	-96.5	6.5	White, opaque
1515		28	6.95	4.191	15.29	0.26	150.1	-96.9	6.7	White, opaque
1525		32	6.93	4.221	15.32	0.23	22.9	-97.5	6.7	White, opaque
1530		36	6.91	4.173	15.43	0.2	15.1	-98.4	6.9	Clear
1535		40	6.91	4.136	15.4	0.18	6.56	-98.2	6.9	Clear

Start Purge Date/Time:	6/2/2010 14:50	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/2/2010 15:37	Start Sample Date/Time:	
Total Colume Purged (gal):	40 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):	6.9	Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

MGP-like odor on tubing when pulling out of well

Sheen blebs on H2O

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 3S
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/2/2010	Permit Number:	
Weather:	85°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	2.49
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	3.0
Pump Intake Setting* (feet):	3 - 15'	Total Depth* (feet):	14.5
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	12
Before Cap Removal:		Casing Volume (gal):	2.36
After Cap Removal:	69.4	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depthto Water (ft)	Comments
1305			7.88	0.301	16.01	0.51		-148.8	2.5	Grey, very silty
		13:05 - 13:20 - No pumping, had to get car to use instead.								
1320			8.17	0.398	17.71	0.13	75	-302	2.8	Grey, very silty
1330			8.04	0.452	17.27	0..14	7.23	-203.9	2.7	Grey, opaque
1335		12	8.00	0.465	17.2	0.14	1.03	-265.4	2.5	Clear

Start Purge Date/Time:	6/2/2010 13:05	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/2/2010 13:35	Start Sample Date/Time:	
Total Colume Purged (gal):	12 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):	2.5	Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Few small sheen blebs.

Slight MGP-like odor.

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well/Piez. ID: MW-4D1

AECOM

Well/Piezometer Development Record

Client: National Grid Site Location: Hetco

Project No: _____ Date: 4/29/11 Developer: Boost

WELL/PIEZOMETER DATA

Well [X] Piezometer [ ] Diameter 2" Material PVC

Measuring Point Description _____

Geology at Screen Interval (if known) _____

Depth to Top of Screen (ft.) 115

Depth to Bottom of Screen (ft.) 120

Time of Water Level Measurement 0830

Total Well Depth (ft.) 120 (115.3') Soft.

Calculate Purge Volume (gal.) 19 gal = 1 well vol

Depth to Static Water Level (ft.) 3.2'

Disposal Method Drum.

Wellhead PID/FID 0.3

Original Well Development [X] Redevelopment [ ] Date of Original Development 4/29/11

DEVELOPMENT METHOD Waterra Pump **PURGE METHOD** Surge block

Field Testing Equipment Used:

Make	Model	Serial Number
Horriba	U22	
Lamotte	2020	

Field Testing Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (gal)	T° (C/F)	pH	Spec. Cond (umhos)	Turbidity (NTUs)	DO	Color	Odor	Other
1100	25	19.8.	7.41	2.68	414.0	6.68	lt Brown	NA	Silty
1110	45	17.52	7.5	35.4	55.9	2.14	clear	NA	NA
1120	~~[illegible]~~ 65	17.0	7.33	36.9	24.0	2.19	clear	NA	NA
	- wait to Purge 90 gallons.								
1145	End Purge @		100 gal						

ACCEPTANCE CRITERIA (from workplan)

Min. Purge Volume (____ well volumes) _____gallons

Maximum Turbidity Allowed _____ NTUs

Stabilization of parameters _____%

	Yes	No	N/A
Has required volume been removed	[ ]	[ ]	[ ]
Has required turbidity been reached	[ ]	[ ]	[ ]
Have parameters stabilized	[ ]	[ ]	[ ]

If no or N/A explain below:

Signature [signature] Date: 4/29/11

1050 Begin Purge

final DTB 119.82

Well/Piez. ID: MW-402

AECOM

Well/Piezometer Development Record

Client: National Grid Site Location: Metro

Project No: _____ Date: 4/29/11 Developer: Boart

WELL/PIEZOMETER DATA

Well ☒ Piezometer ☐ Diameter 2" Material PVC

Measuring Point Description _____ Geology at Screen Interval (if known) _____

Depth to Top of Screen (ft.) 142

Depth to Bottom of Screen (ft.) 147 ~~146~~. Time of Water Level Measurement 832

Total Well Depth (ft.) 147 - 143.1 when measured (146.8 After Devel.) Calculate Purge Volume (gal.) 10 well vol (At least Pumpout 5') ≈ 230 gal

Depth to Static Water Level (ft.) 3.2' Disposal Method Drum.

Wellhead PID/FID 0.4 ppm.

Original Well Development ☒ Redevelopment ☐ Date of Original Development _____

DEVELOPMENT METHOD Water Pump **PURGE METHOD** _____

Field Testing Equipment Used:

	Make	Model	Serial Number
	Horiba U22		
	Lamotte 2020		

Field Testing Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (gal)	T° (C/F)	pH	Spec. Cond (umhos)	Turbidity (NTUs)	DO	Color	Odor	Other
0850	Start Purge.								
0910	~~25 gal~~ 18.	16.74	6.32	1.65	910.9	2.60	Brown	NA	no sheen etc
0920	36	16.00	7.49	1.70	106.6	1.22	lt Brown	"	"
0930	50	16.19	7.37	1.70	49.2	1.27	~~clear~~ Brown	"	"
0940	75	16.22	7.79	1.78	17.6	2.30	lt Brown	"	"
0950	110	16.5	7.9	1.80	90.5	5.0	Opaque white	"	"
1000	~~[illegible]~~ 130	16.49	7.8	1.82	81.9	4.78	lt	"	"
1010	150	16.47	7.78	1.79	52.0	4.7	clear	"	"
1015	155	16.41	7.78	1.89	50.0	4.39	clear	"	"
1020	160	16.30	7.80	1.83	43.8	4.50	clear	"	"

ACCEPTANCE CRITERIA (from workplan) Workplan has no req'd vol.

Min. Purge Volume (10 well volumes) 230 gallons
Maximum Turbidity Allowed _____ NTUs
Stabilization of parameters _____%

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A explain below:

Signature [signature] Date: 4/29/11

Well Development Record

Project Number:	60137361	Well ID:	MW - 4I
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/2/2010	Permit Number:	
Weather:	85°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	3.95
Inner Casing Material:	PVC	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	25.0
Pump Intake Setting* (feet):	25 - 37'	Total Depth* (feet):	37.6
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	31.38
Before Cap Removal:		Casing Volume (gal):	6.13
After Cap Removal:	0.0	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
745			7.52	0.854	14.85	0.32		-158.8	9.8	Grey, silty
750			7.41	1.006	15.28	0.24		-173	9.73	Grey, silty, goopy
755		4	7.41	0.986	15.01	0.31		-177.3	9.52	SAA, pumping slower
800		8	7.37	0.991	15.03	0.21		-189.1	9.83	Grey, silty
805		14	7.35	0.99	15.04	0.13		-183.7	9.87	White, opaque
810		16	7.35	0.986	15.02	0.11		-188.7	12.2	Clear, little silt
813		21	7.35	0.983	15	0.9		-188.5	12.49	Clear

Start Purge Date/Time:	6/2/2010 7:45	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/2/2010 8:13	Start Sample Date/Time:	
Total Colume Purged (gal):	21 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):	6.22	Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Small sheen blebs on purge water.

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 4S
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/1/2010	Permit Number:	
Weather:	89°F, T- Storms	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	4.94
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	3.0
Pump Intake Setting* (feet):	3 - 15'	Total Depth* (feet):	14.8
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	10.02
Before Cap Removal:		Casing Volume (gal):	2.41
After Cap Removal:	0.0	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1525			7.06	3.712	16.4	0.48		-136	8.5	Grey, very silty, sludge-like
1530		3	7	4.62	15.06	1.64		-117.9	11.8	Grey, very silty, sludge-like
1605		15:40 - Stop pumping due to storm.								
1610		16:05 - Start pump								
1605		7	7.08	4.9	14.69	6.2		-86.3	9	Opaque, silty
1610		Well ran dry for third time.								

Start Purge Date/Time:	6/1/2010 15:25	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/1/2010 16:10	Start Sample Date/Time:	
Total Colume Purged (gal):	~9 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):	4.78 (after ~5 min of recharge)	Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Well keeps running dry so we let it recharge for 5 min. Recharge is very fast.

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 5D
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/1/2010	Permit Number:	
Weather:	89°F, T-Storms	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	7.01
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	60.0
Pump Intake Setting* (feet):	60 - 72'	Total Depth* (feet):	71.7
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	64.69
Before Cap Removal:		Casing Volume (gal):	11.69
After Cap Removal:	0.4	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1416			9.16	1.326	16.64	0.67		-53.3		Brown, Silty
1420			7.44	1.544	16.01	0.05		-192.4		Brown, Silty
1425			7.43	1.57	16.74	1.33		-126.3	7.8	White, opaque
1430			7.33	1.584	15.96	0.05		-156.3	6.82	White, opaque
1435			7.31	1.582	15.98	0.11		-149	6.9	Clear
1440			7.31	1.581	15.97	0.16		-145.1	6.73	Clear

Start Purge Date/Time:	6/1/2010 14:15	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/1/2010 14:41	Start Sample Date/Time:	
Total Colume Purged (gal):	~25 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):		Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 5I
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/1/2010	Permit Number:	
Weather:	89°F, T- Storms	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	7.09
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	38.0
Pump Intake Setting* (feet):	38 - 50'	Total Depth* (feet):	49.1
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	42.01
Before Cap Removal:		Casing Volume (gal):	8.00
After Cap Removal:	2.5	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1327			7.74	0.814	16.24	0.16		-121.9		Gray, silty
1332		6	7.57	1.046	16.2	0.06		-152.9	7.79	Gray, silty
1340		12	7.34	0.904	16.25	0.09		-154.5	7.7	Lt. gray, opaque
1345		16	7.33	1	16.19	0.23		-162	7.72	White, opaque
1350		22	7.27	1.123	16.16	0.22		-152.2	7.6	Clear

Start Purge Date/Time:	6/1/2010 13:25	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/1/2010 13:50	Start Sample Date/Time:	
Total Colume Purged (gal):	22 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):		Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 5S
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/1/2010	Permit Number:	
Weather:	89°F, T-Storms	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	7.43
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	3.0
Pump Intake Setting* (feet):	3 - 15'	Total Depth* (feet):	15.5
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	8.07
Before Cap Removal:		Casing Volume (gal):	2.53
After Cap Removal:	2.1	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1228			7.02	4.052	15.28	0.23		-83.4		
1235			7.16	4.055	15.25	0.35		-82.1		
1240		10	7.06	4.063	15.7	0.19		-101.1		
1245		14	7.03	3.954	15.27	0.19		-109.5		
1250		17	7.02	3.88	15.28	0.17		-125.1		
1255		19	7.04	3.831	15.27	0.15		-135.3		

Start Purge Date/Time:	6/1/2010 12:28	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/1/2010 12:55	Start Sample Date/Time:	
Total Colume Purged (gal):	19 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):		Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 6I
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/2/2010	Permit Number:	
Weather:	85°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	6.72
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	30.0
Pump Intake Setting* (feet):	30 - 42'	Total Depth* (feet):	42.31
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	34.51
Before Cap Removal:		Casing Volume (gal):	6.90
After Cap Removal:	2.1	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
940			6.81	3.625	16.25	0.67		-87.7	7.62	Brown, silty
945			6.77	4.016	16.23	0.14		-99.2	7.75	Brown, silty
950			6.67	4.317	16.23	0.13		-101.8	7.9	White, opaque
955			6.72	4.94	16.76	0.09		-104.3	7.82	White, opaque
1000		20	6.73	4.514	16.27	0.7		-105.6	7.8	Clear

Start Purge Date/Time:	6/2/2010 9:40	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/2/2010 10:02	Start Sample Date/Time:	
Total Colume Purged (gal):	20 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):	7.8	Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

No sheen or odor detected. Bottom is soft

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 6S
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/2/2010	Permit Number:	
Weather:	85°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	5.62
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	3.0
Pump Intake Setting* (feet):	3 - 15'	Total Depth* (feet):	15.1
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	0.7
Before Cap Removal:		Casing Volume (gal):	2.46
After Cap Removal:	11.9	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
855			6.93	1.28	17.09	0.47		-92.1	9	Gray, very silty
900			6.7	1.77	16.25	0.31		-84.6	12.3	Gray, very silty
905		5	6.8	1.808	17.23	1.47		-71.1	9	Gray, very silty
		9:05 - 9:07 - Let well recharge.								
915		8	6.75	1.776	16.22	0.13		-84.2	9.3	Brown, silty, see through
920		9	6.75	1.787	16.26	0.22		-63.1	9.42	SAA, pumping very slowly
925		Let well recharge till 927								
927		10	6.77	1.783	16.07	0.22		-60.7	14.4	

Start Purge Date/Time:	6/2/2010 8:55	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/2/2010 9:29	Start Sample Date/Time:	
Total Colume Purged (gal):	10 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):	14.4	Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 7I
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/2/2010	Permit Number:	
Weather:	85°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	6.98
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	30.0
Pump Intake Setting* (feet):	30 - 42'	Total Depth* (feet):	41.4
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	24.2
Before Cap Removal:		Casing Volume (gal):	6.75
After Cap Removal:	10.2	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1115			6.82	1.368	15.55	0.9		-106.3	12	Brown, heavy silt
1120			6.82	1.25	15.39	0.38		-97.9	12	Brown, heavy silt
1125			6.82	1.24	15.3	0.38		-98.9	12	Brown, silty, see through
1130			6.8	1.292	15.42	0.16		-97	12	White, opaque
1135		12	6.8	1.3	15.4	0.19		-95.9	12	White, opaque
1140		18	6.8	1.31	15.17	0.12		-97.6	17.2	Very clear

Start Purge Date/Time:	6/2/2010 11:15	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/2/2010 12:00	Start Sample Date/Time:	
Total Colume Purged (gal):	18 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):	17.2	Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 7S
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/2/2010	Permit Number:	
Weather:	85°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	5.39
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	3.0
Pump Intake Setting* (feet):	3 - 15'	Total Depth* (feet):	15.0
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	6.3
Before Cap Removal:		Casing Volume (gal):	2.4
After Cap Removal:	54.7	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1035			7.08	1.261	19.26	1.05		-107.1	8.44	Dark gray, very silty
1045		6	7.08	1.146	15.00	0.07		-178.0	8.7	Clear
1050		12	7.08	1.911	15.00	0.09		-170.0	8.7	Clear

Start Purge Date/Time:	6/2/2010 10:35	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/2/2010 10:52	Start Sample Date/Time:	
Total Colume Purged (gal):	12 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):	8.7	Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Water was very clear, slight coal-like odor

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 8I
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/3/2010	Permit Number:	
Weather:	80°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	4.51
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	30.0
Pump Intake Setting* (feet):	30 - 42'	Total Depth* (feet):	42.3
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	35.1
Before Cap Removal:		Casing Volume (gal):	6.89
After Cap Removal:	0.0	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
857			7.62	0.977	17.53	3.85		-69.2	5.55	Brown, goopy
		859 - 915 Let well recharge								
		915 - Had to change out 2 phase whale pump								
920		4	7.02	2.003	17.36	0.21	135	-103.6		White, opaque
925		12	7.03	1.867	17.32	0.45	30	-120.9	7.18	White, opaque
930		16	7.02	1.945	17.3	0.34	8.86	-121	7.2	Clear
935		25	7	1.969	17.31	0.27	4.24	-126.3	7.2	Clear

Start Purge Date/Time:	6/3/2010 8:57	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/3/2010 9:36	Start Sample Date/Time:	
Total Colume Purged (gal):	25 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):	7.2	Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Turbidity meter didn't read (possibly to turbid as it read the 10 NTU blank fine)

Small sheen blebs on H2O

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 8S
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	6/2/2010	Permit Number:	
Weather:	85°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	3.08
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	3.0
Pump Intake Setting* (feet):	3 - 15'	Total Depth* (feet):	17.1
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	14.02
Before Cap Removal:		Casing Volume (gal):	2.79
After Cap Removal:	0.0	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1650			7.47	4.019	17.45	0.32	221.7	-135.8	15.4	Dark brown, silty
1653 - 1658		Let well recharge								
1710							599			
		Well keeps going dry every 1 - 2 min. Will let it recharge overnight and develop first thing tomorrow morning.								
950									4.5'	
955		2	7.01	8.304	18.23	0.81	155	-41.2		Brown, silty
		After pumping 2 gal well went dry, very poor recharge.								

Start Purge Date/Time:	6/2/2010 16:50	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	6/3/2010 10:40	Start Sample Date/Time:	
Total Colume Purged (gal):	3 gal	End Sample Date/Time:	
Depth to Water After Purge* (feet):		Sampler Names:	

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Pumped additional 2 gal from MW - 8S, went dry again. Note: appears the dual phase pump may have burned out. Not sure why (it was at ~70' when it quit). Will see if we can get it back running.

Where depth to water after purge was not available, used initial depth to water to calculate water column.

Well Development Record

Project Number:	60137361	Well ID:	MW - 9I
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	9/21/2010	Permit Number:	
Weather:	70°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	6.59
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	30.0
Pump Intake Setting* (feet):	30-45	Total Depth* (feet):	46.5
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	39.91
Before Cap Removal:		Casing Volume (gal):	7.58
After Cap Removal:	1.7	DTW After Pump Installed:	N/M

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depthto Water (ft)	Comments
1205	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	6.59	dtb: 46.45 (before dev.) faint tar-like odor.

Start Purge Date/Time:	9/21/2010 12:05	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	9/21/10 16:30 (offsite)	Start Sample Date/Time:	
Total Colume Purged (gal):	36	End Sample Date/Time:	
Depth to Water After Purge* (feet):	not documented	Sampler Names:	J. Pfeiffer, J. Ehlen

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Good recharge rate during development. Water quality meter was not working, no water quality measurements collected, only turbidity. Turbidity was < 50 NTU.

Well Development Record

Project Number:	60137361	Well ID:	MW - 9D
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	9/21/2010	Permit Number:	
Weather:	70°F, Sun	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	6.61
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	60.0
Pump Intake Setting* (feet):	60-70	Total Depth* (feet):	71.69
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	65.08
Before Cap Removal:		Casing Volume (gal):	11.69
After Cap Removal:	1.6	DTW After Pump Installed:	N/M

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depthto Water (ft)	Comments
1206	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	6.59	dtb: 71.69 (before dev.) faint odor.

Start Purge Date/Time:	9/21/2010 12:05	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	9/21/10 16:30 (offsite)	Start Sample Date/Time:	
Total Colume Purged (gal):	76	End Sample Date/Time:	
Depth to Water After Purge* (feet):	not documented	Sampler Names:	J. Pfeiffer, J. Ehlen

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Good recharge rate during development. Water quality meter was not working, no water quality measurements collected, only turbidity. Turbidity was < 50 NTU.

Well Development Record

Project Number:	60137361	Well ID:	MW - 19S
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	11/20/2011	Permit Number:	
Weather:	40°F, mostly cloudy, slight breeze	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	12.6
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	N/M
Pump Intake Setting* (feet):	N/M	Total Depth* (feet):	15.69
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	3.09
Before Cap Removal:		Casing Volume (gal):	2.56
After Cap Removal:	2.0	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depthto Water (ft)	Comments
1106										begin purging
1108										well dry, stop, allow to recharge
1126									12.6	
1135										remove pump
1135									12.6	dtb : 15.69 ftbtoc
1140										measure canal from MW-19 area - dtw: ~12' bgs, low tide

Start Purge Date/Time:	not documented	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	not documented	Start Sample Date/Time:	
Total Colume Purged (gal):	not documented	End Sample Date/Time:	
Depth to Water After Purge* (feet):	not documented	Sampler Names:	J. Pfeiffer, B. Maye

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
notes provided above from field log book. No water quality measurements documented.

Well Development Record

Project Number:	60137361	Well ID:	MW - 19I
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	11/20/2011	Permit Number:	
Weather:	40°F, mostly cloudy, slight breeze	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	9.49
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	N/M
Pump Intake Setting* (feet):	33.19	Total Depth* (feet):	33.8
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	24.31
Before Cap Removal:		Casing Volume (gal):	5.51
After Cap Removal:	2.0	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depthto Water (ft)	Comments
1248										use 1'inch conduit for purging well. Dtb: 35.92 ftbtoc. Bottom is very soft, squishy.
1311										able to get 2.4' more to bottom. Place pump back into well
1312			7.25							place pump back in well.
1325									26.7	dtb: 36.20 ftbtoc.

Start Purge Date/Time:	not documented	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	not documented	Start Sample Date/Time:	
Total Colume Purged (gal):	not documented	End Sample Date/Time:	
Depth to Water After Purge* (feet):	not documented	Sampler Names:	J. Pfeiffer, B. Maye

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
notes provided above from field log book. No water quality measurements documented.

Well Development Record

Project Number:	60137361	Well ID:	MW - 20S
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	11/20/2011	Permit Number:	
Weather:	40°F, mostly cloudy, slight breeze	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	8.32
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	N/M
Pump Intake Setting* (feet):	N/M	Total Depth* (feet):	15.48
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	7.16
Before Cap Removal:		Casing Volume (gal):	2.52
After Cap Removal:	156.0	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depthto Water (ft)	Comments
1010										begin purging
1012										well dry. Tubing filled with water, no other amount in well. Allow to recharge. Very strong fuel-oil -like odor (petroleum related). LNAPL was undetectable, coated on bottom 0.05' of probe.
1022										turn pump on.
1028									14.3	well dry. Stop pump. Allow to recharge.
									13.1	

Start Purge Date/Time:	not documented	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	not documented	Start Sample Date/Time:	
Total Colume Purged (gal):	not documented	End Sample Date/Time:	
Depth to Water After Purge* (feet):	not documented	Sampler Names:	J. Pfeiffer, B. Maye

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
notes provided above from field log book. No water quality measurements documented.

Well Development Record

Project Number:	60137361	Well ID:	MW - 20I
Project Name:	Metropolitan Former MGP Site	Sample ID:	
Date:	11/20/2011	Permit Number:	
Weather:	40°F, mostly cloudy, slight breeze	Well Condition:	Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	Manhole 8"	Depth to Product* (feet)	N/M
Inner Casing Diameter (inch):	2"	Initial Depth to Water* (feet):	6.99
Inner Casing Material:	PVC sch. 40	Product Thickness (feet):	N/M
Purge/Sample Method:	Surge/whale pump	Depth to Top of Screen* (feet):	N/M
Pump Intake Setting* (feet):	N/M	Total Depth* (feet):	39.8
PID/FID Reading of Well Headspace (ppm)		Water Column (feet):	32.81
Before Cap Removal:		Casing Volume (gal):	6.49
After Cap Removal:	0.6	DTW After Pump Installed:	

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohm/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depthto Water (ft)	Comments
739										begin purging and surging. Purge water very dark grey/brown
747										stop pump, water quality meter needed maint and recalibration.
845										water quality meter working properly now, begin purging again.
936										stop developing well. Purged ~55 gallons.
937										pump removed.
938							62		10.56	dtb: 39.82 ftbtoc, hard bottom., purge water clear.

Start Purge Date/Time:	not documented	Pre-Sample Depth to Water* (feet):	
End Purge Date/Time:	not documented	Start Sample Date/Time:	
Total Colume Purged (gal):	not documented	End Sample Date/Time:	
Depth to Water After Purge* (feet):	not documented	Sampler Names:	J. Pfeiffer, B. Maye

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
notes provided above from field log book. No water quality measurements documented.

(1)

AECOM

Well/Piezo. ID: MW21

Well/Piezometer Development Record

ENVIRONMENT

Client: National Grid

Site Location: Lowes

Project No 60137362 Date: 11/10/11

Developer: BMarge

WELL/PIEZOMETER DATA

Well ☒ AS Point ☐ SVE Point ☐ Piezometer ☐

Diameter 2"

Material PVC

Measuring Point Description: top of PVC

Geology at Screen Interval (if known):

Depth to Top of Screen (ft.): 60

Depth to Bottom of Screen (ft.): 70

Time of Water Level Measurement: 8:08

Total Well Depth (ft.): 72.32

Calculate Purge Volume (gal.): 65.67 × 0.163 = 10.7 (1 wv) = 107 (10 wv)

Depth to Static Water Level (ft.): 6.65

Disposal Method: 55 gal drum

Wellhead PID/FID: –

Original Well Development ☒ Redevelopment ☐

Date of Original Development: 11/10/11

DEVELOPMENT METHOD whale pump surge/purge

PURGE METHOD surge/purge whale pump

Field Testing Equipment Used:

Make	Model	Serial Number
YSI	560	04915740
Hemotte	2020	242

Field Testing Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (gal)	T° (C/F)	pH	Spec. Cond (µS/cm)	Turbidity (NTUs)	DO	Color	Odor	Other
8:14	5	14.76	8.26	1477	overrange	.98	grey	slight naptha	
8:25	10	14.68	9.08	2279	overrange	3.05	grey	"	
8:32	15	14.94	8.04	1665	1281	1.15	light grey	"	
8:45	20	15.13	7.83	2531	1387	1.09	light	"	
8:55	25	14.95	7.82	1715	627	1.06	light	grey	
9:05	30	14.87	7.80	2729	720	2.60	"		
9:10	35	14.89	7.68	2963	38	1.88	"clear		

ACCEPTANCE CRITERIA (from workplan)

Min. Purge Volume (10 well volumes) 107 gallons

Maximum Turbidity Allowed 50 NTUs

Stabilization of parameters 10 % – 3%

	Yes	No	N/A	
Has required volume been removed	☐	☒	☐	3 well volumes
Has required turbidity been reached	☒	☐	☐	
Have parameters stabilized	☐	☒	☐	All, but DO.

If no or N/A explain below:

1 wv = one well volume
10 wv = Ten well volumes

Signature BMarge Date: 11/10/11

DTB after development 72.32

AECOM

Well/Piez. ID: MW-22D

Well/Piezometer Development Record

ENVIRONMENT

Client: National Grid

Site Location: Lowes parking lot. (SB-22 MW-22 11)

Project No 60137362 Date: 11/10/11

Developer: BMay

WELL/PIEZOMETER DATA

Well ☒ AS Point ☐ SVE Point ☐ Piezometer ☐

Diameter 2" Material PVC

Measuring Point Description Top of pvc

Geology at Screen Interval (if known)

Depth to Top of Screen (ft.) 60

Depth to Bottom of Screen (ft.) 70

Time of Water Level Measurement 10:29

Total Well Depth (ft.) 71.56

Calculate Purge Volume (gal.) 67.04 × 0.163 = 10.9 (1WV) = 109 (10 WV)

Depth to Static Water Level (ft.) 4.62

Disposal Method 55 gal drum

Wellhead PID/FID —

Original Well Development ☑ Redevelopment ☐

Date of Original Development 11/10/11

DEVELOPMENT METHOD Whale pump Purge/surge

PURGE METHOD Whale pump surge & purge

Field Testing Equipment Used:

Make	Model	Serial Number
YSI	560	04011578
Lemotte	2N	240

Field Testing Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (gal)	T° (C/F)	pH	Spec. Cond (µS/cm)	Turbidity (NTUs)	DO	Color	Odor	Other
10:58	5	15.70	7.28	2678	off scale	1.69	Brown	~~Brown~~	none
11:11	15	15.17	7.16	2735	off scale	2.53	Brown	none	
11:21	40	15.47	7.26	~~[illegible]~~ 2351	775	2.85	Brown	none	
11:28	55	15.02	7.25	1306	125	1.96	clear	none	
11:37	60	15.26	7.39	2700	31.1	2.75	clear		

switched drums & Done

ACCEPTANCE CRITERIA (from workplan)

Min. Purge Volume (10 well volumes) 109 gallons

Maximum Turbidity Allowed 50 NTUs

Stabilization of parameters 10 % ~3%

	Yes	No	N/A	
Has required volume been removed	☐	☒	☐	6 well volumes.
Has required turbidity been reached	☑	☐	☐	
Have parameters stabilized	☐	☒	☐	All, but DO

If no, or N/A explain below:

atb after development 71.66' btoc.

1 WV = One well volume

10 WV = Ten well volumes

Signature BMay Date: 11/10/11

AECOM

ENVIRONMENT

Well/Piezometer Development Record

Well/Piez. ID: MW22 I

Client: National Grid

Site Location: Lowes

Project No _____ Date: 11/10/11

Developer: BMag

WELL/PIEZOMETER DATA

Well ☒ AS Point ☐ SVE Point ☐ Piezometer ☐

Diameter 2"

Material PVC

Measuring Point Description: Top PVC

Geology at Screen Interval (if known): _____

Depth to Top of Screen (ft.): _____

Depth to Bottom of Screen (ft.): _____

Time of Water Level Measurement: 12:00

Total Well Depth (ft.): 37.54

Calculate Purge Volume (gal.): _____

Depth to Static Water Level (ft.): 4.57

Disposal Method: _____

Wellhead PID/FID: _____

Original Well Development ☒ Redevelopment ☐

Date of Original Development: _____

DEVELOPMENT METHOD Whale pump

PURGE METHOD _____

Field Testing Equipment Used:

Make	Model	Serial Number
YSI	560	04B157NB
Lamotte	2020	2447

Field Testing Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (gal)	T° (C/F)	pH	Spec. Cond (µS/cm)	Turbidity (NTUs)	DO	Color	Odor	Other
12:11	5	18.74	6.80	6077	offscale	.39	Brown	none	
12:17	15	16.41	6.79	5849	offscale	2.46	Brown	none	
12:32	25	16.41	6.77	5818	856	1.74	Light Brown		
12:48	35	16.96	6.78	6949	97	2.84	clear		
1:00	45	16.97	6.78	6973	20.1				

ACCEPTANCE CRITERIA (from workplan)

Min. Purge Volume (____ well volumes) _____gallons

Maximum Turbidity Allowed _____ NTUs

Stabilization of parameters _____%

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A explain below:

no odors

Signature BMag Date: 11/10/11

after development 37.60 DTB

AECOM

Well/Piezometer Development Record

Well/Piez. ID: MW23D

ENVIRONMENT

Client: National Grid

Site Location: Lowes

Project No _____ Date: 11/10/11

Developer: B Monge

WELL/PIEZOMETER DATA

Well ☒ AS Point ☐ SVE Point ☐ Piezometer ☐

Diameter 2"

Material PVC

Measuring Point Description top of pvc

Geology at Screen Interval (if known) ~~1:40~~

Depth to Top of Screen (ft.) _____

Depth to Bottom of Screen (ft.) _____

Time of Water Level Measurement 1:40

Total Well Depth (ft.) 35.36

Calculate Purge Volume (gal.) _____

Depth to Static Water Level (ft.) 2.54

Disposal Method _____

Wellhead PID/FID _____

Original Well Development ☒ Redevelopment ☐

Date of Original Development _____

DEVELOPMENT METHOD whale pump

PURGE METHOD _____

Field Testing Equipment Used:

Make	Model	Serial Number

Field Testing Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (gal)	T° (C/F)	pH	Spec. Cond (µS/cm)	Turbidity (NTUs)	DO	Color	Odor	Other

ACCEPTANCE CRITERIA (from workplan)

Min. Purge Volume (____ well volumes) _____gallons

Maximum Turbidity Allowed _____ NTUs

Stabilization of parameters _____%

	Yes	No	N/A
Has required volume been removed	☐	☒	☐
Has required turbidity been reached	☐	☒	☐
Have parameters stabilized	☐	☒	☐

If no or N/A explain below:

well depth should be 72 ft ran out of water - couldn't finish development. well only recharged .10 ft in 10 min after development attempt well depth 43.20

Signature B Monge

Date: 11/10/11

42.30 + 10 min

DTW 42.41

43.20 DTB

Dry

Well/Piez. ID: MW-23

AECOM

Well/Piezometer Development Record

Client: National Grid Site Location: Metropolitan

Project No: 60137361 Date: 12/19/11 Developer: J. Ehlen / K. Barbour

WELL/PIEZOMETER DATA

☑ Well ☐ Piezometer Diameter 2" Material PVC

Geology at Screen Interval (if known)

2.31'

dtb 71.51' btoc

69.2' of water

Time of Water Level Measurement 952

Calculate Purge Volume (gal.) 11.29 gal

Disposal Method 55 gal drum

Wellhead PID/FID 0.6

☐ Redevelopment ☐ Date of Original Development

PURGE METHOD double white pump

Make	Model	Serial Number
Horiba	U-52	14776
Hach	2100P	012357

1140 AM dtw 2.20' btoc

time	Volume Removed (gal)	T° (C/F)	pH	Spec. Cond (umhos)	Turbidity (NTUs)	DO	Color	Odor	drawdown Other	
1145	2.5	15.51	7.09	6.65	353	1.45	cloudy brown	none	2.23	incomming tide
1150	6	15.62	7.20	6.76	220	1.16	white cloudy	none	2.25	
1155	8.5	15.61	7.22	7.03	27	1.01	clear	none	2.21	
1200	11	15.59	7.22	7.14	20	0.92	clear	none	2.20	
1205	14	15.64	7.23	7.17	21	0.87	clear	none	2.18	
1210	16.5	15.64	7.22	7.18	19	0.82	clear	none	2.15	
1211	stop pumping MW-23									

ACCEPTANCE CRITERIA (from workplan)

Maximum Turbidity Allowed 50 NTUs

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A explain below:

no sheen / odor on purge water
~35 gal of water removed.

Date: 12/19/11

dtw after pumping = 2.13' btoc
dtb after pumping =

AECOM

Well/Piezometer Development Record

Well/Piez. ID: MW25 I

ENVIRONMENT

Client: National Grid

Site Location: Lowes

Project No _____ Date: 11/10/11

Developer: B Mange

WELL/PIEZOMETER DATA

Well ☒ AS Point ☐ SVE Point ☐ Piezometer ☐

Diameter 2" Material PVC

Measuring Point Description top of PVC

Geology at Screen Interval (if known) _____

Depth to Top of Screen (ft.) _____

Depth to Bottom of Screen (ft.) _____

Time of Water Level Measurement 3:00

Total Well Depth (ft.) 45.00

Calculate Purge Volume (gal.) _____

Depth to Static Water Level (ft.) 3.28

Disposal Method _____

Wellhead PID/FID _____

Original Well Development ☒ Redevelopment ☐

Date of Original Development _____

DEVELOPMENT METHOD Whale pump

PURGE METHOD _____

Field Testing Equipment Used:

Make	Model	Serial Number
YSI	556	04B115 7AG
Lemotte		242

Field Testing Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (gal)	T° (C/F)	pH	Spec. Cond (µS/cm)	Turbidity (NTUs)	DO	Color	Odor	Other
310	5	16.81	6.76	3197	89.5	1.51	grey/clear		none
3:16	10	15.89	6.72	3257	1854	.87	grey		" "
3:21	25	15.64	6.71	3253	1683	.74	grey		
3:28	30	15.33	6.70	3233	19	1.41	clear		" "

ACCEPTANCE CRITERIA (from workplan)

Min. Purge Volume (____ well volumes) _____ gallons

Maximum Turbidity Allowed 50 NTUs

Stabilization of parameters _____ %

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A explain below:

Signature _____ Date: 11/10/11

AECOM

Well/Piezometer Development Record

Well/Piez. ID: MW25 S

ENVIRONMENT

Client: National Grid

Site Location: Lowes

Project No _____ Date: 11/10/11

Developer: BMaye

WELL/PIEZOMETER DATA

Well ☒ AS Point ☐ SVE Point ☐ Piezometer ☐

Diameter 2"

Material PVC

Measuring Point Description top of pvc

Geology at Screen Interval (if known) ~~3:30~~

Depth to Top of Screen (ft.) _____

Depth to Bottom of Screen (ft.) _____

Time of Water Level Measurement 3:30

Total Well Depth (ft.) 29.72

Calculate Purge Volume (gal.) _____

Depth to Static Water Level (ft.) 3.12

Disposal Method _____

Wellhead PID/FID _____

Original Well Development ☒ Redevelopment ☐

Date of Original Development _____

DEVELOPMENT METHOD Whale pump

PURGE METHOD _____

Field Testing Equipment Used:

Make	Model	Serial Number
YSI		
Lemotte	22	

Field Testing Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (gal)	T° (C/F)	pH	Spec. Cond (µS/cm)	Turbidity (NTUs)	DO	Color	Odor	Other
3:37	~~[illegible]~~ 5	16.37	6.91	2358	OFF scale	1.42	Grey	none	
3:41	18	16.31	6.78	2673	650	1.91	clear/grey		
3:57	30	16.37	6.77	2954	44.6	.30	clear	none	

ACCEPTANCE CRITERIA (from workplan)

Min. Purge Volume (____ well volumes) _____ gallons

Maximum Turbidity Allowed 50 NTUs

Stabilization of parameters _____ %

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A explain below:

Signature BMaye Date: 11/10/11

29.79 After development

Appendix E

Slug Testing Data Analysis

WELL TEST ANALYSIS

Data Set: C:\Documents and Settings\EhlenJ\My Documents\Metropolitan\Slug tests\1S Rising.aqt
Date: 10/12/10 Time: 17:57:19

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-1S Rising
Test Date: 10/7/2010

AQUIFER DATA

Saturated Thickness: 10.31 ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-1S Rising)

Initial Displacement: 1.842 ft Static Water Column Height: 8.89 ft
Total Well Penetration Depth: 12.71 ft Screen Length: 10. ft
Casing Radius: 0.208 ft Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.8301 ft/day y0 = 0.7114 ft

WELL TEST ANALYSIS

Data Set: C:\Documents and Settings\EhlenJ\My Documents\Metropolitan\Slug tests\1I.aqt
Date: 10/12/10 Time: 17:56:34

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-1I
Test Date: 10/7/2010

AQUIFER DATA

Saturated Thickness: 73.03 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-1I)

Initial Displacement: 4.891 ft
Total Well Penetration Depth: 40.25 ft
Casing Radius: 0.208 ft
Static Water Column Height: 33.79 ft
Screen Length: 10. ft
Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 1.905 ft/day
y0 = 3.793 ft

WELL TEST ANALYSIS

Data Set: C:\Documents and Settings\EhlenJ\My Documents\Metropolitan\Slug tests\1D.aqt
Date: 10/12/10 Time: 17:56:14

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-1D
Test Date: 10/7/2010

AQUIFER DATA

Saturated Thickness: 71.72 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (1D)

Initial Displacement: 7.788 ft
Total Well Penetration Depth: 70.11 ft
Casing Radius: 0.208 ft
Static Water Column Height: 62.46 ft
Screen Length: 10. ft
Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 1.041 ft/day
y0 = 2.832 ft

WELL TEST ANALYSIS

Data Set: C:\Documents and Settings\EhlenJ\My Documents\Metropolitan\Slug tests\2D.aqt
Date: 10/12/10 Time: 17:59:00

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-2D
Test Date: 10/7/2010

AQUIFER DATA

Saturated Thickness: 72.68 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-2D)

Initial Displacement: 9.21 ft
Total Well Penetration Depth: 69.39 ft
Casing Radius: 0.208 ft
Static Water Column Height: 62.36 ft
Screen Length: 10. ft
Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 29.74 ft/day
y0 = 8.895 ft

WELL TEST ANALYSIS

Data Set: C:\...\3S redo Rising.aqt
Date: 10/16/10 Time: 00:11:04

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-3S redo Rising
Test Date: 10/15/2010

AQUIFER DATA

Saturated Thickness: 78.13 ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-3S redo Rising)

Initial Displacement: 1.133 ft Static Water Column Height: 10.49 ft
Total Well Penetration Depth: 12.36 ft Screen Length: 10. ft
Casing Radius: 0.208 ft Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 60.2 ft/day y0 = 0.5764 ft

WELL TEST ANALYSIS

Data Set: C:\...\3S redo Falling.aqt
Date: 10/16/10 Time: 00:09:48

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-3S redo Falling
Test Date: 10/15/2010

AQUIFER DATA

Saturated Thickness: 78.13 ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-3S redo Falling)

Initial Displacement: 1.005 ft Static Water Column Height: 10.49 ft
Total Well Penetration Depth: 12.36 ft Screen Length: 10. ft
Casing Radius: 0.208 ft Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 68.98 ft/day y0 = 0.4814 ft

WELL TEST ANALYSIS

Data Set: C:\Documents and Settings\EhlenJ\My Documents\Metropolitan\Slug tests\3I.aqt
Date: 10/12/10 Time: 17:59:58

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-3I
Test Date: 10/8/2010

AQUIFER DATA

Saturated Thickness: 75.24 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-3I)

Initial Displacement: 2.148 ft
Total Well Penetration Depth: 48.68 ft
Casing Radius: 0.208 ft
Static Water Column Height: 44.46 ft
Screen Length: 25. ft
Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 7.072 ft/day
y0 = 2.421 ft

WELL TEST ANALYSIS

Data Set: C:\Documents and Settings\EhlenJ\My Documents\Metropolitan\Slug tests\5S Falling.aqt
Date: 10/12/10 Time: 18:01:46

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-5S Falling
Test Date: 10/7/2010

AQUIFER DATA

Saturated Thickness: 72.52 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-5S Falling)

Initial Displacement: 1.466 ft
Total Well Penetration Depth: 13.5 ft
Casing Radius: 0.208 ft
Static Water Column Height: 6.37 ft
Screen Length: 10. ft
Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 42.6 ft/day
y0 = 0.5456 ft

WELL TEST ANALYSIS

Data Set: C:\Documents and Settings\EhlenJ\My Documents\Metropolitan\Slug tests\5S Rising.aqt
Date: 10/12/10 Time: 18:02:00

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-5S Rising
Test Date: 10/7/2010

AQUIFER DATA

Saturated Thickness: 72.52 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-5S Rising)

Initial Displacement: 2.31 ft
Total Well Penetration Depth: 13.5 ft
Casing Radius: 0.208 ft
Static Water Column Height: 6.37 ft
Screen Length: 10. ft
Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 68.28 ft/day
y0 = 1.672 ft

WELL TEST ANALYSIS

Data Set: C:\Documents and Settings\EhlenJ\My Documents\Metropolitan\Slug tests\5I.aqt
Date: 10/12/10 Time: 18:01:26

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-5I
Test Date: 10/7/2010

AQUIFER DATA

Saturated Thickness: 71.97 ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-5I)

Initial Displacement: 5.169 ft Static Water Column Height: 39.26 ft
Total Well Penetration Depth: 69.52 ft Screen Length: 10. ft
Casing Radius: 0.208 ft Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 74.72 ft/day y0 = 4.896 ft

WELL TEST ANALYSIS

Data Set: C:\Documents and Settings\EhlenJ\My Documents\Metropolitan\Slug tests\5D.aqt
Date: 10/12/10 Time: 18:01:09

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-5D
Test Date: 10/7/2010

AQUIFER DATA

Saturated Thickness: 71.98 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-5D)

Initial Displacement: 5.864 ft
Static Water Column Height: 61.87 ft
Total Well Penetration Depth: 69.52 ft
Screen Length: 10. ft
Casing Radius: 0.208 ft
Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 251.8 ft/day
y0 = 2.615 ft

WELL TEST ANALYSIS

Data Set: C:\Documents and Settings\EhlenJ\My Documents\Jobs\Metropolitan\Slug tests\5D redo.aqt
Date: 10/16/10 Time: 00:09:32

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-5D redo
Test Date: 10/15/2010

AQUIFER DATA

Saturated Thickness: 72.98 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-5D redo)

Initial Displacement: 11.15 ft
Total Well Penetration Depth: 69.52 ft
Casing Radius: 0.208 ft
Static Water Column Height: 62.5 ft
Screen Length: 10. ft
Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 38.04 ft/day
y0 = 1.663 ft

WELL TEST ANALYSIS

Data Set: C:\...\5D redo - 2.aqt
Date: 10/16/10 Time: 00:09:16

PROJECT INFORMATION

Company: AECOM
Client: National Grid
Project: 60137361
Location: Brooklyn, NY
Test Well: MW-5D redo - 2
Test Date: 10/15/2010

AQUIFER DATA

Saturated Thickness: 72.98 ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-5D redo - 2)

Initial Displacement: 11.15 ft Static Water Column Height: 62.5 ft
Total Well Penetration Depth: 69.52 ft Screen Length: 10. ft
Casing Radius: 0.208 ft Well Radius: 0.208 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 16.83 ft/day y0 = 0.1335 ft

Appendix F

Groundwater Collection Records

Well ID: MW4DI

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
Date: 3/15/12
Time: Start 1500 am/pm
Finish 1600 am/pm
Project No: 60137360
Site Location: Metropolitan - Patchmark
Weather Conds: cloudy, ~50
Collector(s): KB/NP

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 121
c. Length of Water Column 115.51 (a-b)
Casing Diameter/Material 2" PVC
b. Water Table Depth 5.49
d. Calculated System Volume (see back) 18.85

2. WELL PURGE DATA

a. Purge Method: Low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	La Motte	2020e	
	Geotech Pump - peristaltic		

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1505	~5	13.73	6.51	32.7	3.83	-125	625	~250	5.10	dark brown/none
1515	8	13.82	6.60	32.6	4.20	-123	30.3	~250	5.09	clear/none
1520	9.5	13.71	6.63	32.6	3.90	-124	17.2	250	5.09	"
1525	11	13.78	6.64	32.5	3.89	-124	13.6	250	5.12	"
1530	12.5	13.81	6.65	32.5	4.02	-123	12.6	250	5.10	"
1535	14	13.7	6.67	32.5	4.00	-123	12.1	250	5.09	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: low flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-4DI	2 glass	3	HCl	VOC	1555
MW-4DI	1L Amber	2	Ice	SVOC	↓
MW-4DI	Plastic	1	HNO_3	RCRA metals	↓
MW-4DI	PLASTIC	1	NaOH	Total Cyanide	↓

Comments

Signature Kate Bu
Date 3/15/12

Well ID: MW 25I

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
Date: 3/14/12
Time: Start 1547 am/pm
Finish ~~1616~~ 1630 am/pm
Project No: 60137361-330
Site Location: Lowes
Weather Conds: Sunny ~70; little wind
Collector(s): WP/KB

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 44.94 c. Length of Water Column 41.08 (a-b)

Casing Diameter/Material 2"/PVC

b. Water Table Depth 3.86 d. Calculated System Volume (see back) 6.7

2. WELL PURGE DATA

a. Purge Method: Low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	LaMotte	2020e	
	Geotech pump - peristaltic	o/w interface probe	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1550	1.5	17.79	6.96	2.33	~~0.07~~	-100	59.8	250	3.80	Clear/none
1555	3	16.81	6.95	2.72	0.28	-127	5.49	250	3.79	"
1600	~~6~~ 4.5	16.67	6.92	2.73	0.70	-128	4.51	250	3.81	"
1605	6	16.55	6.91	2.74	0.65	-129	4.08	250	3.81	"
1610	7.5	16.51	6.91	2.73	0.62	-130	3.13	250	3.80	"
1615	9	16.48	6.90	2.73	0.59	-130	2.87	250	3.83	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW 25 ~~8~~I	glass	3	HCl	VOC	1610
MW-25I	1L Amber	2	ice	SVOC	↓
MW-25I	plastic	1	HNO_3	RCRA metals	↓
MW-25I	plastic	1	NaOH	total Cyanide	1630

Comments: dtw = 3.79 td = 44.91

Signature: [signature] Date: 3/14/12

Well ID: MW-19I

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
Date: 3/18/12
Time: Start 1114 am/pm
Finish 1241 am/pm
Project No: 60137361
Site Location: Metropolitan - Greco
Weather Conds: Cloudy ~50°
Collector(s): KB/NP/JP

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 34.23 c. Length of Water Column 23.49 (a-b)

Casing Diameter/Material 2"/PVC.

b. Water Table Depth 10.74 d. Calculated System Volume (see back) 3.82 gal: one well volume.

2. WELL PURGE DATA

a. Purge Method: low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	Lamotte	2020e.	
	Geotech pump - peristaltic, o/w interface probe.		

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1118	~1	10.57	10.93	5.46	2.23	-15	62.8	125	11.55	clear/none
1123	~2	11.44	12.13	7.79	1.20	-30	58.2	200	12.44	clear/NLO
1128	~3	11.75	12.30	8.46	0.75	-29	19.5	200	13.94	clear/NLO
1133	~4	11.95	12.28	8.91	0.61	-29	15.4	200	15.24	clear/NLO
1138	~5	12.02	12.09	8.25	0.67	-15	12.8	200	16.85	clear/NLO
1143	~7	12.02	11.99	7.49	0.71	-12	106.3	200	18.1	clear/NLO
1152	~8	12.22	11.97	7.16	0.85	11	40.8	200	19.49	clear/NLO

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: low flow.

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-19I	40ml glass	3	HCL	VOC	1330
	1L glass-amber	2	none	SVOC	
	250ml plastic	1	Nitric Acid	RCRA metals	
	250ml plastic	1	Sodium Hydroxide	Total Cyanide.	

Comments dtw ~~@ end~~ 25.18'
1337 dtw 24.05', dtb 34.18'

Signature [signature] Date 3/18/12

Well ID: MW-20I

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
Project No: 60137361
Site Location: Metropolitan - Greco
Weather Conds: 48°F Cloudy

Date: 3/18/2012

Time: Start 1058 am/pm
Finish 1130 am/pm

Collector(s): KB

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 39.95 c. Length of Water Column 30.42 (a-b)

Casing Diameter/Material 2" / PVC.

b. Water Table Depth 9.53 d. Calculated System Volume (see back) 4.96 one well volume.

2. WELL PURGE DATA

a. Purge Method: Low Flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	Lamotte	2020e.	
	Geotech pump - peristaltic, o/w interface probe		

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1103	1	13.22	5.91	3.85	0.67	-134	11.7	250	10.31	clear/none
1108	2	13.11	5.89	3.84	0.58	-141	9.42	250	10.33	clear/none
1113	3	13.33	5.89	3.84	0.52	-146	9.22	250	10.38	clear/none
1118	4	13.37	5.89	3.83	0.49	-149	9.44	250	10.36	clear/none.

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

(continued on back)

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low Flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-20I	40ml glass	3	HCl	VOC	1130.
	1L glass amber	2	NaOH	SVOC	
	250ml plastic	1	Nitric acid	RCRA Metals	
	250ml plastic.	1	Sodium Hydroxide.	Total Cyanide	

Comments

Signature Date

Purge Volume Calculation

AECOM

Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1159	~8.5	12.34	12.03	4.57	0.71	-11	141	200	21.93	clear/NO
1205	~9.5	12.42	12.09	4.47	0.69	-12	42.6	200	21.60	clear/NO
1210	~10.5	12.52	12.08	4.29	0.67	-13	49	200	22.48	clear/NO
1216	~11.5	12.59	12.09	4.48	0.65	-15	53.9	200	23.90	clear/NO
1222	~12.5	12.69	12.14	4.50	0.68	-16	43.9	200	23.75	clear/NO
1231	~13.5	12.82	12.14	5.11	0.59	-17	28	200	24.60	clear/NO
1236	~14.5	12.87	12.16	5.33	0.58	-17	25.3	200	24.89	clear/NO
1241	~15.5	12.96	12.17	5.48	0.57	-17	21.9	200	25.18	clear/NO

Well ID: **MW-21D**

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid Date: 3/15/2012 Time: Start N/M am/pm
Project No: 60137361 Finish N/M am/pm
Site Location: Metropolitan - Lowe's Parking Lot
Weather Conds: Not documented Collector(s): Not documented

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 72.3 c. Length of Water Column 65.21 (a-b) Casing Diameter/Material 2-inch/PVC

b. Water Table Depth 7.09 d. Calculated System Volume (see back) 10.6g. (1 wv)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump with dedicated poly tubing

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	LaMotte	2020e	
	Geotech Pump	Peristaltic pump	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M
N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M
N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

(continued on back)

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method:

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-21D	glass/voa	3	HCL	VOC	1205
MW-21D	1L amber	2	ice	SVOC	1205
MW-21D	plastic	1	HNO3	RCRA Metals	1205
MW-21D	plastic	1	NaOH	Total Cyanide	1205

Comments
water quality parameters not documented. Notes provided on form from field book and laboratory report.

Signature Date 3/15/2014

Purge Volume Calculation

AECOM

Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

Well ID: **MW-22D**

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid Date: 3/15/2012 Time: Start N/M am/pm
Project No: 60137361 Finish N/M am/pm
Site Location: Metropolitan - Lowe's Parking Lot
Weather Conds: Not documented Collector(s): Not documented

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 71.7 c. Length of Water Column 66.19 (a-b) Casing Diameter/Material 2-inch/PVC

b. Water Table Depth 5.51 d. Calculated System Volume (see back) 10.8g. (1 wv)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump with dedicated poly tubing

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	LaMotte	2020e	
	Geotech Pump	Peristaltic pump	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M
N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M
N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

(continued on back)

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method:

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-22D	glass/voa	3	HCL	VOC	1015
MW-22D	1L amber	2	ice	SVOC	1015
MW-22D	plastic	1	HNO3	RCRA Metals	1015
MW-22D	plastic	1	NaOH	Total Cyanide	1015

Comments
water quality parameters not documented. Notes provided on form from field book and laboratory report.

Signature Date 3/15/2014

Purge Volume Calculation

AECOM

Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

Well ID: MW-23D

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid Date: 3/15/12 Time: Start 1420 am/pm
Project No: 60137361 Finish 1530 am/pm
Site Location: Metropolitan
Weather Conds: ~70°F Clear Collector(s): K. Barbour

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 71.57 c. Length of Water Column 108.98 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 2.59 d. Calculated System Volume (see back) 11.26

2. WELL PURGE DATA

a. Purge Method: Peristaltic Pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	LaMotte	2020e	
	Geotech pump	peristaltic pump	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1425	1	22.72	6.59	1.09	3.96	85	8.88	~200mL	2.41	clear/no odor
1435	2.5	21.87	6.63	1.44	2.85	-33	8.56	~200mL	2.39	" "
1440	~3.5	21.66	6.48	1.52	2.30	-53	9.80	~200mL	2.40	" "
1447	~4.5	21.26	6.65	1.75	2.19	-72	6.12	~200mL	2.39	" "
1452	~6.0	20.96	6.75	2.22	2.14	-93	5.98	~200mL	2.42	" "
1457	7.0	20.71	6.63	2.27	2.15	-84	7.97	~200mL	2.40	" "
1502	8.0	20.61	6.68	2.43	2.14	-94	6.16	~200mL	2.43	

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method:

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-23D	500mL Plastic	1	HNO_3	6010B	1530
MW-23D	250mL Plastic	1	NaOH	Total cyanide	
MW-23D	1 Liter Amber	2	NONE	8270C	
MW-23D	VOAs	3	HCl	8260B	

Comments

Signature [signature] Date 3/14/12

Well ID: MW-4DD

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
Date: 3/15/12
Time: Start 1500 am/pm
Finish 1645 am/pm
Project No: 60137361
Site Location: Metropolitan Pathmark
Weather Conds: Cloudy ~50°F
Collector(s): NP/KB

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 146
c. Length of Water Column 143.8 (a-b)
Casing Diameter/Material 2"/PVC
b. Water Table Depth 2.20
d. Calculated System Volume (see back) 23.7

2. WELL PURGE DATA

a. Purge Method: low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	LaMotte	2020e	
	Geotechpump	peristaltic	

Time (24hr)	Volume Removed Gal ~~(Liters)~~	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1510	~4	13.55	7.95	1.43	1.30	106	—	250	2.41	Brown/none
1520	~8	13.60	7.99	1.43	0.84	113	—	250	2.45	Brown/none
1525	~~8~~ 8.5	13.40	7.99	1.44	1.72	120	—	250	2.45	Brown/none
1604	9.0	13.44	7.92	1.42	1.05	91	98	250	2.45	Brown/none
1618	9.5	13.41	7.93	1.42	0.90	89	73	250	2.45	Brown/none
1628	~9.5	13.35	7.91	1.43	0.68	89	52	250	2.45	lt brown/none
1633	~9.6	13.36	7.93	1.43	0.65	84	74	250	2.45	lt brown/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: low flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-4DD	plastic	1	HNO_3	RCRA metals	1630
MW-4DD	1L Amber	2	ice	SVOC	↓
MW-4DD	glass	3	HCl	VOC	↓
MW-4DD	plastic	1	NaOH	total cyanide	↓

Comments after pumping DTW 2.41
DTB 146.1

Signature Kate Bah
Date 3/15/12

Well ID: MW-19S

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
Date: 3/18/2012
Time: Start 0915 am/pm
Finish 1010 am/pm
Project No: 60137361
Site Location: Metropolitan-Grid
Weather Conds: Cloudy, 50°
Collector(s): NP

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 15.70
c. Length of Water Column 5.27 (a-b)
Casing Diameter/Material 2"/PVC
b. Water Table Depth 10.43
d. Calculated System Volume (see back) 0.85 gal

2. WELL PURGE DATA

a. Purge Method: low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	±1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	Geotech pump v peristaltic.		
	Lamotte 2020e and O/W interface probe.		

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0930	~1	9.72	4.37	0.008	10.40	174	N/M	125	see comments	brown/none
0935	~2	9.92	5.94	31.2	2.40	118	92.0	125	11.18'	clear/none
0940	~3	9.80	6.11	30.0	2.65	110	63.9	125	11.30'	clear/none
0945	~4	9.72	6.27	29.1	2.14	61	12.0	150	11.43'	clear/none
0950	~5	9.75	6.35	28.9	1.48	40	59.4	150	11.58'	clear/none
0955	~6	9.78	6.42	28.6	1.17	17	5.64	150	11.72	clear/none
1000	~7	9.80	6.48	28.5	0.95	8	10.10	150	11.88	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low Flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-19S	40ml glass	3	HCL	VOC	1010
	1L glass, amber	2	none	SVOC	↓
	250ml plastic	1	Nitric Acid	RCRA metals	↓
	250ml plastic	1	Sodium Hydroxide	Total Cyanide	↓

Comments N/M: not measured. At start DTW = 10.65', clogged tube, turned pump back on @ 0926 @ 0926 - 10.23 dtw, 0929 - 10.88' dtw, 0930 - 10.43 dtw, 0931 - 11.05 dtw, 0932 - 11.10' dtw, 0933 - 11.15' dtw, 0934 - 11.16' dtw, 0935 - 11.18' dtw.
Final dtw 12.72, dtb 15.69, hard bottom

Signature _____ Date _____

Purge Volume Calculation

AECOM

Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1005	~8	9.82	6.52	28.5	0.91	4	3.33	150	12.05	clear/none
1010	~9	9.89	6.57	28.3	1.07	0	4.22	150	12.25	clear/none

Well ID: MW-~~17B~~ 20 I

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
Date: 3/18/12
Time: Start 1058 am/pm
Finish _____ am/pm
Project No: 60137361
Site Location: Metro - Greco
Weather Conds: ~48°F Cloudy
Collector(s): _____

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 39.95
c. Length of Water Column 30.42 (a-b)
Casing Diameter/Material 2"
b. Water Table Depth 9.53
d. Calculated System Volume (see back) 4.96

2. WELL PURGE DATA

a. Purge Method: Peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Solinst		
	Geotech		
	Horiba	U-52	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1103	1.0	13.26	5.91	3.85	0.67	-134	11.7	250	10.31	Clear/no odor
1108	2.0	13.31	5.89	3.84	0.58	-141	9.42	"	10.33	" "
1113	3.0	13.33	5.89	3.84	0.52	-146	9.22	"	10.38	" "
1118	4.0	13.37	5.89	3.83	0.49	-149	9.44	"	10.36	" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low Flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time

Comments DTW after pumping 10.16 ft DTB after 39.96'

Signature _____ Date _____

Well ID: MW-20S

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
Project No: 60139361
Site Location: Metropolitan-Greco
Weather Conds: Cloudy 50°

Date: 3/18/2012
Time: Start 0906 am/pm
Finish 1258 am/pm
Collector(s): KB

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 15.48
b. Water Table Depth 8.85
c. Length of Water Column 6.63 (a-b)
d. Calculated System Volume (see back) 1.08

Casing Diameter/Material 2"/PVC.

2. WELL PURGE DATA

a. Purge Method: Low Flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	Lamotte	2020e	
	Geotech pump - peristaltic, o/w interface probe		

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0905	~.25	10.73	4.84	1.30	1.74	95	423	250	9.12	grey/PLO
0910	~1	11.43	5.59	1.27	1.20	-66	35	250	9.78	grey/PLO
0911	~2	11.52	5.78	1.25	0.98	-115	222	250	9.94	clear/PLO
0913	~2.5	11.55	5.82	1.25	0.93	-123	171	250	10.04	clear/PLO
0914	~2.5	11.53	5.80	1.26	0.88	-130	138	250	10.52	clear/PLO
0932	~3	11.79	6.15	1.17	0.75	-141	31.2	250	12.11	clear/PLO
0937	~3.5	11.84	6.23	1.15	0.63	-176	26.8	250	12.91	clear/PLO

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low Flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW20S	40ml glass	3	HCL	VOC	~~1030~~
	1L glass, amber	2	none	SVOC	1215
	250ml plastic	1	Nitric Acid.	RCRA Metals.	
	250ml plastic.	1	Sodium Hydroxide.	Total Cyanide.	

Comments: dtw after pumping 11.90', dtb 15.46'
1258 dtw: 12.49, dtb 15.50'

Signature _____ Date _____

Purge Volume Calculation

AECOM

Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
0942	~4	11.94	6.26	1.16	0.56	-178	17.5	250	14.09	clear/PVO
0947	~5	12.01	6.30	1.12	0.62	-187	14.6	250	15.18	clear/PVO
0948									dry	
1008									14.42	
1017									13.66	
1028									13.31	
1208									11.89	
1218	pumping very slow in order to sample while recharging								12.33	
1221	very turbid, black fine sediment.							8	12.81	
1223									12.54	
1233									13.80	
1243	pumped ~3 liters.								13.63	
1247									13.55	
1252										

Well ID: MW22I

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
Date: 3/15/12
Time: Start 815 am/pm
Finish 846 am/pm
Project No: 60137361-330
Site Location: Lowes
Weather Conds: ~50, cloudy, slight wind
Collector(s): NP/KB

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 38.71
c. Length of Water Column 31.41 (a-b)
Casing Diameter/Material 2"/PVC
b. Water Table Depth 5.30
d. Calculated System Volume (see back) 5.13 gal

2. WELL PURGE DATA

a. Purge Method: Low Flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	LaMotte	2020e	
	Geotech Pump - peristaltic	D/W interface probe	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
820	1.5	15.98	6.95	4.80	1.49	-129	62.4	250	5.41	clear/none
825	3	15.65	6.92	4.82	1.12	-131	9.02	250	5.35	"
830	4.5	15.56	6.92	4.85	0.46	-131	2.72	250	5.33	"
835	6	15.49	6.92	4.87	0.43	-132	2.98	250	5.34	"
840	7.5	15.44	6.92	4.88	0.41	-133	2.20	250	5.35	"
845	9	15.45	5	4.88	0.41	-133	1.16	250	5.32	"
850										

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: low flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW22I	glass	3	HCl	VOC	830
MW22I	1L Amber	2	Ice	SVOC	↓
MW22I	plastic	1	HNO_3	RCRA metals	
MW22I	plastic	1	NaOH	total cyanide	

Comments end, DTW = 5.3
TD = 36.61

Signature
Date

Well ID: MW-25S

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
Date: 3/14/12
Time: Start 1428 am/pm
Finish 1509 am/pm
Project No: 60137361-330
Site Location: Lathrop
Weather Conds: Temp ~70°F, wind ~5-10 mph
Collector(s): N. Dalal / KB

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 29.84 c. Length of Water Column 4.2 (a-b) 2.5.99 Casing Diameter/Material 2" PVC

b. Water Table Depth 3.85 d. Calculated System Volume (see back) 67 (1WV) 80.1 (2WV)

2. WELL PURGE DATA

a. Purge Method: low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	La Motte	2020e	
	Geotech pump	peristaltic	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet) DTW	Color/Odor
1443	1.5	18.41	6.72	3.56	0.76	-91	20	250	4.10	clear/none
1448	3	18.47	6.70	3.57	0.96	-93	8.71	250	4.11	clear/none
1453	4.5	18.54	6.71	3.56	0.92	-98	4.69	250	4.15	//
1458	6	18.49	6.71	3.54	0.85	-100	5.33	250	4.14	//
1503	7.5	18.55	6.71	3.55	0.80	-102	8.76	250	4.17	//
1508	9	18.52	6.71	3.54	0.72	-104	5.08	250	4.15	//
1513										

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☒
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW25S	glass	3	HCl,	VOC	1458
MW25S	1L Amber	2	ice	SVOC	
MW-25S	plastic	1			
MW25S	plastic	1			

Comments dtw: 3.70 @ 1428.
Stopped at 1428 and restarted at 1430, between 1430 - 1441, → water was dark brown and silty
volume removed ~ 3 gallons

Signature Kate Bo
Date 3/14/12

Final @
1513 dtw: 3.73
1513 dtb: 29.84

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60131361
Project Name: Metropolitan
Date: 10/4/10
Weather: 50's, Rain

Well ID: MW-1S
Sample ID: MW-1S
Permit Number: N/A
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
Inner Casing Diameter (inch): 2in
Inner Casing Material: PVC
Purge/Sample Method: Low Flow
Pump Intake Setting* (feet): 10.0 ft.
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 34.9

Depth to Product* (feet): ND
Initial Depth to Water* (feet): 4.60
Product Thickness (feet): ND
Depth to Top of Screen* (feet): 3'
Total Depth* (feet): 14.71
Water Column (feet): 10.11
Casing Volume (gal): 1.65
DTW After Pump Installed: NA

PURGING/SAMPLING INFORMATION

Time	(Qpm) Rate ~~(gpm)~~	Liters ~~Gallons~~ Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1115	250ml	0	6.88	20.9	20.01	1.73	40.2	-148	4.60	Light Gray/
1120	250	1	6.93	20.8	20.71	1.24	29.5	-149	5.49	Heavy MGP
1125	250	2	6.94	20.9	20.70	1.17	31.3	-148	5.52	like odor.
1130	250	3	6.89	21.5	19.96	1.24	30.4	-143	5.56	
1135	250	4	6.88	21.8	20.05	1.15	24.6	-142	6.00	
1140	200	5	6.87	22.2	20.08	1.02	27.4	-143	5.70	
1145	200	6	6.85	22.9	19.66	1.04	22.2	-142	5.60	
1150	200	7	6.84	23.1	19.96	1.03	28.7	-142	5.60	
1155	200	8	6.81	24.0	19.90	1.02	27.1	-142	5.60	
1200	200	9	6.82	24.4	19.94	0.93	25.2	-144	5.60	
1205	200	10	6.81	24.6	19.90	0.93	27.8	-144	5.60	
1210	200	11	6.81	24.8	19.96	0.90	25.3	-145	5.60	

Start Purge Date/Time: 1110
End Purge Date/Time: 1210
Total Volume Purged (gal): 3 gallons
Depth to Water After Purge* (feet): 5.60

Pre-Sample Depth to Water* (feet): 5.60
Start Sample Date/Time: 1215
End Sample Date/Time: 1241
Sampler Names: M. Merdinger

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
Slight sheen on water, strong MGP-like odor.
DTW after sample: 5.40

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan
Date: 10/4/10
Weather: ~55°F, cloudy, drizzle

Well ID: 1I
Sample ID: MW-1I
Permit Number: NA
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" Steel
Inner Casing Diameter (inch): 2"
Inner Casing Material: PVC
Purge/Sample Method: Low flow
Pump Intake Setting* (feet): 10'
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 22.7

Depth to Product* (feet): ——
Initial Depth to Water* (feet): 7.88'
Product Thickness (feet): ——
Depth to Top of Screen* (feet): 30'
Total Depth* (feet): 42.25'
Water Column (feet): 34.37
Casing Volume (gal): 5.60
DTW After Pump Installed: NA

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1255									7.88'	
1305			6.99	3.82	17.3	7.82	20.5	-15	7.87'	Clear
1310			6.65	4.09	16.7	6.98	14.9	27	9.88'	"
1315			6.60	4.07	16.7	5.87	7.99	35	10.95'	"
1320	250 ml/min		6.58	3.96	16.7	5.49	4.70	39	11.85	"
1327			6.57	3.96	16.5	5.11	2.31	41	11.51'	"
1332			6.56	3.98	16.5	4.71	1.40	42	11.30'	"
1337			6.56	4.00	16.4	4.40	0.93	37	11.21'	"
1342			6.55	4.03	16.4	3.99	0.69	28	11.14'	"
1347			6.55	4.05	16.5	3.74	0.69	21	11.13'	"
1352			6.55	4.07	16.4	3.52	0.67	20	11.14'	"
1357			6.54	4.08	16.4	3.35	0.60	20	11.16'	"

Start Purge Date/Time: 10/4/10 12:55
End Purge Date/Time: 10/4/10 14:12
Total Volume Purged (gal): 3.99 liters
Depth to Water After Purge* (feet): 11.16

Pre-Sample Depth to Water* (feet): 11.16
Start Sample Date/Time: 1400 10/4/10
End Sample Date/Time: 1411 10/4/10
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

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Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan
Date: 10/4/10
Weather: cloudy, drizzle, ~55°F

Well ID: MW-1D
Sample ID: MW-1D
Permit Number: NA
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" steel
Inner Casing Diameter (inch): 2"
Inner Casing Material: PVC
Purge/Sample Method: Low flow
Pump Intake Setting* (feet): 10'
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 19.9

Depth to Product* (feet): —
Initial Depth to Water* (feet): 7.55'
Product Thickness (feet): —
Depth to Top of Screen* (feet): 60'
Total Depth* (feet): 72.11
Water Column (feet): 64.56
Casing Volume (gal): 10.52
DTW After Pump Installed: NA

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1101									7.55'	Start pump
1106			11.63	3.81	17.5	9.02	45.2	-141	9.31'	clear
1112			8.46	3.78	17.4	8.56	105.3	-185	10.05'	clear, tinge of white
1117			8.12	3.83	17.3	8.00	69.5	-174	10.47'	clear, white tinge
1123	250 mL/min		7.93	3.83	17.3	7.72	44.0	-163	10.94'	"
1128	"		7.87	3.80	17.1	8.22	30.3	-159	11.24'	clear
1133	"		7.88	3.83	17.0	7.41	21.0	-160	11.50'	clear
1138	"		7.90	3.77	17.0	7.27	15.3	-164	11.61'	clear
1143	"		7.95	3.79	16.8	8.89	14.5	-169	11.82'	"
1148	"		7.95	3.81	16.9	8.19	14.7	-172	11.91'	"
1153	"		7.95	3.83	16.9	8.65	18.7	-173	12.01'	"
1158	"		7.97	3.87	16.9	7.87	18.2	-177	12.10'	"
1203	"		7.97	3.91	16.9	7.89	18.2	-178	12.17'	"

Start Purge Date/Time: 10/4/10 11:01
End Purge Date/Time: 10/4/10 12:36
Total Volume Purged (gal): 4.5 gal
Depth to Water After Purge* (feet): 10.32'

Pre-Sample Depth to Water* (feet):
Start Sample Date/Time: 10/4/10 12:15
End Sample Date/Time: 10/4/10 12:33
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
No odors, sheen, pid 19.9 ppm, turbidity good

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361.300
Project Name: Metropoliten-Not Grid
Date: 10/5/10
Weather: 60°, Overcast/Drizzle

Well ID: MW-2D
Sample ID: MW-2D (100510)
Permit Number: N/A
Well Condition: Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
Inner Casing Diameter (inch): 2in
Inner Casing Material: PVC
Purge/Sample Method: Low Flow
Pump Intake Setting* (feet): Middle of Screen
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0 ppm.
After Cap Removal: 19.9

Depth to Product* (feet): not detected
Initial Depth to Water* (feet): 6.70
Product Thickness (feet): not detected.
Depth to Top of Screen* (feet): 60
Total Depth* (feet): 71.39'
Water Column (feet): 64.99
Casing Volume (gal): 10.55
DTW After Pump Installed: 5.67

PURGING/SAMPLING INFORMATION

Time	(lpm) Rate (~~gpm~~)	Liters ~~Gallons~~ Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
0805	250	0	11.00	0.888	16.89	3.10	6.43	-88	6.70	Start pump
0810	250	1.25	7.39	6.12	16.91	1.77	3.05	-162	6.65	
0815	250	2.5	7.18	6.17	16.88	1.67	3.73	-145	6.65	
0820	250	3.75	7.02	5.81	16.82	1.60	0.00	-125	6.65	
0825	250	5	6.89	5.01	16.82	1.15	0.00	-109	6.67	
0830	250	6.25	6.79	4.59	16.68	0.91	0.00	-96	6.67	
0835	250	7.5	6.73	4.46	16.58	0.83	0.00	-90	6.69	
0840	250	8.75	6.70	4.39	16.65	0.73	0.00	-85	6.68	
0845	250	10	6.68	4.36	16.65	0.66	0.00	-82	6.68	
0850	250	11.25	6.66	4.34	16.65	0.65	0.00	-81	6.68	
0855	250	12.5	6.66	4.33	16.64	0.64	0.00	-81	6.68	

Start Purge Date/Time: 0800
End Purge Date/Time: 0855
Total Volume Purged (gal): 12.5 gallons.
Depth to Water After Purge* (feet): 6.68'

Pre-Sample Depth to Water* (feet): 6.68
Start Sample Date/Time: 10/5/10 0900
End Sample Date/Time: 10/5/10
Sampler Names: M. Merdinger

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
Slight hazy color, No odor / No sheen, No turbidity

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan
Date: 10/5/10
Weather: cloudy, mid 50's, light breeze

Well ID: 3S
Sample ID: MW-3S (10510)
Permit Number: NA
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" steel
Inner Casing Diameter (inch): 2"
Inner Casing Material: PVC
Purge/Sample Method: Low Flow
Pump Intake Setting* (feet): 10'
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 60.2

Depth to Product* (feet): ND
Initial Depth to Water* (feet): 1.91
Product Thickness (feet): ND
Depth to Top of Screen* (feet): 31
Total Depth* (feet): 14.36
Water Column (feet): 12.45'
Casing Volume (gal): 2.03
DTW After Pump Installed: NA

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
946									1.91	Start pump
951			7.31	0.481	20.30	2.36	0.00	-146	1.93	
956			7.34	0.477	20.58	1.87	0.00	-157	1.97	
1001			7.35	0.478	20.68	1.61	0.00	-166	1.97	
1006	300 ml/min		7.37	0.479	20.63	1.38	0.00	-172	1.97	slowed down pump
1011	250 ml/min		7.38	0.477	20.57	1.18	0.00	-176	1.93	
1016	"		7.39	0.479	20.63	1.14	0.00	-179	1.92	

Start Purge Date/Time: 10/5/10 9:46
End Purge Date/Time: 10/5/10 10:45
Total Volume Purged (gal): 3 gal
Depth to Water After Purge* (feet): 1.92'

Pre-Sample Depth to Water* (feet): 1.93
Start Sample Date/Time: 10/5/10 10:30
End Sample Date/Time: 10/5/10 10:44
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
slight HCLO, no sheen

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan – Not Grnd
Date: 10/5/10
Weather: 60's, Drizzle

Well ID: MW-3I
Sample ID: MW-3I (100510)
Permit Number: N/A
Well Condition: Good → Nails in casing

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
Inner Casing Diameter (inch): 2in
Inner Casing Material: PVC
Purge/Sample Method: Low Flow
Pump Intake Setting* (feet): Mid-Screen
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0 ppm.
After Cap Removal: 14.8

Depth to Product* (feet): not detected ~~not measured~~
Initial Depth to Water* (feet): 4.02
Product Thickness (feet): not detected
Depth to Top of Screen* (feet): 25'
Total Depth* (feet): 50.68'
Water Column (feet): 46.66
Casing Volume (gal): 7.61
DTW After Pump Installed: NA

PURGING/SAMPLING INFORMATION

Time	(lpm) Rate (gpm)	Liters ~~Gallons~~ Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
0950	200	0	6.52	1.39	19.3	3.24	4.96	-121	4.02	
0955	200	1	6.51	1.98	18.3	2.88	4.06	-124	4.04	
1000	200	2	6.51	1.98	18.2	2.14	3.75	-131	4.05	
1005	200	3	6.51	1.98	18.1	2.18	3.95	-134	4.05	
1010	200	4	6.51	1.95	18.1	2.53	3.45	-136	4.05	
1015	200	5	6.51	1.95	18.1	2.73	5.56	-139	4.05	
1020	200	6	6.51	1.94	18.3	2.20	6.37	-140	4.05	
1025	200	7	6.51	1.94	18.2	0.00	6.35	-142	4.05	
1030	200	8	6.53	1.93	18.3	0.00	6.23	-144	4.05	
1035	200	9	6.53	1.93	18.2	0.01	6.18	-143	4.05	

Start Purge Date/Time: 0945
End Purge Date/Time: 1035
Total Volume Purged (gal): 2.5 galls
Depth to Water After Purge* (feet): 4.05

Pre-Sample Depth to Water* (feet): 4.05
Start Sample Date/Time: 10/5/10 1045
End Sample Date/Time: 10/5/10.
Sampler Names: M. Merdinger

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
Slighty Hazy Grey color, Coal-Tar like odor

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137367
Project Name: Metropolitan - NetGrid
Date: 10/5/10
Weather: 60's; Drizzle

Well ID: MW-4S
Sample ID: MW-4S (100510)
Permit Number: N/A
Well Condition: Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
Inner Casing Diameter (inch): 2in
Inner Casing Material: PVC
Purge/Sample Method: Low Flow
Pump Intake Setting* (feet): Mid-Screen
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 4.4

Depth to Product* (feet): —
Initial Depth to Water* (feet): 4.42
Product Thickness (feet): —
Depth to Top of Screen* (feet): 5.60
Total Depth* (feet): 15.60
Water Column (feet): 11.18
Casing Volume (gal): 1.82
DTW After Pump Installed: 4.42

PURGING/SAMPLING INFORMATION

Time	~~Rate (gpm)~~ Liters	~~Gallons~~ Liters Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1610	200	0	6.59	21.2	20.71	1.78	0.0	-111	4.42	
1615	200	1	6.60	21.2	20.80	1.28	0.0	-114	4.70	
1620	200	2	6.68	18.3	21.47	0.90	0.0	-123	4.70	
1625	200	3	6.63	17.8	21.81	0.78	0.0	-127	4.70	
1630	200	4	6.63	17.9	21.86	0.69	0.0	-129	4.70	
1635	200	5	6.63	18.0	21.70	0.68	0.0	-129	4.70	
1640	200	6	6.63	18.1	21.71	0.65	0.0	-129	4.70	

Start Purge Date/Time: 1605
End Purge Date/Time: 1640
Total Volume Purged (gal): 2.5 gallons
Depth to Water After Purge* (feet): 4.70

Pre-Sample Depth to Water* (feet): 4.70
Start Sample Date/Time: 10/5/10 1645
End Sample Date/Time: 10/5/10
Sampler Names: MM

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan
Date: 10/5/10
Weather: Cloudy, mid 50's, light breeze

Well ID: 4I
Sample ID: MW-4I (10510)
Permit Number: NA
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" steel
Inner Casing Diameter (inch): 2"
Inner Casing Material: PVC
Purge/Sample Method: Low flow
Pump Intake Setting* (feet): 10'
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 12.6

Depth to Product* (feet): ND
Initial Depth to Water* (feet): 4.35
Product Thickness (feet): ND
Depth to Top of Screen* (feet): 25'
Total Depth* (feet): 37.61
Water Column (feet): 33.26
Casing Volume (gal): 5.42
DTW After Pump Installed: NA

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1615									4.35	Start pump
1620	300 mL/min		7.26	1.53	17.8	7.63	—	-177	4.14	Had to re-zero turbidity meter
1625	300 mL/min		7.24	1.55	17.5	5.84	7.39	-179	4.18	Slowed down pump
1630	250 mL/min		7.26	1.52	17.2	5.62	2.80	-182	4.19	
1635	"		7.29	1.50	17.3	2.60	1.16	-185	4.13	
1640	"		7.31	1.48	17.4	1.95	0.94	-188	4.15	
1645	"		7.32	1.46	17.3	2.77	1.64	-189	4.15	
1650	"		7.34	1.45	17.3	6.14	1.18	-188	4.12	
1655	"		7.34	1.44	17.2		0.39	-191	4.10	DO: bouncing all over the place
1701	"		7.35	1.43	17.1	~~2.72~~	0.82	-191	4.10	"
1706	"		7.36	1.41	17.0	2.72	0.39	-194	4.12	"
1711	"		7.35	1.42	16.9	0.44	0.00	-193	4.09	DO: not bouncing as quickly.
1716	"		7.34	1.52	17.0	0.15	0.72	-185	4.09	"
1721	"		7.36	1.53	16.9	0.00	0.26	-195	4.08	
1725	"		7.38	1.52	16.9	0.00	0.00	-198	4.08	

Start Purge Date/Time: 10/5/10 1615
End Purge Date/Time: 10/5/10 1742
Total Volume Purged (gal): 4.5 gal
Depth to Water After Purge* (feet): 3.95

Pre-Sample Depth to Water* (feet): 4.08
Start Sample Date/Time: 10/5/10 1730
End Sample Date/Time: 10/5/10 1741
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
Slight sheen & HCLO

* maybe we should sample this well as the tide is going out, the canal could be having an effect on the D.O.

AECOM

* Tide is coming in.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137367
Project Name: Metropolitan
Date: 10/6/10
Weather: 60's, Sunny

Well ID: MW-5S
Sample ID: MW-5S(100610)
Permit Number: N/A
Well Condition: Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
Inner Casing Diameter (inch): 2in
Inner Casing Material: PVC
Purge/Sample Method: Low Flow
Pump Intake Setting* (feet): Mid Screen
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.1ppm
After Cap Removal: 0.1ppm

Depth to Product* (feet): —
Initial Depth to Water* (feet): 6.71
Product Thickness (feet): —
Depth to Top of Screen* (feet): ~~5.50~~ 13'
Total Depth* (feet): 15.50
Water Column (feet): 8.79
Casing Volume (gal): 1.43 gal.
DTW After Pump Installed: 6.71

PURGING/SAMPLING INFORMATION

Time	(Lpm) Rate ~~(gpm)~~	Liters ~~Gallons~~ Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
0840	200	0	6.72	7.02	18.6	0.51	2.31	-98	6.71	
0845	200	1	6.98	7.46	18.2	0.27	0.98	-100	6.73	
0850	200	2	6.96	7.55	18.2	0.14	0.62	-102	6.75	
0855	200	3	6.97	7.55	18.3	0.00	0.57	-106	6.75	
0900	200	4	6.97	7.55	18.3	0.00	0.55	-110	6.75	
0905	200	5	6.98	7.54	18.4	0.00	0.49	-114	6.75	

Start Purge Date/Time: 0835
End Purge Date/Time: 0905
Total Volume Purged (gal): 5 liters / 1 gal
Depth to Water After Purge* (feet): 6.75

Pre-Sample Depth to Water* (feet): 6.75
Start Sample Date/Time: 10/6/10 MW-5S(100610) 0910
End Sample Date/Time: 10/6/10 MW-5S(100610) Dup 0930
Sampler Names: M. Merdinger

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
Slightly hazy, Organic odor

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137367
Project Name: Metropolitan - Not Grid
Date: 10/6/10
Weather: Sunny, 60s

Well ID: MW-5I
Sample ID: MW-5I (100610)
Permit Number: N/A
Well Condition: Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
Inner Casing Diameter (inch): 2in
Inner Casing Material: PVC
Purge/Sample Method: Low Flow
Pump Intake Setting* (feet): Mid Screen
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0 ppm.
After Cap Removal: 22.5

Depth to Product* (feet): —
Initial Depth to Water* (feet): 6.66
Product Thickness (feet): —
Depth to Top of Screen* (feet): 39.00
Total Depth* (feet): 49.00
Water Column (feet): 42.34
Casing Volume (gal): 6.90
DTW After Pump Installed: 6.66

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1030	200	0	7.64	0.927	18.9	6.15	15.1	-160	6.73	
1035	200	1	7.23	1.76	18.0	5.45	22.3	-153	6.75	
1040	200	2	7.22	1.85	18.2	4.31	12.2	-150	6.75	
1045	200	3	7.23	1.87	18.3	2.29	8.92	-153	6.75	
1050	200	4	7.26	1.86	18.2	1.97	3.57	-158	6.75	
1055	200	5	7.28	1.86	18.5	0.00	2.61	-171	6.75	
1100	200	6	7.29	1.86	18.4	0.00	1.35	-172	6.75	
1105	200	7	7.29	1.85	18.5	0.00	1.37	+174	6.75	

Start Purge Date/Time: 1025
End Purge Date/Time: 1105
Total Volume Purged (gal): 7 liters
Depth to Water After Purge* (feet): 6.75

Pre-Sample Depth to Water* (feet): 6.75
Start Sample Date/Time: 10/6/10 1110
End Sample Date/Time: 10/6/10 1150
Sampler Names: M. Merdinger

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
Slight Gray, NLO

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137367
Project Name: Metropolitan - Nat Grid
Date: 10/6/10
Weather: 60's, Sunny

Well ID: MW-5D
Sample ID: MW-5D(100610)
Permit Number: N/A
Well Condition: Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
Inner Casing Diameter (inch): 2in
Inner Casing Material: PVC
Purge/Sample Method: Low Flow
Pump Intake Setting* (feet): Mid Screen
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0 ppm.
After Cap Removal: 0.8

Depth to Product* (feet): —
Initial Depth to Water* (feet): 7.11
Product Thickness (feet): —
Depth to Top of Screen* (feet): 61.52
Total Depth* (feet): 71.52
Water Column (feet): 64.41
Casing Volume (gal): 10.49
DTW After Pump Installed: 7.11

PURGING/SAMPLING INFORMATION

Time	(Lpm) Rate (gpm)	Liters Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1205	200	0	11.51	1.50	20.2	2.57	6.02	-207	7.15	
1210	200	1	8.99	1.44	19.6	2.14	122	-119	7.15	
1215	200	2	7.86	2.36	19.6	2.27	82.7	-184	7.18	
1220	200	3	7.47	2.44	19.6	1.85	63.3	-159	7.20	
1225	200	4	7.40	2.46	19.5	1.76	25.8	-153	7.20	
1230	200	5	7.34	2.47	19.4	1.55	10.92	-144	7.23	
1235	200	6	7.31	2.43	18.9	1.54	5.83	-137	7.25	
1240	200	7	7.30	2.41	18.5	1.22	3.39	-135	7.25	
1245	200	8	7.30	2.40	18.3	1.33	0.55	-133	7.28	
1250	200	9	7.30	2.37	19.0	1.32	0.62	-134	7.28	
1255	200	10	7.31	2.37	19.1	1.33	0.58	-134	7.28	
1300	200	11	7.32	2.37	19.1	1.34	0.49	-135	7.28	

Start Purge Date/Time: 1200
End Purge Date/Time: 1300
Total Volume Purged (gal): 11 gal.
Depth to Water After Purge* (feet): 7.28

Pre-Sample Depth to Water* (feet): 7.11'
Start Sample Date/Time: 10/6/10 1305
End Sample Date/Time: 10/6/10
Sampler Names: M. Meerdink

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan
Date: 10/5/10
Weather: cloudy, Mid 50's light breeze

Well ID: 6S
Sample ID: MW-6S (10510)
Permit Number: NA
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" steel
Inner Casing Diameter (inch): 2" PVC
Inner Casing Material: PVC
Purge/Sample Method: Low flow
Pump Intake Setting* (feet): 10'
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 34.9

Depth to Product* (feet): —
Initial Depth to Water* (feet): 5.37
Product Thickness (feet): —
Depth to Top of Screen* (feet): 3'
Total Depth* (feet): 15.06'
Water Column (feet): 9.69'
Casing Volume (gal): 1.58
DTW After Pump Installed: NA

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1330									5.37	start pump
1335	250 ml/min		6.42	2.55	21.08	2.75	11.2	-88	5.99	
1340	"		6.40	2.54	20.98	2.59	16.4	-88	6.14	
1345	"		6.38	2.55	20.95	3.08	17.5	-87	6.21	
1350	"		6.36	2.55	21.00	3.06	17.5	-86	6.26	
1355	"		6.36	2.54	21.08	3.60	19.1	-84	6.31	
1400	"		6.35	2.54	21.03	3.31	23.2	-84	6.42	
1405	"		6.35	2.53	21.19	3.33	23.0	-83	6.45	
1410	"		6.38	2.54	21.10	4.59	25.6	-85	6.44	
1415	"		6.42	2.54	20.95	5.23	22.5	-84	6.35	
1420	"		6.42	2.53	20.87	5.12	21.2	-83	6.34	
1425	"		6.43	2.53	20.93	6.02	19.3	-82	6.38	
1430	"		6.43	2.52	20.92	6.06	17.8	-82	6.40	
1435	"		6.50	2.52	20.70	6.55	15.5	-88	6.31	

Start Purge Date/Time: 10/5/10 1330
End Purge Date/Time: 10/5/10
Total Volume Purged (gal): 4 gal
Depth to Water After Purge* (feet): 6.35

Pre-Sample Depth to Water* (feet): 6.28
Start Sample Date/Time: 10/5/10 1438
End Sample Date/Time: 10/5/10 1515
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
No sheen, no odor

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan
Date: 10/5/10
Weather: cloudy, mid 50s, light breeze

Well ID: 6I
Sample ID: MW-6I (10510)
Permit Number: NA
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" Steel
Inner Casing Diameter (inch): 2"
Inner Casing Material: PVC
Purge/Sample Method: Low flow
Pump Intake Setting* (feet): 10'
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 10.0

Depth to Product* (feet): —
Initial Depth to Water* (feet): 6.63
Product Thickness (feet): —
Depth to Top of Screen* (feet): 30'
Total Depth* (feet): 42.31
Water Column (feet): 35.68
Casing Volume (gal): 5.82
DTW After Pump Installed: NA

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1155									6.63	start pump
1200	250 ml/min		6.43	6.12	17.46	2.14	7.32	-116	6.68	
1205	"		6.41	6.38	17.81	1.47	6.75	-120	6.71	
1210	"		6.41	6.40	18.06	1.24	8.26	-121	6.72	
1215	"		6.41	6.39	18.12	1.18	6.88	-122	6.74	
1220	"		6.42	6.50	17.52	1.02	7.45	-124	6.75	
1225	"		6.41	6.49	17.45	1.04	6.75	-125	6.78	
1231	"		6.42	6.55	17.36	1.00	5.52	-126	6.78	

Start Purge Date/Time: 10/5/10 11:55
End Purge Date/Time: 10/5/10 13:06
Total Volume Purged (gal): 2.5 gal
Depth to Water After Purge* (feet): 6.79

Pre-Sample Depth to Water* (feet): 6.78'
Start Sample Date/Time: 12:35 10/5/10
End Sample Date/Time: 13:05 10/5/10
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
slight sheen on water, slight HCLO

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan - Not Grid
Date: 10/4/10
Weather: 50's, Rain

Well ID: MW-7S
Sample ID: MW-7S (100410)
Permit Number: N/A
Well Condition: Good.

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in. Steel
Inner Casing Diameter (inch): 2in
Inner Casing Material: PVC
Purge/Sample Method: Low flow
Pump Intake Setting* (feet): 10.0 ft
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 27.1

Depth to Product* (feet): ND 4.51 (AMW)
Initial Depth to Water* (feet): 4.51
Product Thickness (feet): ND —
Depth to Top of Screen* (feet): 3'
Total Depth* (feet): 15.05
Water Column (feet): 10.54
Casing Volume (gal): 1.72
DTW After Pump Installed: No pump - tubing

PURGING/SAMPLING INFORMATION

Time	(lpm) Rate (gpm)	liters ~~Gallons~~ Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1530	200	0	6.74	1.25	19.60	0.37	20.6	135	4.51	Start purge
1535	200	1	6.77	1.26	19.90	0.30	4.53	-144	4.51	
1540	200	2	6.84	1.26	20.20	0.24	0.87	-165	4.51	
1545	200	3	6.86	1.24	20.30	0.22	2.72	-177	4.51	
1550	200	4	6.87	1.23	20.40	0.21	1.32	-185	4.51	
1555	200	5	6.86	1.21	20.40	0.20	0.11	-205	4.51	
1600	200	6	6.91	1.20	20.40	0.17	0.12	-230	4.51	
1605	200	7	6.92	1.19	20.50	0.14	0.08	-245	4.51	
1610	200	8	6.92	1.17	20.40	0.12	0.00	-260	4.51	
1615	200	9	6.92	1.17	20.20	0.10	0.00	-270	4.51	
1620	200	10	6.92	1.16	20.20	0.07	0.00	-280	4.51	
1625	200	11	6.92	1.15	20.40	0.04	0.00	-279	4.51	
1630	200	12	6.91	1.15	20.60	0.00	0.00	-283	4.51	
1635	200	13	6.92	1.15	20.50	0.00	0.00	-285	4.51	
1640	200	14	6.92	1.14	20.50	0.00	0.00	-288	4.51	

Start Purge Date/Time: 1525
End Purge Date/Time: 1640
Total Volume Purged (gal): 5 gallons
Depth to Water After Purge* (feet): 4.51

Pre-Sample Depth to Water* (feet): 4.51
Start Sample Date/Time: 10/4/10 1645
End Sample Date/Time:
Sampler Names: M. Merdinger

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
Light Grey, MGP odor.

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number:
Project Name: Metropolitan
Date: 10/4/10
Weather: ~55°F, cloudy, drizzle

Well ID: 7I
Sample ID: MW-7I (10410)
Permit Number: NA
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" steel
Inner Casing Diameter (inch): 2"
Inner Casing Material: PVC
Purge/Sample Method: Low Flow
Pump Intake Setting* (feet): 10'
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 11.9

Depth to Product* (feet): —
Initial Depth to Water* (feet): 6.87'
Product Thickness (feet):
Depth to Top of Screen* (feet): 30'
Total Depth* (feet): 41.35'
Water Column (feet): 34.48'
Casing Volume (gal): 5.62
DTW After Pump Installed: NA

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1523									6.87'	Start pump
1528			6.60	2.19	16.75	3.94	30.2	-114	7.58'	clear
1533			6.58	2.23	16.51	2.69	69.7	-114	7.77'	clear, slightly cloudy white
1538	250 ml/min		6.58	2.19	16.32	2.15	41.7	-114	7.79'	cloudy brownish
1543	"		6.57	2.18	16.45	2.02	23.6	-114	7.80'	clear
1548	"		6.57	2.18	16.39	1.97	16.3	-114	7.80'	clear
1553	"		6.56	2.17	16.31	1.85	6.80	-115	7.80'	clear
1558	"		6.56	2.18	16.21	1.80	7.41	-115	7.82'	clear
1603	"		6.56	2.18	16.16	1.73	3.24	-116	7.84'	clear
1608	"		6.56	2.17	16.11	1.27	3.33	-119	7.85'	clear

Start Purge Date/Time: 10/4/10 1523
End Purge Date/Time: 10/4/10 1636
Total Volume Purged (gal): 4 gal
Depth to Water After Purge* (feet): 7.27'

Pre-Sample Depth to Water* (feet): ~~6.56'~~ JE 7.85'
Start Sample Date/Time: 1620
End Sample Date/Time: 1635
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
~~Strong~~ Slight sheen & HCLO

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan - National Grid
Date: 10/5/10
Weather: 60s, Drizzle

Well ID: MW-8S
Sample ID: MW-8S (100510)
Permit Number: N/A
Well Condition: Filled w/ Water

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
Inner Casing Diameter (inch): 2in
Inner Casing Material: PVC
Purge/Sample Method: Low Flow
Pump Intake Setting* (feet): Mid Screen
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 1.8

Depth to Product* (feet): –
Initial Depth to Water* (feet): 4.70
Product Thickness (feet): –
Depth to Top of Screen* (feet): 7.19
Total Depth* (feet): 17.19
Water Column (feet): 12.49
Casing Volume (gal): 2.03
DTW After Pump Installed: 9.70

PURGING/SAMPLING INFORMATION

Time	lpm Rate ~~(gpm)~~	liters ~~Gallons~~ Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1220	200	0	6.71	16.1	20.9	0.00	0.0	-137	4.70	
1225	200	1	6.74	16.4	20.4	0.23	0.0	-144	6.31	
1230	200	2	6.74	16.5	20.4	0.23	0.0	-145	6.55	
1235	200	3	6.74	16.3	20.7	0.23	0.0	-149	6.65	
1240	200	4	6.74	16.3	21.1	0.21	0.0	-155	7.00	
1245	200	5	6.75	16.5	21.1	0.00	0.0	-159	7.42	
1250	200	6	6.75	16.4	21.1	0.00	0.0	-159	7.80	
1255	200	7	6.77	16.6	21.2	0.00	0.0	-161	8.23	
1300	200	8	6.77	16.7	21.1	0.00	0.0	-161	9.25	
1305	200	9	6.77	16.8	21.0	0.00	0.0	-164	9.27	
1310	200	10	6.77	16.7	20.9	0.00	0.0	-165	9.29	

Start Purge Date/Time: 1220
End Purge Date/Time: 1310
Total Volume Purged (gal): 1.5 gallons
Depth to Water After Purge* (feet): 9.29

Pre-Sample Depth to Water* (feet): 9.29
Start Sample Date/Time: 10/5/10 1315
End Sample Date/Time: 10/5/10 1350
Sampler Names: M. Merdinger

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
Slow recharge, Tar odor strong, hazy

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan - Not Grid
Date: 10/5/10
Weather: 60's, Drizzle

Well ID: MW-8I
Sample ID: MW-8I (1005/0)
Permit Number: N/A
Well Condition: Water in well casing

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
Inner Casing Diameter (inch): 2in
Inner Casing Material: PVC
Purge/Sample Method: Low flow
Pump Intake Setting* (feet): Mid-Screen
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0 ppm.
After Cap Removal: 14.2

Depth to Product* (feet): —
Initial Depth to Water* (feet): 4.81
Product Thickness (feet): —
Depth to Top of Screen* (feet): 32.25
Total Depth* (feet): 42.25
Water Column (feet): 37.44
Casing Volume (gal): 6.1
DTW After Pump Installed: 4.81

PURGING/SAMPLING INFORMATION

Time	(lpm) Rate ~~(gpm)~~	liter ~~Gallons~~ Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1355	200	0	6.68	3.19	19.6	5.61	0.0	-137	4.81	
1400	200	1	6.73	5.07	19.9	2.02	0.0	-122	4.82	
1405	200	2	6.75	5.03	19.6	3.54	0.0	-120	4.82	
1410	200	3	6.77	4.83	19.5	3.81	0.0	-120	4.82	
1415	200	4	6.78	4.99	19.4	2.28	0.0	-120	4.82	
1420	200	5	6.77	4.91	19.3	2.27	0.0	-119	4.82	
1425	200	6	6.77	4.96	19.2	2.26	0.0	-120	4.82	

Start Purge Date/Time: 1351
End Purge Date/Time: 1425
Total Volume Purged (gal): 6 liters
Depth to Water After Purge* (feet): 4.82

Pre-Sample Depth to Water* (feet): 4.82
Start Sample Date/Time: 10/5/10 1430
End Sample Date/Time:
Sampler Names: M. Mendinger

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
Slight sheen, slight Naptha-like odor.

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan
Date: 10/6/10
Weather: Sunny, ~60°F, light breeze

Well ID: MW-9I
Sample ID: MW-9I (10610)
Permit Number: N/A
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" Steel
Inner Casing Diameter (inch): 2"
Inner Casing Material: PVC
Purge/Sample Method: Low flow
Pump Intake Setting* (feet): 10'
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 3.4

Depth to Product* (feet):
Initial Depth to Water* (feet): 6.53
Product Thickness (feet):
Depth to Top of Screen* (feet): ~~0.53~~ JE 30'
Total Depth* (feet): 46.50
Water Column (feet): 39.97
Casing Volume (gal): 6.52
DTW After Pump Installed: NA

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1243									6.53	Start pump
1250	changed to smaller tubing, pump was having trouble bringing up water									Stopped pump
1300										Start pump
1316	250 ml/min		7.26	0.898	17.53	0.54	4.79	-162	6.67	
1321	"		7.16	1.33	16.61	0.48	5.07	-171	6.68	
1326	"		7.15	1.34	16.40	0.46	5.10	-173	6.69	
1332			7.17	1.34	16.50	0.42	6.53	-177	6.70	
									~~6.53~~ JE	

Start Purge Date/Time: 10/6/10 1300
End Purge Date/Time: 10/6/10 1350
Total Volume Purged (gal): 3.5 gal
Depth to Water After Purge* (feet): 6.68

Pre-Sample Depth to Water* (feet): 6.70'
Start Sample Date/Time: 10/6/10 1338
End Sample Date/Time: 10/6/10 1350
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
moderate odor, no sheen

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan
Date: 10/6/10
Weather: Sunny, ~60°F, light breeze

Well ID: MW-9S
Sample ID: MW-9S (10610)
Permit Number: NA
Well Condition: Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" Steel
Inner Casing Diameter (inch): 2"
Inner Casing Material: PVC
Purge/Sample Method: Low flow
Pump Intake Setting* (feet): 10'
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 2.4

Depth to Product* (feet): ND
Initial Depth to Water* (feet): 5.87
Product Thickness (feet): ND
Depth to Top of Screen* (feet): 5'
Total Depth* (feet): 16.42
Water Column (feet): 10.55
Casing Volume (gal): 1.72
DTW After Pump Installed: NA

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
846							4.76		5.87	
851									6.03	Start pump
858	250 ml/min		6.17	35.6	18.32	6.46	4.76	43	6.13	
903	"		6.40	36.3	19.00	5.99	4.06	16	6.35	
908	"		6.51	36.5	19.21	5.73	4.52	-11	6.36	
913	"		6.55	36.6	19.46	5.27	4.22	-32	6.52	
918	"		6.59	36.7	19.46	5.63	4.10	-47	6.63	
923	"		6.61	36.8	19.24	5.70	3.76	-60	6.72	
928	"		6.64	36.8	19.17	6.34	3.48	-71	6.87	
933	"		6.65	36.8	19.24	6.46	3.60	-76	6.97	
938	"		6.65	36.8	19.26	6.40	2.98	-83	7.05	
943	"		6.66	36.8	19.35	6.28	3.36	-90	7.13	
948	"		6.64	36.8	19.36	6.23	3.26	-92	7.29	

Start Purge Date/Time: 10/6/10 851
End Purge Date/Time: 10/6/10 1007
Total Volume Purged (gal): 4 gal
Depth to Water After Purge* (feet): 7.88

Pre-Sample Depth to Water* (feet): 7.38
Start Sample Date/Time: 10/6/10 950
End Sample Date/Time: 10/6/10 1007
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
No sheen, organic/swampy odor

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan
Date: 10/6/10
Weather: Sunny, ~60°F, light breeze

Well ID: MW-9D
Sample ID: MW-9D (10061D)
Permit Number: n/A
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" Steel
Inner Casing Diameter (inch): 2"
Inner Casing Material: PVC
Purge/Sample Method: Low flow
Pump Intake Setting* (feet): 10'
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0 ppm
After Cap Removal: 7.4 ppm.

Depth to Product* (feet): not detected
Initial Depth to Water* (feet): 6.29
Product Thickness (feet): not detected
Depth to Top of Screen* (feet): 60
Total Depth* (feet): 71.74
Water Column (feet): 65.45
Casing Volume (gal): 10.67
DTW After Pump Installed: n/A

PURGING/SAMPLING INFORMATION

Time	Rate (gpm)	Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1113									6.29	Start pump
1118	200 ml/min		8.37	1.11	17.19	2.49	4.48	-59	6.32	
1123	200 ml/min		8.13	2.15	16.63	2.59	10.32	-86	6.33	increased pump rate
1128	225 ml/min		8.11	2.72	16.94	1.79	66.7	-111	6.35	
1133	"		8.15	2.57	16.82	1.65	30.5	-133	6.37	
1138	"		8.15	2.56	16.71	1.43	15.7	-148	6.38	
1143	"		8.12	2.59	16.57	1.36	10.13	-156	6.40	
1148	"		8.08	2.63	16.47	1.23	7.62	-163	6.41	
1153	"		8.05	2.70	16.39	1.18	6.30	-169	6.41	
~~1158~~									~~6.43~~	

Start Purge Date/Time: 10/6/10 1113
End Purge Date/Time: 10/6/10 1200
Total Volume Purged (gal): 2.5 gal
Depth to Water After Purge* (feet): 6.43

Pre-Sample Depth to Water* (feet): 6.41
Start Sample Date/Time: 10/6/10 1200
End Sample Date/Time: 10/6/10 1212
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
No sheen, no odor

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges
Dissolved Oxygen: +/- 10%
Turbidity: +/- 10%
Specific Conductance: +/- 3%
Temperature: +/-3 %
pH: +/- 0.1 unit
Redox Potential: +/- 10mv

* = Measured from top of inner casing
DTW - Depth to Water
Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb
Water Levels Measured with an Electronic Water Level Meter
Field parameter meter calibration results are recorded in the field book.

Appendix G

Air Quality Monitoring Records

AECOM

Client: National Grid
Location: Metropolitan
Date: 4/25/11
Field Personnel: J. Ehlen

Project:
Project Number: 60137361
Weather: ~70°F, foggy, humid, misty, no wind.
Ambient Noise: 78.8

Community Air Monitoring Plan / Noise Field Log

pg 1 of 2

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
835	0.0	0.201	0.0	0.4	0.150	78.3	setting up temp fence.
905	0.0	0.156	0.0	0.1	0.123	89.5	jack hammering MW-4D1
930	0.0	0.155	0.0	0.0	0.138	73.5	change battery on upwind pid
943	NA	0.145	0.0	0.0	0.137	74.1	pre-clearing MW-4D1
1005	0.0	0.165	0.0	0.0	0.133	77.8	"
1015	0.0	0.167	0.0	0.0	0.142	95.4	pre-clearing MW-4D1 Jackhammering MW-4D2
1030	0.0	0.160	0.0	0.0	0.149	79.0	"
1044	0.0	0.151	0.0	0.1	0.129	74.4	switching out rigs & unloading equipment
1100	0.0	0.157	0.0	0.0	0.107	75.3	"
1116	0.0	0.108	0.0	0.0	0.095	77.0	SAA; upwind dust seems to stop logging by itself.
1132	0.0	0.115	0.0	0.0	0.099	73.7	switching out drill rigs.
1146	0.0	0.102	0.0	0.0	0.088	74.3	"
1200	0.0	0.099	0.2	0.0	0.099	76.9	pre-clear MW-4D1
1217	0.0	0.112	0.0	0.0	0.106	73.5	"
1234	0.0	0.135	0.0	0.1	0.145	79.9	"
1246	0.0	0.118	0.0	0.2	0.118	78.4	"
1300	0.0	0.203	0.0	0.4	0.117	72.8	"
1315	0.0	0.166	0.0	0.5	0.132	71.3	"
1334	0.0	0.193	0.1	0.5	0.144	78.3	pre-clear MW-4D2
1347	0.0	0.135	0.0	0.4	0.147	72.9	"
1405	0.0	0.139	0.0	0.4	0.149	76.3	"
1500	0.0	0.081	0.0	0.0	0.076	90.3	"

* Upwind dust trak stops logging randomly.

AECOM

Client: National Grid
Location: Metropolitan
Date: 4/25/11
Field Personnel: J. Ehler

Project:
Project Number: 60137361
Weather: ~75°F, humid, sunny, little wind
Ambient Noise: Same

Community Air Monitoring Plan / Noise Field Log

pg 2 of 2

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
1515 ~~1315~~	0.077	0.0	0.0	0.0	0.072	78.0	pre-clear MW-4D2
1530 ~~1330~~	0.0	0.073	0.1	0.0	0.060	72.8	"
1542 ~~13~~	0.0	0.071	0.0	0.0	0.060	73.4	" begin preclear

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 902685
User ID: 00000001 Site ID: 00000015
Data Points: 69 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 04/25/2011 06:52

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	4/25/2011 7:22	0		0		0	
2	4/25/2011 7:23	0		0		0	
3	4/25/2011 7:24	0		0		0	
4	4/25/2011 7:25	0		0		0	
5	4/25/2011 7:26	0		0		0	
6	4/25/2011 7:27	0		0		0	
7	4/25/2011 7:28	0		0		0	
8	4/25/2011 7:29	0		0		0	
9	4/25/2011 7:30	0		0		0	
10	4/25/2011 7:31	0		0		0	
11	4/25/2011 7:32	0		0		0	
12	4/25/2011 7:33	0		0		0	
13	4/25/2011 7:34	0		0		0	
14	4/25/2011 7:35	0		0		0	
15	4/25/2011 7:36	0		0		0	
16	4/25/2011 7:37	0		0		0	
17	4/25/2011 7:38	0		0		0	
18	4/25/2011 7:39	0		0		0	
19	4/25/2011 7:40	0		0		0	
20	4/25/2011 7:41	0		0		0	
21	4/25/2011 7:42	0		0		0	
22	4/25/2011 7:43	0		0		0	
23	4/25/2011 7:44	0		0		0	
24	4/25/2011 7:45	0		0		0	
25	4/25/2011 7:46	0		0		0	
26	4/25/2011 7:47	0		0		0	
27	4/25/2011 7:48	0		0		0	
28	4/25/2011 7:49	0		0		0	
29	4/25/2011 7:50	0		0		0	
30	4/25/2011 7:51	0		0		0	
31	4/25/2011 7:52	0		0		0	
32	4/25/2011 7:53	0		0		0	
33	4/25/2011 7:54	0		0		0	
34	4/25/2011 7:55	0		0		0	
35	4/25/2011 7:56	0		0		0	
36	4/25/2011 7:57	0		0		0	
37	4/25/2011 7:58	0		0		0	
38	4/25/2011 7:59	0		0		0	
39	4/25/2011 8:00	0		0		0	
40	4/25/2011 8:01	0		0		0	
41	4/25/2011 8:02	0		0		0	
42	4/25/2011 8:03	0		0		0	
43	4/25/2011 8:04	0		0		0	
44	4/25/2011 8:05	0		0		0	
45	4/25/2011 8:06	0		0		0	
46	4/25/2011 8:07	0		0		0	
47	4/25/2011 8:08	0		0		0	
48	4/25/2011 8:09	0		0		0	
49	4/25/2011 8:10	0		0		0	
50	4/25/2011 8:11	0		0		0	
51	4/25/2011 8:12	0		0		0	
52	4/25/2011 8:13	0		0		0	
53	4/25/2011 8:14	0		0		0	
54	4/25/2011 8:15	0		0		0	
55	4/25/2011 8:16	0		0		0	
56	4/25/2011 8:17	0		0		0	
57	4/25/2011 8:18	0		0		0	
58	4/25/2011 8:19	0		0		0	

59	4/25/2011 8:20	0	0	0
60	4/25/2011 8:21	0	0	0
61	4/25/2011 8:22	0	0	0
62	4/25/2011 8:23	0	0	0
63	4/25/2011 8:24	0	0	0
64	4/25/2011 8:25	0	0	0
65	4/25/2011 8:26	0	0	0
66	4/25/2011 8:27	0	0	0
67	4/25/2011 8:28	0	0	0
68	4/25/2011 8:29	0	0	0
69	4/25/2011 8:30	0	0	0

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 902685
User ID: 00000001 Site ID: 00000016
Data Points: 342 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 04/25/2011 06:52

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	4/25/2011 9:09	0		0		0	
2	4/25/2011 9:10	0		0		0	
3	4/25/2011 9:11	0		0		0	
4	4/25/2011 9:12	0		0		0	
5	4/25/2011 9:13	0		0		0	
6	4/25/2011 9:14	0		0		0	
7	4/25/2011 9:15	0		0		0	
8	4/25/2011 9:16	0		0		0	
9	4/25/2011 9:17	0		0		0	
10	4/25/2011 9:18	0		0		0	
11	4/25/2011 9:19	0		0		0	
12	4/25/2011 9:20	0		0		0	
13	4/25/2011 9:21	0		0		0	
14	4/25/2011 9:22	0		0		0	
15	4/25/2011 9:23	0		0		0	
16	4/25/2011 9:24	0		0		0	
17	4/25/2011 9:25	0		0		0	
18	4/25/2011 9:26	0		0		0	
19	4/25/2011 9:27	0		0		0	
20	4/25/2011 9:28	0		0		0	
21	4/25/2011 9:29	0		0		0	
22	4/25/2011 9:30	0		0		0	
23	4/25/2011 9:31	0		0		0	
24	4/25/2011 9:32	0		0		0	
25	4/25/2011 9:33	0		0		0	
26	4/25/2011 9:34	0		0		0	
27	4/25/2011 9:35	0		0		0	
28	4/25/2011 9:36	0		0		0	
29	4/25/2011 9:37	0		0		0	
30	4/25/2011 9:38	0		0		0	
31	4/25/2011 9:39	0		0		0	
32	4/25/2011 9:40	0		0		0	
33	4/25/2011 9:41	0		0		0	
34	4/25/2011 9:42	0		0		0	
35	4/25/2011 9:43	0		0		0	
36	4/25/2011 9:44	0		0		0	
37	4/25/2011 9:45	0		0		0	
38	4/25/2011 9:46	0		0		0	
39	4/25/2011 9:47	0		0		0	
40	4/25/2011 9:48	0		0		0	
41	4/25/2011 9:49	0		0		0	
42	4/25/2011 9:50	0		0		0	
43	4/25/2011 9:51	0		0		0	
44	4/25/2011 9:52	0		0		0	
45	4/25/2011 9:53	0		0		0	
46	4/25/2011 9:54	0		0		0	

47	4/25/2011 9:55	0	0	0
48	4/25/2011 9:56	0	0	0
49	4/25/2011 9:57	0	0	0
50	4/25/2011 9:58	0	0	0
51	4/25/2011 9:59	0	0	0
52	4/25/2011 10:00	0	0	0
53	4/25/2011 10:01	0	0	0
54	4/25/2011 10:02	0	0	0
55	4/25/2011 10:03	0	0	0
56	4/25/2011 10:04	0	0	0
57	4/25/2011 10:05	0	0	0
58	4/25/2011 10:06	0	0	0
59	4/25/2011 10:07	0	0	0
60	4/25/2011 10:08	0	0	0
61	4/25/2011 10:09	0	0	0
62	4/25/2011 10:10	0	0	0
63	4/25/2011 10:11	0	0	0
64	4/25/2011 10:12	0	0	0
65	4/25/2011 10:13	0	0	0
66	4/25/2011 10:14	0	0	0
67	4/25/2011 10:15	0	0	0
68	4/25/2011 10:16	0	0	0
69	4/25/2011 10:17	0	0	0
70	4/25/2011 10:18	0	0	0
71	4/25/2011 10:19	0	0	0
72	4/25/2011 10:20	0	0	0
73	4/25/2011 10:21	0	0	0
74	4/25/2011 10:22	0	0	0
75	4/25/2011 10:23	0	0	0
76	4/25/2011 10:24	0	0	0
77	4/25/2011 10:25	0	0	0
78	4/25/2011 10:26	0	0	0
79	4/25/2011 10:27	0	0	0
80	4/25/2011 10:28	0	0	0
81	4/25/2011 10:29	0	0	0
82	4/25/2011 10:30	0	0	0
83	4/25/2011 10:31	0	0	0
84	4/25/2011 10:32	0	0	0
85	4/25/2011 10:33	0	0	0
86	4/25/2011 10:34	0	0	0
87	4/25/2011 10:35	0	0	0
88	4/25/2011 10:36	0	0	0
89	4/25/2011 10:37	0	0	0
90	4/25/2011 10:38	0	0	0
91	4/25/2011 10:39	0	0	0
92	4/25/2011 10:40	0	0	0
93	4/25/2011 10:41	0	0	0
94	4/25/2011 10:42	0	0	0
95	4/25/2011 10:43	0	0	0
96	4/25/2011 10:44	0	0	0
97	4/25/2011 10:45	0	0	0
98	4/25/2011 10:46	0	0	0
99	4/25/2011 10:47	0	0	0
100	4/25/2011 10:48	0	0	0
101	4/25/2011 10:49	0	0	0
102	4/25/2011 10:50	0	0	0
103	4/25/2011 10:51	0	0	0
104	4/25/2011 10:52	0	0	0
105	4/25/2011 10:53	0	0	0
106	4/25/2011 10:54	0	0	0
107	4/25/2011 10:55	0	0	0
108	4/25/2011 10:56	0	0	0
109	4/25/2011 10:57	0	0	0
110	4/25/2011 10:58	0	0	0
111	4/25/2011 10:59	0	0	0
112	4/25/2011 11:00	0	0	0
113	4/25/2011 11:01	0	0	0
114	4/25/2011 11:02	0	0	0
115	4/25/2011 11:03	0	0	0

116	4/25/2011 11:04	0	0	0
117	4/25/2011 11:05	0	0	0
118	4/25/2011 11:06	0	0	0
119	4/25/2011 11:07	0	0	0
120	4/25/2011 11:08	0	0	0
121	4/25/2011 11:09	0	0	0
122	4/25/2011 11:10	0	0	0
123	4/25/2011 11:11	0	0	0
124	4/25/2011 11:12	0	0	0
125	4/25/2011 11:13	0	0	0
126	4/25/2011 11:14	0	0	0
127	4/25/2011 11:15	0	0	0
128	4/25/2011 11:16	0	0	0
129	4/25/2011 11:17	0	0	0
130	4/25/2011 11:18	0	0	0
131	4/25/2011 11:19	0	0	0
132	4/25/2011 11:20	0	0	0
133	4/25/2011 11:21	0	0	0
134	4/25/2011 11:22	0	0	0
135	4/25/2011 11:23	0	0	0
136	4/25/2011 11:24	0	0	0
137	4/25/2011 11:25	0	0	0
138	4/25/2011 11:26	0	0	0
139	4/25/2011 11:27	0	0	0
140	4/25/2011 11:28	0	0	0
141	4/25/2011 11:29	0	0	0
142	4/25/2011 11:30	0	0	0
143	4/25/2011 11:31	0	0	0
144	4/25/2011 11:32	0	0	0
145	4/25/2011 11:33	0	0	0
146	4/25/2011 11:34	0	0	0
147	4/25/2011 11:35	0	0	0
148	4/25/2011 11:36	0	0	0
149	4/25/2011 11:37	0	0	0
150	4/25/2011 11:38	0	0	0
151	4/25/2011 11:39	0	0	0
152	4/25/2011 11:40	0	0	0
153	4/25/2011 11:41	0	0	0
154	4/25/2011 11:42	0	0	0
155	4/25/2011 11:43	0	0	0
156	4/25/2011 11:44	0	0	0
157	4/25/2011 11:45	0	0	0
158	4/25/2011 11:46	0	0	0
159	4/25/2011 11:47	0	0	0
160	4/25/2011 11:48	0	0	0
161	4/25/2011 11:49	0	0	0
162	4/25/2011 11:50	0	0	0
163	4/25/2011 11:51	0	0	0
164	4/25/2011 11:52	0	0	0
165	4/25/2011 11:53	0	0	0
166	4/25/2011 11:54	0	0	0
167	4/25/2011 11:55	0	0	0
168	4/25/2011 11:56	0	0	0
169	4/25/2011 11:57	0	0	0
170	4/25/2011 11:58	0	0	0
171	4/25/2011 11:59	0	0	0
172	4/25/2011 12:00	0	0	0
173	4/25/2011 12:01	0	0	0
174	4/25/2011 12:02	0	0	0
175	4/25/2011 12:03	0	0	0
176	4/25/2011 12:04	0	0	0
177	4/25/2011 12:05	0	0	0
178	4/25/2011 12:06	0	0	0
179	4/25/2011 12:07	0	0	0
180	4/25/2011 12:08	0	0	0
181	4/25/2011 12:09	0	0	0
182	4/25/2011 12:10	0	0	0
183	4/25/2011 12:11	0	0	0
184	4/25/2011 12:12	0	0	0

185	4/25/2011 12:13	0	0	0
186	4/25/2011 12:14	0	0	0
187	4/25/2011 12:15	0	0	0
188	4/25/2011 12:16	0	0	0
189	4/25/2011 12:17	0	0	0
190	4/25/2011 12:18	0	0	0
191	4/25/2011 12:19	0	0	0
192	4/25/2011 12:20	0	0	0
193	4/25/2011 12:21	0	0	0
194	4/25/2011 12:22	0	0	0
195	4/25/2011 12:23	0	0	0
196	4/25/2011 12:24	0	0	0
197	4/25/2011 12:25	0	0	0
198	4/25/2011 12:26	0	0	0
199	4/25/2011 12:27	0	0	0
200	4/25/2011 12:28	0	0	0
201	4/25/2011 12:29	0	0	0
202	4/25/2011 12:30	0	0	0
203	4/25/2011 12:31	0	0	0
204	4/25/2011 12:32	0	0	0
205	4/25/2011 12:33	0	0	0
206	4/25/2011 12:34	0	0	0
207	4/25/2011 12:35	0	0	0
208	4/25/2011 12:36	0	0	0
209	4/25/2011 12:37	0	0	0
210	4/25/2011 12:38	0	0	0
211	4/25/2011 12:39	0	0	0
212	4/25/2011 12:40	0	0	0
213	4/25/2011 12:41	0	0	0
214	4/25/2011 12:42	0	0	0
215	4/25/2011 12:43	0	0	0
216	4/25/2011 12:44	0	0	0
217	4/25/2011 12:45	0	0	0
218	4/25/2011 12:46	0	0	0
219	4/25/2011 12:47	0	0	0
220	4/25/2011 12:48	0	0	0
221	4/25/2011 12:49	0	0	0
222	4/25/2011 12:50	0	0	0
223	4/25/2011 12:51	0	0	0
224	4/25/2011 12:52	0	0	0
225	4/25/2011 12:53	0	0	0
226	4/25/2011 12:54	0	0	0
227	4/25/2011 12:55	0	0	0
228	4/25/2011 12:56	0	0	0
229	4/25/2011 12:57	0	0	0
230	4/25/2011 12:58	0	0	0
231	4/25/2011 12:59	0	0	0
232	4/25/2011 13:00	0	0	0
233	4/25/2011 13:01	0	0	0
234	4/25/2011 13:02	0	0	0
235	4/25/2011 13:03	0	0	0
236	4/25/2011 13:04	0	0	0
237	4/25/2011 13:05	0	0	0
238	4/25/2011 13:06	0	0	0
239	4/25/2011 13:07	0	0	0
240	4/25/2011 13:08	0	0	0
241	4/25/2011 13:09	0	0	0
242	4/25/2011 13:10	0	0	0
243	4/25/2011 13:11	0	0	0
244	4/25/2011 13:12	0	0	0
245	4/25/2011 13:13	0	0	0
246	4/25/2011 13:14	0	0	0
247	4/25/2011 13:15	0	0	0
248	4/25/2011 13:16	0	0	0
249	4/25/2011 13:17	0	0	0
250	4/25/2011 13:18	0	0	0
251	4/25/2011 13:19	0	0	0
252	4/25/2011 13:20	0	0	0
253	4/25/2011 13:21	0	0	0

254	4/25/2011 13:22	0	0	0
255	4/25/2011 13:23	0	0	0
256	4/25/2011 13:24	0	0	0
257	4/25/2011 13:25	0	0	0
258	4/25/2011 13:26	0	0	0
259	4/25/2011 13:27	0	0	0
260	4/25/2011 13:28	0	0	0
261	4/25/2011 13:29	0	0	0
262	4/25/2011 13:30	0	0	0
263	4/25/2011 13:31	0	0	0
264	4/25/2011 13:32	0	0	0
265	4/25/2011 13:33	0	0	0
266	4/25/2011 13:34	0	0	0
267	4/25/2011 13:35	0	0	0
268	4/25/2011 13:36	0	0	0
269	4/25/2011 13:37	0	0	0
270	4/25/2011 13:38	0	0	0
271	4/25/2011 13:39	0	0	0
272	4/25/2011 13:40	0	0	0
273	4/25/2011 13:41	0	0	0
274	4/25/2011 13:42	0	0	0
275	4/25/2011 13:43	0	0	0
276	4/25/2011 13:44	0	0	0
277	4/25/2011 13:45	0	0	0
278	4/25/2011 13:46	0	0	0
279	4/25/2011 13:47	0	0	0
280	4/25/2011 13:48	0	0	0
281	4/25/2011 13:49	0	0	0
282	4/25/2011 13:50	0	0	0
283	4/25/2011 13:51	0	0	0
284	4/25/2011 13:52	0	0	0
285	4/25/2011 13:53	0	0	0
286	4/25/2011 13:54	0	0	0
287	4/25/2011 13:55	0	0	0
288	4/25/2011 13:56	0	0	0
289	4/25/2011 13:57	0	0	0
290	4/25/2011 13:58	0	0	0
291	4/25/2011 13:59	0	0	0
292	4/25/2011 14:00	0	0	0
293	4/25/2011 14:01	0	0	0
294	4/25/2011 14:02	0	0	0
295	4/25/2011 14:03	0	0	0
296	4/25/2011 14:04	0	0	0
297	4/25/2011 14:05	0	0	0
298	4/25/2011 14:06	0	0	0
299	4/25/2011 14:07	0	0	0
300	4/25/2011 14:08	0	0	0
301	4/25/2011 14:09	0	0	0
302	4/25/2011 14:10	0	0	0
303	4/25/2011 14:11	0	0	0
304	4/25/2011 14:12	0	0	0
305	4/25/2011 14:13	0	0	0
306	4/25/2011 14:14	0	0	0
307	4/25/2011 14:15	0	0	0
308	4/25/2011 14:16	0	0	0
309	4/25/2011 14:17	0	0	0
310	4/25/2011 14:18	0	0	0
311	4/25/2011 14:19	0	0	0
312	4/25/2011 14:20	0	0	0
313	4/25/2011 14:21	0	0	0
314	4/25/2011 14:22	0	0	0
315	4/25/2011 14:23	0	0	0
316	4/25/2011 14:24	0	0	0
317	4/25/2011 14:25	0	0	0
318	4/25/2011 14:26	0	0	0
319	4/25/2011 14:27	0	0	0
320	4/25/2011 14:28	0	0	0
321	4/25/2011 14:29	0	0	0
322	4/25/2011 14:30	0	0	0

323	4/25/2011 14:31	0	0	0
324	4/25/2011 14:32	0	0	0
325	4/25/2011 14:33	0	0	0
326	4/25/2011 14:34	0	0	0
327	4/25/2011 14:35	0	0	0
328	4/25/2011 14:36	0	0	0
329	4/25/2011 14:37	0	0	0
330	4/25/2011 14:38	0	0	0
331	4/25/2011 14:39	0	0	0
332	4/25/2011 14:40	0	0	0
333	4/25/2011 14:41	0	0	0
334	4/25/2011 14:42	0	0	0
335	4/25/2011 14:43	0	0	0
336	4/25/2011 14:44	0	0	0
337	4/25/2011 14:45	0	0	0
338	4/25/2011 14:46	0	0	0
339	4/25/2011 14:47	0	0	0
340	4/25/2011 14:48	0	0	0
341	4/25/2011 14:49	0	0	0
342	4/25/2011 14:50	0	0	0

=========Event #17 information (begin)=========
==========
[Event #17 name:]--[Event #17]2011-04-25 04:20<-->2011-04-25 12:07
[Event start time:]--2011-04-25 04:20:42[Event end time:]--2011-04-25 12:07:42
==========Event #17 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367
Data Points: 467 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID(ppb)
Measurement Gas : Isobutene
Calibration Time : 2011-04-25 04:03:00
Drift Value : ---
Low Alarm Levels : 50000
High Alarm Levels : 100000
Span Value : 100000
Correction Factor : 1.00
Over Alarm Levels : 15000000
==========Event #17 data informations==========

LINE#	Date/Time	PID(ppb)	PID(ppm)
1	4/25/2011 4:21	259	0.3
2	4/25/2011 4:22	169	0.2
3	4/25/2011 4:23	168	0.2
4	4/25/2011 4:24	323	0.3
5	4/25/2011 4:25	439	0.4
6	4/25/2011 4:26	378	0.4
7	4/25/2011 4:27	323	0.3
8	4/25/2011 4:28	572	0.6
9	4/25/2011 4:29	458	0.5
10	4/25/2011 4:30	957	1.0
11	4/25/2011 4:31	645	0.6
12	4/25/2011 4:32	1041	1.0
13	4/25/2011 4:33	713	0.7
14	4/25/2011 4:34	485	0.5
15	4/25/2011 4:35	389	0.4
16	4/25/2011 4:36	240	0.2
17	4/25/2011 4:37	155	0.2
18	4/25/2011 4:38	385	0.4
19	4/25/2011 4:39	383	0.4
20	4/25/2011 4:40	472	0.5
21	4/25/2011 4:41	392	0.4
22	4/25/2011 4:42	428	0.4
23	4/25/2011 4:43	417	0.4
24	4/25/2011 4:44	288	0.3
25	4/25/2011 4:45	127	0.1
26	4/25/2011 4:46	161	0.2
27	4/25/2011 4:47	244	0.2
28	4/25/2011 4:48	463	0.5
29	4/25/2011 4:49	340	0.3
30	4/25/2011 4:50	329	0.3
31	4/25/2011 4:51	531	0.5
32	4/25/2011 4:52	783	0.8
33	4/25/2011 4:53	802	0.8
34	4/25/2011 4:54	497	0.5
35	4/25/2011 4:55	330	0.3
36	4/25/2011 4:56	399	0.4
37	4/25/2011 4:57	701	0.7
38	4/25/2011 4:58	696	0.7
39	4/25/2011 4:59	536	0.5
40	4/25/2011 5:00	463	0.5
41	4/25/2011 5:01	230	0.2
42	4/25/2011 5:02	190	0.2
43	4/25/2011 5:03	118	0.1
44	4/25/2011 5:04	275	0.3
45	4/25/2011 5:05	446	0.4
46	4/25/2011 5:06	550	0.6
47	4/25/2011 5:07	821	0.8
48	4/25/2011 5:08	769	0.8

49	4/25/2011 5:09	385	0.4
50	4/25/2011 5:10	260	0.3
51	4/25/2011 5:11	156	0.2
52	4/25/2011 5:12	294	0.3
53	4/25/2011 5:13	172	0.2
54	4/25/2011 5:14	85	0.1
55	4/25/2011 5:15	66	0.1
56	4/25/2011 5:16	28	0.0
57	4/25/2011 5:17	153	0.2
58	4/25/2011 5:18	238	0.2
59	4/25/2011 5:19	55	0.1
60	4/25/2011 5:20	61	0.1
61	4/25/2011 5:21	124	0.1
62	4/25/2011 5:22	201	0.2
63	4/25/2011 5:23	185	0.2
64	4/25/2011 5:24	121	0.1
65	4/25/2011 5:25	194	0.2
66	4/25/2011 5:26	82	0.1
67	4/25/2011 5:27	13	0.0
68	4/25/2011 5:28	51	0.1
69	4/25/2011 5:29	26	0.0
70	4/25/2011 5:30	138	0.1
71	4/25/2011 5:31	73	0.1
72	4/25/2011 5:32	14	0.0
73	4/25/2011 5:33	3	0.0
74	4/25/2011 5:34	1	0.0
75	4/25/2011 5:35	0	0.0
76	4/25/2011 5:36	0	0.0
77	4/25/2011 5:37	104	0.1
78	4/25/2011 5:38	18	0.0
79	4/25/2011 5:39	41	0.0
80	4/25/2011 5:40	225	0.2
81	4/25/2011 5:41	0	0.0
82	4/25/2011 5:42	0	0.0
83	4/25/2011 5:43	0	0.0
84	4/25/2011 5:44	0	0.0
85	4/25/2011 5:45	0	0.0
86	4/25/2011 5:46	110	0.1
87	4/25/2011 5:47	0	0.0
88	4/25/2011 5:48	0	0.0
89	4/25/2011 5:49	3	0.0
90	4/25/2011 5:50	3	0.0
91	4/25/2011 5:51	37	0.0
92	4/25/2011 5:52	24	0.0
93	4/25/2011 5:53	0	0.0
94	4/25/2011 5:54	1	0.0
95	4/25/2011 5:55	0	0.0
96	4/25/2011 5:56	36	0.0
97	4/25/2011 5:57	0	0.0
98	4/25/2011 5:58	10	0.0
99	4/25/2011 5:59	0	0.0
100	4/25/2011 6:00	0	0.0
101	4/25/2011 6:01	0	0.0
102	4/25/2011 6:02	0	0.0
103	4/25/2011 6:03	0	0.0
104	4/25/2011 6:04	1	0.0
105	4/25/2011 6:05	0	0.0
106	4/25/2011 6:06	0	0.0
107	4/25/2011 6:07	0	0.0
108	4/25/2011 6:08	0	0.0
109	4/25/2011 6:09	0	0.0
110	4/25/2011 6:10	0	0.0
111	4/25/2011 6:11	0	0.0
112	4/25/2011 6:12	0	0.0
113	4/25/2011 6:13	0	0.0
114	4/25/2011 6:14	0	0.0
115	4/25/2011 6:15	0	0.0
116	4/25/2011 6:16	0	0.0
117	4/25/2011 6:17	0	0.0

118	4/25/2011 6:18	0	0.0
119	4/25/2011 6:19	0	0.0
120	4/25/2011 6:20	0	0.0
121	4/25/2011 6:21	0	0.0
122	4/25/2011 6:22	0	0.0
123	4/25/2011 6:23	0	0.0
124	4/25/2011 6:24	0	0.0
125	4/25/2011 6:25	31	0.0
126	4/25/2011 6:26	1	0.0
127	4/25/2011 6:27	0	0.0
128	4/25/2011 6:28	0	0.0
129	4/25/2011 6:29	0	0.0
130	4/25/2011 6:30	0	0.0
131	4/25/2011 6:31	0	0.0
132	4/25/2011 6:32	0	0.0
133	4/25/2011 6:33	0	0.0
134	4/25/2011 6:34	0	0.0
135	4/25/2011 6:35	0	0.0
136	4/25/2011 6:36	0	0.0
137	4/25/2011 6:37	0	0.0
138	4/25/2011 6:38	0	0.0
139	4/25/2011 6:39	0	0.0
140	4/25/2011 6:40	0	0.0
141	4/25/2011 6:41	0	0.0
142	4/25/2011 6:42	0	0.0
143	4/25/2011 6:43	17	0.0
144	4/25/2011 6:44	0	0.0
145	4/25/2011 6:45	0	0.0
146	4/25/2011 6:46	0	0.0
147	4/25/2011 6:47	0	0.0
148	4/25/2011 6:48	0	0.0
149	4/25/2011 6:49	0	0.0
150	4/25/2011 6:50	0	0.0
151	4/25/2011 6:51	0	0.0
152	4/25/2011 6:52	0	0.0
153	4/25/2011 6:53	0	0.0
154	4/25/2011 6:54	0	0.0
155	4/25/2011 6:55	0	0.0
156	4/25/2011 6:56	0	0.0
157	4/25/2011 6:57	0	0.0
158	4/25/2011 6:58	55	0.1
159	4/25/2011 6:59	3	0.0
160	4/25/2011 7:00	87	0.1
161	4/25/2011 7:01	0	0.0
162	4/25/2011 7:02	0	0.0
163	4/25/2011 7:03	24	0.0
164	4/25/2011 7:04	36	0.0
165	4/25/2011 7:05	166	0.2
166	4/25/2011 7:06	148	0.1
167	4/25/2011 7:07	25	0.0
168	4/25/2011 7:08	0	0.0
169	4/25/2011 7:09	0	0.0
170	4/25/2011 7:10	70	0.1
171	4/25/2011 7:11	0	0.0
172	4/25/2011 7:12	81	0.1
173	4/25/2011 7:13	28	0.0
174	4/25/2011 7:14	0	0.0
175	4/25/2011 7:15	0	0.0
176	4/25/2011 7:16	0	0.0
177	4/25/2011 7:17	0	0.0
178	4/25/2011 7:18	0	0.0
179	4/25/2011 7:19	0	0.0
180	4/25/2011 7:20	0	0.0
181	4/25/2011 7:21	0	0.0
182	4/25/2011 7:22	0	0.0
183	4/25/2011 7:23	0	0.0
184	4/25/2011 7:24	2	0.0
185	4/25/2011 7:25	0	0.0
186	4/25/2011 7:26	6	0.0

187	4/25/2011 7:27	0	0.0
188	4/25/2011 7:28	0	0.0
189	4/25/2011 7:29	0	0.0
190	4/25/2011 7:30	0	0.0
191	4/25/2011 7:31	0	0.0
192	4/25/2011 7:32	0	0.0
193	4/25/2011 7:33	0	0.0
194	4/25/2011 7:34	0	0.0
195	4/25/2011 7:35	0	0.0
196	4/25/2011 7:36	0	0.0
197	4/25/2011 7:37	57	0.1
198	4/25/2011 7:38	113	0.1
199	4/25/2011 7:39	1	0.0
200	4/25/2011 7:40	0	0.0
201	4/25/2011 7:41	0	0.0
202	4/25/2011 7:42	113	0.1
203	4/25/2011 7:43	0	0.0
204	4/25/2011 7:44	0	0.0
205	4/25/2011 7:45	0	0.0
206	4/25/2011 7:46	0	0.0
207	4/25/2011 7:47	0	0.0
208	4/25/2011 7:48	0	0.0
209	4/25/2011 7:49	0	0.0
210	4/25/2011 7:50	0	0.0
211	4/25/2011 7:51	0	0.0
212	4/25/2011 7:52	0	0.0
213	4/25/2011 7:53	0	0.0
214	4/25/2011 7:54	11	0.0
215	4/25/2011 7:55	20	0.0
216	4/25/2011 7:56	0	0.0
217	4/25/2011 7:57	0	0.0
218	4/25/2011 7:58	0	0.0
219	4/25/2011 7:59	0	0.0
220	4/25/2011 8:00	0	0.0
221	4/25/2011 8:01	0	0.0
222	4/25/2011 8:02	0	0.0
223	4/25/2011 8:03	0	0.0
224	4/25/2011 8:04	0	0.0
225	4/25/2011 8:05	0	0.0
226	4/25/2011 8:06	10	0.0
227	4/25/2011 8:07	0	0.0
228	4/25/2011 8:08	0	0.0
229	4/25/2011 8:09	12	0.0
230	4/25/2011 8:10	7	0.0
231	4/25/2011 8:11	89	0.1
232	4/25/2011 8:12	48	0.0
233	4/25/2011 8:13	290	0.3
234	4/25/2011 8:14	38	0.0
235	4/25/2011 8:15	40	0.0
236	4/25/2011 8:16	87	0.1
237	4/25/2011 8:17	0	0.0
238	4/25/2011 8:18	0	0.0
239	4/25/2011 8:19	0	0.0
240	4/25/2011 8:20	0	0.0
241	4/25/2011 8:21	0	0.0
242	4/25/2011 8:22	0	0.0
243	4/25/2011 8:23	0	0.0
244	4/25/2011 8:24	1	0.0
245	4/25/2011 8:25	65	0.1
246	4/25/2011 8:26	84	0.1
247	4/25/2011 8:27	16	0.0
248	4/25/2011 8:28	0	0.0
249	4/25/2011 8:29	0	0.0
250	4/25/2011 8:30	0	0.0
251	4/25/2011 8:31	0	0.0
252	4/25/2011 8:32	0	0.0
253	4/25/2011 8:33	30	0.0
254	4/25/2011 8:34	1	0.0
255	4/25/2011 8:35	293	0.3

256	4/25/2011 8:36	0	0.0
257	4/25/2011 8:37	2	0.0
258	4/25/2011 8:38	1	0.0
259	4/25/2011 8:39	1	0.0
260	4/25/2011 8:40	47	0.0
261	4/25/2011 8:41	5	0.0
262	4/25/2011 8:42	0	0.0
263	4/25/2011 8:43	0	0.0
264	4/25/2011 8:44	1	0.0
265	4/25/2011 8:45	1	0.0
266	4/25/2011 8:46	65	0.1
267	4/25/2011 8:47	220	0.2
268	4/25/2011 8:48	424	0.4
269	4/25/2011 8:49	316	0.3
270	4/25/2011 8:50	417	0.4
271	4/25/2011 8:51	942	0.9
272	4/25/2011 8:52	359	0.4
273	4/25/2011 8:53	251	0.3
274	4/25/2011 8:54	156	0.2
275	4/25/2011 8:55	176	0.2
276	4/25/2011 8:56	297	0.3
277	4/25/2011 8:57	520	0.5
278	4/25/2011 8:58	337	0.3
279	4/25/2011 8:59	343	0.3
280	4/25/2011 9:00	256	0.3
281	4/25/2011 9:01	281	0.3
282	4/25/2011 9:02	170	0.2
283	4/25/2011 9:03	130	0.1
284	4/25/2011 9:04	113	0.1
285	4/25/2011 9:05	102	0.1
286	4/25/2011 9:06	171	0.2
287	4/25/2011 9:07	149	0.1
288	4/25/2011 9:08	237	0.2
289	4/25/2011 9:09	366	0.4
290	4/25/2011 9:10	347	0.3
291	4/25/2011 9:11	379	0.4
292	4/25/2011 9:12	258	0.3
293	4/25/2011 9:13	265	0.3
294	4/25/2011 9:14	399	0.4
295	4/25/2011 9:15	303	0.3
296	4/25/2011 9:16	223	0.2
297	4/25/2011 9:17	342	0.3
298	4/25/2011 9:18	323	0.3
299	4/25/2011 9:19	355	0.4
300	4/25/2011 9:20	345	0.3
301	4/25/2011 9:21	302	0.3
302	4/25/2011 9:22	404	0.4
303	4/25/2011 9:23	565	0.6
304	4/25/2011 9:24	646	0.6
305	4/25/2011 9:25	487	0.5
306	4/25/2011 9:26	369	0.4
307	4/25/2011 9:27	386	0.4
308	4/25/2011 9:28	381	0.4
309	4/25/2011 9:29	472	0.5
310	4/25/2011 9:30	495	0.5
311	4/25/2011 9:31	504	0.5
312	4/25/2011 9:32	600	0.6
313	4/25/2011 9:33	512	0.5
314	4/25/2011 9:34	530	0.5
315	4/25/2011 9:35	400	0.4
316	4/25/2011 9:36	470	0.5
317	4/25/2011 9:37	553	0.6
318	4/25/2011 9:38	404	0.4
319	4/25/2011 9:39	383	0.4
320	4/25/2011 9:40	376	0.4
321	4/25/2011 9:41	466	0.5
322	4/25/2011 9:42	645	0.6
323	4/25/2011 9:43	556	0.6
324	4/25/2011 9:44	498	0.5

325	4/25/2011 9:45	534	0.5
326	4/25/2011 9:46	367	0.4
327	4/25/2011 9:47	431	0.4
328	4/25/2011 9:48	379	0.4
329	4/25/2011 9:49	268	0.3
330	4/25/2011 9:50	398	0.4
331	4/25/2011 9:51	430	0.4
332	4/25/2011 9:52	485	0.5
333	4/25/2011 9:53	412	0.4
334	4/25/2011 9:54	959	1.0
335	4/25/2011 9:55	687	0.7
336	4/25/2011 9:56	678	0.7
337	4/25/2011 9:57	623	0.6
338	4/25/2011 9:58	759	0.8
339	4/25/2011 9:59	1577	1.6
340	4/25/2011 10:00	945	0.9
341	4/25/2011 10:01	857	0.9
342	4/25/2011 10:02	1035	1.0
343	4/25/2011 10:03	702	0.7
344	4/25/2011 10:04	591	0.6
345	4/25/2011 10:05	730	0.7
346	4/25/2011 10:06	720	0.7
347	4/25/2011 10:07	1654	1.7
348	4/25/2011 10:08	1589	1.6
349	4/25/2011 10:09	758	0.8
350	4/25/2011 10:10	2551	2.6
351	4/25/2011 10:11	1542	1.5
352	4/25/2011 10:12	904	0.9
353	4/25/2011 10:13	852	0.9
354	4/25/2011 10:14	855	0.9
355	4/25/2011 10:15	1262	1.3
356	4/25/2011 10:16	1048	1.0
357	4/25/2011 10:17	1906	1.9
358	4/25/2011 10:18	670	0.7
359	4/25/2011 10:19	544	0.5
360	4/25/2011 10:20	436	0.4
361	4/25/2011 10:21	422	0.4
362	4/25/2011 10:22	290	0.3
363	4/25/2011 10:23	466	0.5
364	4/25/2011 10:24	521	0.5
365	4/25/2011 10:25	391	0.4
366	4/25/2011 10:26	462	0.5
367	4/25/2011 10:27	1066	1.1
368	4/25/2011 10:28	1214	1.2
369	4/25/2011 10:29	2020	2.0
370	4/25/2011 10:30	1017	1.0
371	4/25/2011 10:31	570	0.6
372	4/25/2011 10:32	1193	1.2
373	4/25/2011 10:33	1106	1.1
374	4/25/2011 10:34	1578	1.6
375	4/25/2011 10:35	1134	1.1
376	4/25/2011 10:36	658	0.7
377	4/25/2011 10:37	958	1.0
378	4/25/2011 10:38	1345	1.3
379	4/25/2011 10:39	554	0.6
380	4/25/2011 10:40	1254	1.3
381	4/25/2011 10:41	1148	1.1
382	4/25/2011 10:42	656	0.7
383	4/25/2011 10:43	500	0.5
384	4/25/2011 10:44	312	0.3
385	4/25/2011 10:45	342	0.3
386	4/25/2011 10:46	221	0.2
387	4/25/2011 10:47	291	0.3
388	4/25/2011 10:48	496	0.5
389	4/25/2011 10:49	265	0.3
390	4/25/2011 10:50	89	0.1
391	4/25/2011 10:51	326	0.3
392	4/25/2011 10:52	43	0.0
393	4/25/2011 10:53	60	0.1

394	4/25/2011 10:54	5	0.0
395	4/25/2011 10:55	0	0.0
396	4/25/2011 10:56	0	0.0
397	4/25/2011 10:57	10	0.0
398	4/25/2011 10:58	0	0.0
399	4/25/2011 10:59	17	0.0
400	4/25/2011 11:00	0	0.0
401	4/25/2011 11:01	9	0.0
402	4/25/2011 11:02	0	0.0
403	4/25/2011 11:03	0	0.0
404	4/25/2011 11:04	0	0.0
405	4/25/2011 11:05	0	0.0
406	4/25/2011 11:06	0	0.0
407	4/25/2011 11:07	0	0.0
408	4/25/2011 11:08	0	0.0
409	4/25/2011 11:09	0	0.0
410	4/25/2011 11:10	0	0.0
411	4/25/2011 11:11	23	0.0
412	4/25/2011 11:12	2	0.0
413	4/25/2011 11:13	8	0.0
414	4/25/2011 11:14	0	0.0
415	4/25/2011 11:15	0	0.0
416	4/25/2011 11:16	0	0.0
417	4/25/2011 11:17	0	0.0
418	4/25/2011 11:18	13	0.0
419	4/25/2011 11:19	2	0.0
420	4/25/2011 11:20	23	0.0
421	4/25/2011 11:21	8	0.0
422	4/25/2011 11:22	0	0.0
423	4/25/2011 11:23	0	0.0
424	4/25/2011 11:24	40	0.0
425	4/25/2011 11:25	106	0.1
426	4/25/2011 11:26	11	0.0
427	4/25/2011 11:27	0	0.0
428	4/25/2011 11:28	0	0.0
429	4/25/2011 11:29	0	0.0
430	4/25/2011 11:30	0	0.0
431	4/25/2011 11:31	24	0.0
432	4/25/2011 11:32	0	0.0
433	4/25/2011 11:33	0	0.0
434	4/25/2011 11:34	0	0.0
435	4/25/2011 11:35	24	0.0
436	4/25/2011 11:36	27	0.0
437	4/25/2011 11:37	12	0.0
438	4/25/2011 11:38	0	0.0
439	4/25/2011 11:39	0	0.0
440	4/25/2011 11:40	74	0.1
441	4/25/2011 11:41	0	0.0
442	4/25/2011 11:42	1	0.0
443	4/25/2011 11:43	0	0.0
444	4/25/2011 11:44	152	0.2
445	4/25/2011 11:45	2	0.0
446	4/25/2011 11:46	1	0.0
447	4/25/2011 11:47	0	0.0
448	4/25/2011 11:48	5	0.0
449	4/25/2011 11:49	301	0.3
450	4/25/2011 11:50	263	0.3
451	4/25/2011 11:51	258	0.3
452	4/25/2011 11:52	123	0.1
453	4/25/2011 11:53	7	0.0
454	4/25/2011 11:54	0	0.0
455	4/25/2011 11:55	0	0.0
456	4/25/2011 11:56	2	0.0
457	4/25/2011 11:57	0	0.0
458	4/25/2011 11:58	0	0.0
459	4/25/2011 11:59	0	0.0
460	4/25/2011 12:00	10	0.0
461	4/25/2011 12:01	18	0.0
462	4/25/2011 12:02	67	0.1

463	4/25/2011 12:03	100	0.1
464	4/25/2011 12:04	7	0.0
465	4/25/2011 12:05	0	0.0
466	4/25/2011 12:06	23	0.0
467	4/25/2011 12:07	0	0.0

==========Event #17 information (end)==========

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530110314
Firmware Version	2.7
Calibration Date	1/17/2011
Test Name	MANUAL_001
Test Start Time	8:21:19 AM
Test Start Date	4/25/2011
Test Length [D:H:M]	0:01:00
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.161
Mass Minimum [mg/m3]	0.138
Mass Maximum [mg/m3]	0.203
Mass TWA [mg/m3]	0.02
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	60

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.182		
120	0.183		
180	0.181		
240	0.177		
300	0.172		
360	0.186		
420	0.161		
480	0.161		
540	0.158		
600	0.155		
660	0.166		
720	0.165		
780	0.175		
840	0.191		
900	0.203		
960	0.2		
1020	0.186		
1080	0.167		
1140	0.167		
1200	0.163		
1260	0.163		
1320	0.156		
1380	0.161		
1440	0.154		
1500	0.152		
1560	0.158		
1620	0.158		
1680	0.179		
1740	0.18		
1800	0.203		
1860	0.176		
1920	0.163		
1980	0.152		
2040	0.155		
2100	0.159		
2160	0.152		
2220	0.154		
2280	0.148		
2340	0.144		
2400	0.144		
2460	0.14		
2520	0.154		
2580	0.151		
2640	0.159		
2700	0.157		
2760	0.145		
2820	0.144		
2880	0.145		
2940	0.143		

3000	0.144
3060	0.143
3120	0.142
3180	0.138
3240	0.14
3300	0.145
3360	0.143
3420	0.146
3480	0.144
3540	0.149
3600	0.155

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530110314
Firmware Version	2.7
Calibration Date	1/17/2011
Test Name	MANUAL_002
Test Start Time	9:44:07 AM
Test Start Date	4/25/2011
Test Length [D:H:M]	0:01:00
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.158
Mass Minimum [mg/m3]	0.138
Mass Maximum [mg/m3]	0.177
Mass TWA [mg/m3]	0.02
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	60

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.153		
120	0.158		
180	0.164		
240	0.165		
300	0.159		
360	0.158		
420	0.177		
480	0.159		
540	0.164		
600	0.167		
660	0.159		
720	0.156		
780	0.157		
840	0.154		
900	0.146		
960	0.148		
1020	0.151		
1080	0.153		
1140	0.157		
1200	0.16		
1260	0.168		
1320	0.165		
1380	0.168		
1440	0.174		
1500	0.166		
1560	0.168		
1620	0.167		
1680	0.162		
1740	0.168		
1800	0.16		
1860	0.162		
1920	0.17		
1980	0.162		
2040	0.17		
2100	0.168		
2160	0.162		
2220	0.165		
2280	0.165		
2340	0.164		
2400	0.159		
2460	0.155		
2520	0.157		
2580	0.151		
2640	0.16		
2700	0.166		
2760	0.152		
2820	0.156		
2880	0.149		
2940	0.147		

3000	0.146
3060	0.146
3120	0.147
3180	0.143
3240	0.138
3300	0.14
3360	0.139
3420	0.143
3480	0.155
3540	0.144
3600	0.157

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530110314
Firmware Version	2.7
Calibration Date	1/17/2011
Test Name	MANUAL_003
Test Start Time	11:15:07 AM
Test Start Date	4/25/2011
Test Length [D:H:M]	0:01:00
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.106
Mass Minimum [mg/m3]	0.091
Mass Maximum [mg/m3]	0.175
Mass TWA [mg/m3]	0.013
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	60

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.106		
120	0.118		
180	0.114		
240	0.109		
300	0.111		
360	0.11		
420	0.114		
480	0.119		
540	0.121		
600	0.118		
660	0.116		
720	0.119		
780	0.12		
840	0.113		
900	0.121		
960	0.108		
1020	0.109		
1080	0.108		
1140	0.106		
1200	0.103		
1260	0.109		
1320	0.104		
1380	0.12		
1440	0.114		
1500	0.108		
1560	0.105		
1620	0.104		
1680	0.103		
1740	0.102		
1800	0.109		
1860	0.1		
1920	0.098		
1980	0.096		
2040	0.175		
2100	0.132		
2160	0.096		
2220	0.093		
2280	0.094		
2340	0.096		
2400	0.102		
2460	0.101		
2520	0.099		
2580	0.099		
2640	0.098		
2700	0.101		
2760	0.098		
2820	0.095		
2880	0.095		
2940	0.094		

3000	0.092
3060	0.093
3120	0.091
3180	0.093
3240	0.096
3300	0.098
3360	0.096
3420	0.095
3480	0.093
3540	0.094
3600	0.094

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530110314
Firmware Version	2.7
Calibration Date	1/17/2011
Test Name	MANUAL_004
Test Start Time	12:15:19 PM
Test Start Date	4/25/2011
Test Length [D:H:M]	0:01:00
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.119
Mass Minimum [mg/m3]	0.09
Mass Maximum [mg/m3]	0.203
Mass TWA [mg/m3]	0.015
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	60

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.102		
120	0.095		
180	0.093		
240	0.09		
300	0.091		
360	0.098		
420	0.099		
480	0.094		
540	0.097		
600	0.094		
660	0.091		
720	0.091		
780	0.095		
840	0.092		
900	0.096		
960	0.135		
1020	0.097		
1080	0.095		
1140	0.101		
1200	0.107		
1260	0.1		
1320	0.098		
1380	0.097		
1440	0.095		
1500	0.094		
1560	0.097		
1620	0.101		
1680	0.1		
1740	0.119		
1800	0.1		
1860	0.105		
1920	0.107		
1980	0.118		
2040	0.123		
2100	0.131		
2160	0.123		
2220	0.126		
2280	0.135		
2340	0.132		
2400	0.141		
2460	0.14		
2520	0.14		
2580	0.148		
2640	0.203		
2700	0.175		
2760	0.138		
2820	0.134		
2880	0.135		
2940	0.139		

3000	0.141
3060	0.14
3120	0.141
3180	0.143
3240	0.14
3300	0.134
3360	0.139
3420	0.14
3480	0.14
3540	0.146
3600	0.165

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530110314
Firmware Version	2.7
Calibration Date	1/17/2011
Test Name	MANUAL_005
Test Start Time	1:35:34 PM
Test Start Date	4/25/2011
Test Length [D:H:M]	0:01:00
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.135
Mass Minimum [mg/m3]	0.095
Mass Maximum [mg/m3]	0.218
Mass TWA [mg/m3]	0.017
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	60

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.218		
120	0.141		
180	0.148		
240	0.151		
300	0.158		
360	0.146		
420	0.144		
480	0.139		
540	0.14		
600	0.142		
660	0.16		
720	0.138		
780	0.139		
840	0.143		
900	0.141		
960	0.139		
1020	0.141		
1080	0.139		
1140	0.138		
1200	0.139		
1260	0.14		
1320	0.136		
1380	0.132		
1440	0.129		
1500	0.133		
1560	0.133		
1620	0.134		
1680	0.13		
1740	0.134		
1800	0.139		
1860	0.142		
1920	0.148		
1980	0.143		
2040	0.14		
2100	0.141		
2160	0.159		
2220	0.147		
2280	0.139		
2340	0.135		
2400	0.135		
2460	0.137		
2520	0.133		
2580	0.133		
2640	0.131		
2700	0.116		
2760	0.12		
2820	0.116		
2880	0.114		
2940	0.115		

3000	0.116
3060	0.116
3120	0.113
3180	0.118
3240	0.119
3300	0.128
3360	0.123
3420	0.122
3480	0.116
3540	0.095
3600	0.098

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530110314
Firmware Version	2.7
Calibration Date	1/17/2011
Test Name	MANUAL_006
Test Start Time	3:00:07 PM
Test Start Date	4/25/2011
Test Length [D:H:M]	0:00:51
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.073
Mass Minimum [mg/m3]	0.069
Mass Maximum [mg/m3]	0.081
Mass TWA [mg/m3]	0.008
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	51

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.081		
120	0.077		
180	0.076		
240	0.076		
300	0.076		
360	0.075		
420	0.076		
480	0.075		
540	0.075		
600	0.075		
660	0.074		
720	0.072		
780	0.075		
840	0.072		
900	0.075		
960	0.077		
1020	0.07		
1080	0.071		
1140	0.072		
1200	0.071		
1260	0.072		
1320	0.071		
1380	0.074		
1440	0.074		
1500	0.074		
1560	0.074		
1620	0.072		
1680	0.071		
1740	0.072		
1800	0.073		
1860	0.07		
1920	0.071		
1980	0.07		
2040	0.07		
2100	0.071		
2160	0.073		
2220	0.071		
2280	0.069		
2340	0.069		
2400	0.07		
2460	0.071		
2520	0.071		
2580	0.074		
2640	0.074		
2700	0.071		
2760	0.071		
2820	0.071		
2880	0.071		
2940	0.072		

3000	0.07
3060	0.072

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530103310
Firmware Version	2.6
Calibration Date	8/12/2010
Test Name	MANUAL_001
Test Start Time	8:18:49 AM
Test Start Date	4/25/2011
Test Length [D:H:M]	0:07:34
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.107
Mass Minimum [mg/m3]	0.052
Mass Maximum [mg/m3]	0.204
Mass TWA [mg/m3]	0.102
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	454

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.16		
120	0.159		
180	0.162		
240	0.162		
300	0.157		
360	0.154		
420	0.153		
480	0.149		
540	0.148		
600	0.141		
660	0.138		
720	0.139		
780	0.146		
840	0.149		
900	0.149		
960	0.148		
1020	0.153		
1080	0.172		
1140	0.186		
1200	0.153		
1260	0.147		
1320	0.141		
1380	0.141		
1440	0.145		
1500	0.142		
1560	0.145		
1620	0.141		
1680	0.142		
1740	0.144		
1800	0.147		
1860	0.149		
1920	0.145		
1980	0.166		
2040	0.189		
2100	0.204		
2160	0.203		
2220	0.139		
2280	0.143		
2340	0.142		
2400	0.151		
2460	0.14		
2520	0.123		
2580	0.122		
2640	0.132		
2700	0.125		
2760	0.124		
2820	0.13		
2880	0.133		
2940	0.13		

3000	0.136
3060	0.128
3120	0.134
3180	0.122
3240	0.129
3300	0.127
3360	0.125
3420	0.127
3480	0.128
3540	0.129
3600	0.126
3660	0.127
3720	0.125
3780	0.141
3840	0.137
3900	0.127
3960	0.154
4020	0.149
4080	0.12
4140	0.124
4200	0.124
4260	0.124
4320	0.13
4380	0.134
4440	0.131
4500	0.129
4560	0.138
4620	0.137
4680	0.134
4740	0.143
4800	0.146
4860	0.139
4920	0.14
4980	0.155
5040	0.157
5100	0.139
5160	0.138
5220	0.132
5280	0.136
5340	0.14
5400	0.146
5460	0.137
5520	0.138
5580	0.139
5640	0.137
5700	0.14
5760	0.144
5820	0.138
5880	0.131
5940	0.138
6000	0.131
6060	0.128
6120	0.125
6180	0.125
6240	0.127
6300	0.128
6360	0.13
6420	0.131
6480	0.13
6540	0.128
6600	0.131
6660	0.131
6720	0.136
6780	0.137
6840	0.142
6900	0.139
6960	0.139
7020	0.138
7080	0.143

7140	0.134
7200	0.141
7260	0.165
7320	0.136
7380	0.141
7440	0.141
7500	0.138
7560	0.141
7620	0.142
7680	0.137
7740	0.155
7800	0.146
7860	0.14
7920	0.133
7980	0.126
8040	0.127
8100	0.127
8160	0.128
8220	0.128
8280	0.129
8340	0.13
8400	0.128
8460	0.12
8520	0.116
8580	0.116
8640	0.122
8700	0.124
8760	0.131
8820	0.139
8880	0.118
8940	0.119
9000	0.144
9060	0.142
9120	0.162
9180	0.109
9240	0.114
9300	0.112
9360	0.106
9420	0.117
9480	0.12
9540	0.13
9600	0.115
9660	0.107
9720	0.098
9780	0.107
9840	0.104
9900	0.099
9960	0.099
10020	0.103
10080	0.109
10140	0.104
10200	0.104
10260	0.102
10320	0.1
10380	0.097
10440	0.101
10500	0.097
10560	0.094
10620	0.09
10680	0.092
10740	0.095
10800	0.094
10860	0.091
10920	0.089
10980	0.093
11040	0.094
11100	0.1
11160	0.101
11220	0.104

11280	0.105
11340	0.107
11400	0.098
11460	0.094
11520	0.086
11580	0.099
11640	0.098
11700	0.097
11760	0.091
11820	0.088
11880	0.094
11940	0.09
12000	0.101
12060	0.104
12120	0.096
12180	0.091
12240	0.09
12300	0.09
12360	0.087
12420	0.088
12480	0.087
12540	0.087
12600	0.081
12660	0.086
12720	0.085
12780	0.09
12840	0.081
12900	0.08
12960	0.085
13020	0.088
13080	0.088
13140	0.088
13200	0.086
13260	0.084
13320	0.088
13380	0.1
13440	0.082
13500	0.086
13560	0.081
13620	0.079
13680	0.08
13740	0.078
13800	0.079
13860	0.083
13920	0.084
13980	0.089
14040	0.081
14100	0.079
14160	0.079
14220	0.079
14280	0.08
14340	0.109
14400	0.082
14460	0.076
14520	0.079
14580	0.088
14640	0.087
14700	0.089
14760	0.126
14820	0.109
14880	0.079
14940	0.077
15000	0.077
15060	0.085
15120	0.079
15180	0.082
15240	0.088
15300	0.088
15360	0.145

15420	0.102
15480	0.096
15540	0.081
15600	0.081
15660	0.084
15720	0.08
15780	0.085
15840	0.089
15900	0.085
15960	0.14
16020	0.086
16080	0.087
16140	0.088
16200	0.093
16260	0.099
16320	0.104
16380	0.102
16440	0.1
16500	0.102
16560	0.106
16620	0.107
16680	0.117
16740	0.113
16800	0.135
16860	0.163
16920	0.107
16980	0.112
17040	0.109
17100	0.11
17160	0.108
17220	0.108
17280	0.112
17340	0.111
17400	0.111
17460	0.113
17520	0.11
17580	0.109
17640	0.109
17700	0.113
17760	0.153
17820	0.117
17880	0.114
17940	0.114
18000	0.115
18060	0.109
18120	0.11
18180	0.109
18240	0.105
18300	0.134
18360	0.107
18420	0.108
18480	0.108
18540	0.104
18600	0.107
18660	0.105
18720	0.107
18780	0.118
18840	0.137
18900	0.113
18960	0.114
19020	0.144
19080	0.107
19140	0.11
19200	0.112
19260	0.116
19320	0.125
19380	0.186
19440	0.114
19500	0.113

19560	0.109
19620	0.109
19680	0.112
19740	0.113
19800	0.11
19860	0.109
19920	0.11
19980	0.115
20040	0.116
20100	0.114
20160	0.113
20220	0.111
20280	0.112
20340	0.109
20400	0.11
20460	0.105
20520	0.101
20580	0.104
20640	0.106
20700	0.104
20760	0.103
20820	0.105
20880	0.108
20940	0.113
21000	0.117
21060	0.117
21120	0.113
21180	0.116
21240	0.121
21300	0.125
21360	0.117
21420	0.113
21480	0.109
21540	0.108
21600	0.108
21660	0.107
21720	0.102
21780	0.099
21840	0.097
21900	0.089
21960	0.086
22020	0.088
22080	0.093
22140	0.091
22200	0.092
22260	0.094
22320	0.097
22380	0.1
22440	0.099
22500	0.1
22560	0.09
22620	0.078
22680	0.082
22740	0.074
22800	0.073
22860	0.071
22920	0.072
22980	0.074
23040	0.076
23100	0.07
23160	0.071
23220	0.071
23280	0.071
23340	0.068
23400	0.065
23460	0.067
23520	0.065
23580	0.063
23640	0.065

23700	0.063
23760	0.06
23820	0.064
23880	0.064
23940	0.068
24000	0.062
24060	0.058
24120	0.058
24180	0.058
24240	0.076
24300	0.066
24360	0.07
24420	0.063
24480	0.072
24540	0.061
24600	0.061
24660	0.058
24720	0.056
24780	0.056
24840	0.056
24900	0.057
24960	0.072
25020	0.06
25080	0.055
25140	0.055
25200	0.055
25260	0.055
25320	0.055
25380	0.054
25440	0.053
25500	0.055
25560	0.055
25620	0.067
25680	0.057
25740	0.055
25800	0.062
25860	0.064
25920	0.058
25980	0.053
26040	0.052
26100	0.063
26160	0.066
26220	0.064
26280	0.067
26340	0.056
26400	0.054
26460	0.053
26520	0.054
26580	0.054
26640	0.054
26700	0.056
26760	0.054
26820	0.069
26880	0.061
26940	0.064
27000	0.058
27060	0.057
27120	0.054
27180	0.057
27240	0.055

AECOM

Client: National Grid
Location: Metropolitan
Date: 4/26/11
Field Personnel: J. Ehlen

Project:
Project Number: 60137361
Weather: ~70°F, sunny, light breeze, humid
Ambient Noise: ~75 dB

Community Air Monitoring Plan / Noise Field Log

pg 1 of 2

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
805 *	0.7	0.062	0.0	0.0	0.060	81.7	setting up to drill MW-4D2
824	0.5	0.093	0.1	0.0	0.084	92.7	Drilling MW-4D2
840	0.3	0.068	0.0	0.0	0.072	76.6	"
852	0.4	0.059	0.0	0.0	0.052	83.4	"
905	0.5	0.055	0.1	0.0	0.051	91.3	"
926	0.4	0.050	0.1	0.0	0.045	78.7	" changing batteries in workarea pid
940	0.4	0.048	0.0	0.0	0.040	82.6	"
955	0.4	0.042	0.1	0.0	0.036	81.3	"
1007	0.2	0.040	0.1	0.0	0.052	90.7	"
1023	0.1	0.040	0.1	0.0	0.025	81.8	"
1040	0.2	0.040	0.1	0.0	0.074	73.0	"
1057	0.1	0.043	0.1	0.0	0.039	91.4	"
1114	0.0	0.039	0.1	0.0	0.042	91.9	"
1128	0.1	0.043	0.1	0.0	0.095	83.7	"
1143	0.0	0.038	0.0	0.0	0.074	91.1	"
1156	0.1	0.046	0.1	0.0	0.077	82.5	"
1335	0.0	0.040	0.1	0.0	0.030	83.9	"
1350	0.0	0.040	0.1	0.0	0.054	73.0	"
1407	0.0	0.070	0.1	0.0	0.064	91.9	"
1421	0.0	0.038	0.1	0.0	0.037	90.8	"
1436	0.0	0.069	0.1	0.0	0.063	70.0	refilling water tank
1454	0.0	0.029	0.1	0.0	0.028	79.9	drilling MW 4D2

* Pid reading 0.5 after calibration.

AECOM

Client: National Grid
Location: Metropolitan
Date: 4/26/11
Field Personnel: J. Ehlen

Project:
Project Number: 60137361
Weather: ~80°F, sunny, breezy
Ambient Noise:

Community Air Monitoring Plan / Noise Field Log

pg 2 of 2

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
1516	0.0	0.026	0.1	0.0	0.033	72.7	Drilling MW-4D2
1540	0.0	0.025	0.1	0.0	0.059	77.7	"
1557	0.0	0.021	0.1	0.0	0.025	88.5	"
1611	0.0	0.019	0.1	0.0	0.046	76.3	"
1643	0.0	0.020	0.1	0.0	0.031	73.1	cleaning up around MW-4D2

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 902685
User ID: 00000001 Site ID: 00000017
Data Points: 9 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 04/26/2011 06:08

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	4/26/2011 6:10	0.4		0.4		0.5	
2	4/26/2011 6:11	0.5		0.5		0.6	
3	4/26/2011 6:12	0.6		0.6		0.7	
4	4/26/2011 6:13	0.6		0.6		0.7	
5	4/26/2011 6:14	0.7		0.7		0.8	
6	4/26/2011 6:15	0.8		0.8		0.8	
7	4/26/2011 6:16	0.8		0.8		0.8	
8	4/26/2011 6:17	0.8		0.8		0.9	
9	4/26/2011 6:18	0.9		0.9		1	

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 902685
User ID: 00000001 Site ID: 00000017
Data Points: 578 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 04/26/2011 06:08

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	4/26/2011 6:21	0		0		0.4	
2	4/26/2011 6:22	0		0.1		0.5	
3	4/26/2011 6:23	0.1		0.1		0.1	
4	4/26/2011 6:24	0.1		0.1		0.1	
5	4/26/2011 6:25	0.1		0.1		0.1	
6	4/26/2011 6:26	0.1		0.1		0.2	
7	4/26/2011 6:27	0.1		0.1		0.2	
8	4/26/2011 6:28	0.1		0.1		0.2	
9	4/26/2011 6:29	0.1		0.1		0.2	
10	4/26/2011 6:30	0.1		0.1		0.2	
11	4/26/2011 6:31	0.1		0.1		0.2	
12	4/26/2011 6:32	0.1		0.1		0.2	
13	4/26/2011 6:33	0.1		0.1		0.2	
14	4/26/2011 6:34	0.2		0.2		0.2	
15	4/26/2011 6:35	0.2		0.2		0.2	
16	4/26/2011 6:36	0.2		0.2		0.3	
17	4/26/2011 6:37	0.2		0.2		0.2	
18	4/26/2011 6:38	0.2		0.2		0.3	
19	4/26/2011 6:39	0.2		0.2		0.2	
20	4/26/2011 6:40	0.2		0.2		0.3	
21	4/26/2011 6:41	0.2		0.2		0.3	
22	4/26/2011 6:42	0.2		0.2		0.3	
23	4/26/2011 6:43	0.3		0.3		0.4	
24	4/26/2011 6:44	0.3		0.3		0.4	
25	4/26/2011 6:45	0.4		0.4		0.4	
26	4/26/2011 6:46	0.4		0.4		0.5	
27	4/26/2011 6:47	0.4		0.4		0.5	
28	4/26/2011 6:48	0.4		0.4		0.5	
29	4/26/2011 6:49	0.5		0.5		0.6	
30	4/26/2011 6:50	0.5		0.5		0.5	
31	4/26/2011 6:51	0.4		0.4		0.5	
32	4/26/2011 6:52	0.4		0.4		0.5	
33	4/26/2011 6:53	0.4		0.4		0.5	
34	4/26/2011 6:54	0.4		0.4		0.6	
35	4/26/2011 6:55	0.5		0.5		0.6	
36	4/26/2011 6:56	0.5		0.5		0.6	
37	4/26/2011 6:57	0.5		0.5		0.6	
38	4/26/2011 6:58	0.5		0.5		0.6	
39	4/26/2011 6:59	0.6		0.6		0.6	
40	4/26/2011 7:00	0.6		0.6		0.6	
41	4/26/2011 7:01	0.6		0.6		0.7	
42	4/26/2011 7:02	0.6		0.6		0.7	
43	4/26/2011 7:03	0.6		0.6		0.7	
44	4/26/2011 7:04	0.6		0.6		0.7	
45	4/26/2011 7:05	0.6		0.6		0.7	
46	4/26/2011 7:06	0.6		0.6		0.7	
47	4/26/2011 7:07	0.6		0.6		0.7	
48	4/26/2011 7:08	0.6		0.6		0.7	
49	4/26/2011 7:09	0.5		0.5		0.6	
50	4/26/2011 7:10	0.5		0.5		0.6	
51	4/26/2011 7:11	0.5		0.5		0.6	
52	4/26/2011 7:12	0.5		0.5		0.6	
53	4/26/2011 7:13	0.5		0.5		0.6	
54	4/26/2011 7:14	0.6		0.6		0.6	
55	4/26/2011 7:15	0.5		0.5		0.6	
56	4/26/2011 7:16	0.6		0.6		0.7	
57	4/26/2011 7:17	0.5		0.5		0.6	
58	4/26/2011 7:18	0.5		0.5		0.6	

59	4/26/2011 7:19	0.5	0.5	0.5
60	4/26/2011 7:20	0.4	0.4	0.5
61	4/26/2011 7:21	0.4	0.4	0.5
62	4/26/2011 7:22	0.4	0.4	0.5
63	4/26/2011 7:23	0.4	0.4	0.5
64	4/26/2011 7:24	0.4	0.4	0.4
65	4/26/2011 7:25	0.4	0.4	0.4
66	4/26/2011 7:26	0.4	0.4	0.4
67	4/26/2011 7:27	0.4	0.4	0.4
68	4/26/2011 7:28	0.3	0.3	0.4
69	4/26/2011 7:29	0.3	0.3	0.4
70	4/26/2011 7:30	0.3	0.3	0.4
71	4/26/2011 7:31	0.3	0.3	0.4
72	4/26/2011 7:32	0.3	0.3	0.4
73	4/26/2011 7:33	0.3	0.3	0.4
74	4/26/2011 7:34	0.3	0.3	0.4
75	4/26/2011 7:35	0.3	0.3	0.4
76	4/26/2011 7:36	0.3	0.3	0.4
77	4/26/2011 7:37	0.3	0.3	0.4
78	4/26/2011 7:38	0.3	0.3	0.4
79	4/26/2011 7:39	0.3	0.3	0.4
80	4/26/2011 7:40	0.3	0.3	0.4
81	4/26/2011 7:41	0.3	0.3	0.4
82	4/26/2011 7:42	0.3	0.3	0.4
83	4/26/2011 7:43	0.3	0.3	0.4
84	4/26/2011 7:44	0.3	0.3	0.4
85	4/26/2011 7:45	0.3	0.3	0.4
86	4/26/2011 7:46	0.3	0.3	0.4
87	4/26/2011 7:47	0.4	0.4	0.4
88	4/26/2011 7:48	0.4	0.4	0.5
89	4/26/2011 7:49	0.4	0.4	0.5
90	4/26/2011 7:50	0.4	0.4	0.5
91	4/26/2011 7:51	0.4	0.4	0.5
92	4/26/2011 7:52	0.4	0.4	0.4
93	4/26/2011 7:53	0.4	0.4	0.5
94	4/26/2011 7:54	0.4	0.4	0.5
95	4/26/2011 7:55	0.4	0.4	0.5
96	4/26/2011 7:56	0.4	0.4	0.5
97	4/26/2011 7:57	0.4	0.4	0.4
98	4/26/2011 7:58	0.4	0.4	0.5
99	4/26/2011 7:59	0.4	0.4	0.5
100	4/26/2011 8:00	0.4	0.4	0.5
101	4/26/2011 8:01	0.4	0.4	0.5
102	4/26/2011 8:02	0.4	0.4	0.5
103	4/26/2011 8:03	0.4	0.4	0.5
104	4/26/2011 8:04	0.4	0.4	0.5
105	4/26/2011 8:05	0.4	0.4	0.5
106	4/26/2011 8:06	0.4	0.4	0.5
107	4/26/2011 8:07	0.4	0.4	0.5
108	4/26/2011 8:08	0.4	0.4	0.5
109	4/26/2011 8:09	0.4	0.4	0.5
110	4/26/2011 8:10	0.4	0.4	0.5
111	4/26/2011 8:11	0.4	0.4	0.5
112	4/26/2011 8:12	0.4	0.4	0.5
113	4/26/2011 8:13	0.4	0.4	0.5
114	4/26/2011 8:14	0.4	0.4	0.5
115	4/26/2011 8:15	0.4	0.4	0.5
116	4/26/2011 8:16	0.4	0.4	0.5
117	4/26/2011 8:17	0.4	0.4	0.5
118	4/26/2011 8:18	0.4	0.4	0.5
119	4/26/2011 8:19	0.4	0.4	0.5
120	4/26/2011 8:20	0.4	0.4	0.5
121	4/26/2011 8:21	0.4	0.4	0.5
122	4/26/2011 8:22	0.4	0.4	0.5
123	4/26/2011 8:23	0.4	0.4	0.5
124	4/26/2011 8:24	0.4	0.4	0.5
125	4/26/2011 8:25	0.4	0.4	0.5
126	4/26/2011 8:26	0.4	0.4	0.5
127	4/26/2011 8:27	0.4	0.4	0.5

128	4/26/2011 8:28	0.4	0.4	0.5
129	4/26/2011 8:29	0.4	0.4	0.5
130	4/26/2011 8:30	0.4	0.4	0.5
131	4/26/2011 8:31	0.4	0.4	0.5
132	4/26/2011 8:32	0.4	0.4	0.5
133	4/26/2011 8:33	0.4	0.4	0.5
134	4/26/2011 8:34	0.4	0.4	0.5
135	4/26/2011 8:35	0.4	0.4	0.5
136	4/26/2011 8:36	0.4	0.4	0.5
137	4/26/2011 8:37	0.4	0.4	0.5
138	4/26/2011 8:38	0.4	0.4	0.5
139	4/26/2011 8:39	0.4	0.4	0.5
140	4/26/2011 8:40	0.4	0.4	0.5
141	4/26/2011 8:41	0.4	0.4	0.5
142	4/26/2011 8:42	0.4	0.4	0.5
143	4/26/2011 8:43	0.4	0.4	0.5
144	4/26/2011 8:44	0.4	0.4	0.5
145	4/26/2011 8:45	0.4	0.4	0.5
146	4/26/2011 8:46	0.4	0.4	0.5
147	4/26/2011 8:47	0.4	0.4	0.5
148	4/26/2011 8:48	0.4	0.4	0.4
149	4/26/2011 8:49	0.4	0.4	0.4
150	4/26/2011 8:50	0.4	0.4	0.4
151	4/26/2011 8:51	0.4	0.4	0.4
152	4/26/2011 8:52	0.4	0.4	0.5
153	4/26/2011 8:53	0.4	0.4	0.5
154	4/26/2011 8:54	0.3	0.3	0.4
155	4/26/2011 8:55	0.3	0.3	0.4
156	4/26/2011 8:56	0.3	0.3	0.3
157	4/26/2011 8:57	0.2	0.2	0.3
158	4/26/2011 8:58	0.2	0.2	0.3
159	4/26/2011 8:59	0.2	0.2	0.3
160	4/26/2011 9:00	0.2	0.2	0.3
161	4/26/2011 9:01	0.2	0.2	0.2
162	4/26/2011 9:02	0.2	0.2	0.2
163	4/26/2011 9:03	0.2	0.2	0.3
164	4/26/2011 9:04	0.2	0.2	0.3
165	4/26/2011 9:05	0.2	0.2	0.2
166	4/26/2011 9:06	0.2	0.2	0.2
167	4/26/2011 9:07	0.2	0.2	0.2
168	4/26/2011 9:08	0.2	0.2	0.2
169	4/26/2011 9:09	0.1	0.1	0.2
170	4/26/2011 9:10	0.1	0.1	0.2
171	4/26/2011 9:11	0.1	0.1	0.2
172	4/26/2011 9:12	0.1	0.1	0.2
173	4/26/2011 9:13	0.1	0.1	0.2
174	4/26/2011 9:14	0.1	0.1	0.2
175	4/26/2011 9:15	0.1	0.1	0.2
176	4/26/2011 9:16	0.1	0.1	0.2
177	4/26/2011 9:17	0.1	0.1	0.2
178	4/26/2011 9:18	0.1	0.1	0.2
179	4/26/2011 9:19	0.1	0.1	0.2
180	4/26/2011 9:20	0.1	0.1	0.2
181	4/26/2011 9:21	0.1	0.1	0.2
182	4/26/2011 9:22	0.1	0.1	0.2
183	4/26/2011 9:23	0.1	0.1	0.2
184	4/26/2011 9:24	0.1	0.1	0.2
185	4/26/2011 9:25	0.2	0.2	0.2
186	4/26/2011 9:26	0.1	0.1	0.2
187	4/26/2011 9:27	0.1	0.1	0.2
188	4/26/2011 9:28	0.2	0.2	0.2
189	4/26/2011 9:29	0.2	0.2	0.2
190	4/26/2011 9:30	0.2	0.2	0.2
191	4/26/2011 9:31	0.2	0.2	0.2
192	4/26/2011 9:32	0.2	0.2	0.2
193	4/26/2011 9:33	0.2	0.2	0.2
194	4/26/2011 9:34	0.2	0.2	0.2
195	4/26/2011 9:35	0.2	0.2	0.2
196	4/26/2011 9:36	0.1	0.1	0.2

197	4/26/2011 9:37	0.1	0.1	0.2
198	4/26/2011 9:38	0.2	0.2	0.2
199	4/26/2011 9:39	0.2	0.2	0.2
200	4/26/2011 9:40	0.1	0.1	0.2
201	4/26/2011 9:41	0.1	0.1	0.2
202	4/26/2011 9:42	0.1	0.1	0.2
203	4/26/2011 9:43	0.1	0.1	0.2
204	4/26/2011 9:44	0.1	0.1	0.2
205	4/26/2011 9:45	0.1	0.1	0.2
206	4/26/2011 9:46	0.1	0.1	0.2
207	4/26/2011 9:47	0.1	0.1	0.2
208	4/26/2011 9:48	0.1	0.1	0.2
209	4/26/2011 9:49	0.1	0.1	0.2
210	4/26/2011 9:50	0.1	0.1	0.2
211	4/26/2011 9:51	0.1	0.1	0.1
212	4/26/2011 9:52	0.1	0.1	0.1
213	4/26/2011 9:53	0.1	0.1	0.1
214	4/26/2011 9:54	0.1	0.1	0.1
215	4/26/2011 9:55	0.1	0.1	0.1
216	4/26/2011 9:56	0.1	0.1	0.1
217	4/26/2011 9:57	0.1	0.1	0.1
218	4/26/2011 9:58	0.1	0.1	0.1
219	4/26/2011 9:59	0.1	0.1	0.1
220	4/26/2011 10:00	0	0	0.1
221	4/26/2011 10:01	0.1	0.1	0.1
222	4/26/2011 10:02	0.1	0.1	0.1
223	4/26/2011 10:03	0.1	0.1	0.1
224	4/26/2011 10:04	0	0	0.1
225	4/26/2011 10:05	0	0	0.1
226	4/26/2011 10:06	0	0	0.1
227	4/26/2011 10:07	0	0	0.1
228	4/26/2011 10:08	0	0	0.3
229	4/26/2011 10:09	0	0	0.1
230	4/26/2011 10:10	0	0	0.1
231	4/26/2011 10:11	0	0	0.1
232	4/26/2011 10:12	0	0	0
233	4/26/2011 10:13	0	0	0
234	4/26/2011 10:14	0	0	0
235	4/26/2011 10:15	0	0	0
236	4/26/2011 10:16	0	0	0
237	4/26/2011 10:17	0	0	0
238	4/26/2011 10:18	0	0	0
239	4/26/2011 10:19	0	0	0
240	4/26/2011 10:20	0	0	0
241	4/26/2011 10:21	0	0	0
242	4/26/2011 10:22	0	0	0
243	4/26/2011 10:23	0	0	0
244	4/26/2011 10:24	0	0	0.1
245	4/26/2011 10:25	0	0	0.1
246	4/26/2011 10:26	0	0	0.1
247	4/26/2011 10:27	0	0	0.1
248	4/26/2011 10:28	0	0	0.1
249	4/26/2011 10:29	0	0	0.1
250	4/26/2011 10:30	0	0	0.1
251	4/26/2011 10:31	0	0	0.1
252	4/26/2011 10:32	0	0	0.1
253	4/26/2011 10:33	0	0	0.1
254	4/26/2011 10:34	0	0	0.1
255	4/26/2011 10:35	0	0	0.2
256	4/26/2011 10:36	0	0	0.1
257	4/26/2011 10:37	0	0	0.1
258	4/26/2011 10:38	0	0	0.1
259	4/26/2011 10:39	0	0	0
260	4/26/2011 10:40	0	0	0
261	4/26/2011 10:41	0	0	0.2
262	4/26/2011 10:42	0	0	0.1
263	4/26/2011 10:43	0	0	0.1
264	4/26/2011 10:44	0.1	0.1	0.1
265	4/26/2011 10:45	0.1	0.1	0.1

266	4/26/2011 10:46	0.1	0.1	0.1
267	4/26/2011 10:47	0.1	0.1	0.1
268	4/26/2011 10:48	0.1	0.1	0.1
269	4/26/2011 10:49	0.1	0.1	0.1
270	4/26/2011 10:50	0.1	0.1	0.1
271	4/26/2011 10:51	0.1	0.1	0.1
272	4/26/2011 10:52	0	0	0.1
273	4/26/2011 10:53	0.1	0.1	0.1
274	4/26/2011 10:54	0	0	0.1
275	4/26/2011 10:55	0	0	0.1
276	4/26/2011 10:56	0	0	0.1
277	4/26/2011 10:57	0	0	0.1
278	4/26/2011 10:58	0	0	0
279	4/26/2011 10:59	0	0	0.1
280	4/26/2011 11:00	0	0	0
281	4/26/2011 11:01	0	0	0
282	4/26/2011 11:02	0	0	0.3
283	4/26/2011 11:03	0	0	0
284	4/26/2011 11:04	0	0	0
285	4/26/2011 11:05	0	0	0
286	4/26/2011 11:06	0	0	0
287	4/26/2011 11:07	0	0	0
288	4/26/2011 11:08	0	0	0
289	4/26/2011 11:09	0	0	0
290	4/26/2011 11:10	0	0	0
291	4/26/2011 11:11	0	0	0
292	4/26/2011 11:12	0	0	0
293	4/26/2011 11:13	0	0	0
294	4/26/2011 11:14	0	0	0
295	4/26/2011 11:15	0	0	0
296	4/26/2011 11:16	0	0	0
297	4/26/2011 11:17	0	0	0
298	4/26/2011 11:18	0	0	0
299	4/26/2011 11:19	0	0	0
300	4/26/2011 11:20	0	0	0
301	4/26/2011 11:21	0	0	0
302	4/26/2011 11:22	0	0	0
303	4/26/2011 11:23	0	0	0
304	4/26/2011 11:24	0	0	0
305	4/26/2011 11:25	0	0	0
306	4/26/2011 11:26	0	0	0
307	4/26/2011 11:27	0	0	0
308	4/26/2011 11:28	0	0	0
309	4/26/2011 11:29	0	0	0
310	4/26/2011 11:30	0	0	0
311	4/26/2011 11:31	0	0	0
312	4/26/2011 11:32	0	0	0
313	4/26/2011 11:33	0	0	0
314	4/26/2011 11:34	0	0	0
315	4/26/2011 11:35	0	0	0
316	4/26/2011 11:36	0	0	0
317	4/26/2011 11:37	0	0	0
318	4/26/2011 11:38	0	0	0
319	4/26/2011 11:39	0	0	0
320	4/26/2011 11:40	0	0	0
321	4/26/2011 11:41	0	0	0
322	4/26/2011 11:42	0	0	0
323	4/26/2011 11:43	0	0	0
324	4/26/2011 11:44	0	0	0
325	4/26/2011 11:45	0	0	0
326	4/26/2011 11:46	0	0	0
327	4/26/2011 11:47	0	0	0
328	4/26/2011 11:48	0	0	0
329	4/26/2011 11:49	0	0	0
330	4/26/2011 11:50	0	0	0
331	4/26/2011 11:51	0	0	0
332	4/26/2011 11:52	0	0	0
333	4/26/2011 11:53	0	0	0
334	4/26/2011 11:54	0	0	0

335	4/26/2011 11:55	0	0	0
336	4/26/2011 11:56	0	0	0
337	4/26/2011 11:57	0	0	0
338	4/26/2011 11:58	0	0	0
339	4/26/2011 11:59	0	0	0
340	4/26/2011 12:00	0	0	0
341	4/26/2011 12:01	0	0	0
342	4/26/2011 12:02	0	0	0
343	4/26/2011 12:03	0	0	0
344	4/26/2011 12:04	0	0	0
345	4/26/2011 12:05	0	0	0
346	4/26/2011 12:06	0	0	0
347	4/26/2011 12:07	0	0	0
348	4/26/2011 12:08	0	0	0
349	4/26/2011 12:09	0	0	0
350	4/26/2011 12:10	0	0	0
351	4/26/2011 12:11	0	0	0
352	4/26/2011 12:12	0	0	0
353	4/26/2011 12:13	0	0	0
354	4/26/2011 12:14	0	0	0
355	4/26/2011 12:15	0	0	0
356	4/26/2011 12:16	0	0	0
357	4/26/2011 12:17	0	0	0
358	4/26/2011 12:18	0	0	0
359	4/26/2011 12:19	0	0	0
360	4/26/2011 12:20	0	0	0
361	4/26/2011 12:21	0	0	0
362	4/26/2011 12:22	0	0	0
363	4/26/2011 12:23	0	0	0
364	4/26/2011 12:24	0	0	0
365	4/26/2011 12:25	0	0	0
366	4/26/2011 12:26	0	0	0
367	4/26/2011 12:27	0	0	0
368	4/26/2011 12:28	0	0	0
369	4/26/2011 12:29	0	0	0
370	4/26/2011 12:30	0	0	0
371	4/26/2011 12:31	0	0	0
372	4/26/2011 12:32	0	0	0
373	4/26/2011 12:33	0	0	0
374	4/26/2011 12:34	0	0	0
375	4/26/2011 12:35	0	0	0
376	4/26/2011 12:36	0	0	0
377	4/26/2011 12:37	0	0	0
378	4/26/2011 12:38	0	0	0
379	4/26/2011 12:39	0	0	0
380	4/26/2011 12:40	0	0	0
381	4/26/2011 12:41	0	0	0
382	4/26/2011 12:42	0	0	0
383	4/26/2011 12:43	0	0	0
384	4/26/2011 12:44	0	0	0
385	4/26/2011 12:45	0	0	0
386	4/26/2011 12:46	0	0	0
387	4/26/2011 12:47	0	0	0
388	4/26/2011 12:48	0	0	0
389	4/26/2011 12:49	0	0	0
390	4/26/2011 12:50	0	0	0
391	4/26/2011 12:51	0	0	0
392	4/26/2011 12:52	0	0	0
393	4/26/2011 12:53	0	0	0
394	4/26/2011 12:54	0	0	0
395	4/26/2011 12:55	0	0	0
396	4/26/2011 12:56	0	0	0
397	4/26/2011 12:57	0	0	0
398	4/26/2011 12:58	0	0	0
399	4/26/2011 12:59	0	0	0
400	4/26/2011 13:00	0	0	0
401	4/26/2011 13:01	0	0	0
402	4/26/2011 13:02	0	0	0
403	4/26/2011 13:03	0	0	0

404	4/26/2011 13:04	0	0	0
405	4/26/2011 13:05	0	0	0
406	4/26/2011 13:06	0	0	0
407	4/26/2011 13:07	0	0	0
408	4/26/2011 13:08	0	0	0
409	4/26/2011 13:09	0	0	0
410	4/26/2011 13:10	0	0	0
411	4/26/2011 13:11	0	0	0
412	4/26/2011 13:12	0	0	0
413	4/26/2011 13:13	0	0	0
414	4/26/2011 13:14	0	0	0
415	4/26/2011 13:15	0	0	0
416	4/26/2011 13:16	0	0	0
417	4/26/2011 13:17	0	0	0
418	4/26/2011 13:18	0	0	0
419	4/26/2011 13:19	0	0	0
420	4/26/2011 13:20	0	0	0
421	4/26/2011 13:21	0	0	0
422	4/26/2011 13:22	0	0	0
423	4/26/2011 13:23	0	0	0
424	4/26/2011 13:24	0	0	0
425	4/26/2011 13:25	0	0	0
426	4/26/2011 13:26	0	0	0
427	4/26/2011 13:27	0	0	0
428	4/26/2011 13:28	0	0	0
429	4/26/2011 13:29	0	0	0
430	4/26/2011 13:30	0	0	0
431	4/26/2011 13:31	0	0	0
432	4/26/2011 13:32	0	0	0
433	4/26/2011 13:33	0	0	0
434	4/26/2011 13:34	0	0	0
435	4/26/2011 13:35	0	0	0
436	4/26/2011 13:36	0	0	0
437	4/26/2011 13:37	0	0	0
438	4/26/2011 13:38	0	0	0
439	4/26/2011 13:39	0	0	0
440	4/26/2011 13:40	0	0	0
441	4/26/2011 13:41	0	0	0
442	4/26/2011 13:42	0	0	0
443	4/26/2011 13:43	0	0	0
444	4/26/2011 13:44	0	0	0
445	4/26/2011 13:45	0	0	0
446	4/26/2011 13:46	0	0	0
447	4/26/2011 13:47	0	0	0
448	4/26/2011 13:48	0	0	0
449	4/26/2011 13:49	0	0	0
450	4/26/2011 13:50	0	0	0
451	4/26/2011 13:51	0	0	0
452	4/26/2011 13:52	0	0	0
453	4/26/2011 13:53	0	0	0
454	4/26/2011 13:54	0	0	0
455	4/26/2011 13:55	0	0	0
456	4/26/2011 13:56	0	0	0
457	4/26/2011 13:57	0	0	0
458	4/26/2011 13:58	0	0	0
459	4/26/2011 13:59	0	0	0
460	4/26/2011 14:00	0	0	0
461	4/26/2011 14:01	0	0	0
462	4/26/2011 14:02	0	0	0
463	4/26/2011 14:03	0	0	0
464	4/26/2011 14:04	0	0	0
465	4/26/2011 14:05	0	0	0
466	4/26/2011 14:06	0	0	0
467	4/26/2011 14:07	0	0	0
468	4/26/2011 14:08	0	0	0
469	4/26/2011 14:09	0	0	0
470	4/26/2011 14:10	0	0	0
471	4/26/2011 14:11	0	0	0
472	4/26/2011 14:12	0	0	0

473	4/26/2011 14:13	0	0	0
474	4/26/2011 14:14	0	0	0
475	4/26/2011 14:15	0	0	0
476	4/26/2011 14:16	0	0	0
477	4/26/2011 14:17	0	0	0
478	4/26/2011 14:18	0	0	0
479	4/26/2011 14:19	0	0	0
480	4/26/2011 14:20	0	0	0
481	4/26/2011 14:21	0	0	0
482	4/26/2011 14:22	0	0	0
483	4/26/2011 14:23	0	0	0
484	4/26/2011 14:24	0	0	0
485	4/26/2011 14:25	0	0	0
486	4/26/2011 14:26	0	0	0
487	4/26/2011 14:27	0	0	0
488	4/26/2011 14:28	0	0	0
489	4/26/2011 14:29	0	0	0
490	4/26/2011 14:30	0	0	0
491	4/26/2011 14:31	0	0	0
492	4/26/2011 14:32	0	0	0
493	4/26/2011 14:33	0	0	0
494	4/26/2011 14:34	0	0	0
495	4/26/2011 14:35	0	0	0
496	4/26/2011 14:36	0	0	0
497	4/26/2011 14:37	0	0	0
498	4/26/2011 14:38	0	0	0
499	4/26/2011 14:39	0	0	0
500	4/26/2011 14:40	0	0	0
501	4/26/2011 14:41	0	0	0
502	4/26/2011 14:42	0	0	0
503	4/26/2011 14:43	0	0	0
504	4/26/2011 14:44	0	0	0
505	4/26/2011 14:45	0	0	0
506	4/26/2011 14:46	0	0	0
507	4/26/2011 14:47	0	0	0
508	4/26/2011 14:48	0	0	0
509	4/26/2011 14:49	0	0	0
510	4/26/2011 14:50	0	0	0
511	4/26/2011 14:51	0	0	0
512	4/26/2011 14:52	0	0	0
513	4/26/2011 14:53	0	0	0
514	4/26/2011 14:54	0	0	0
515	4/26/2011 14:55	0	0	0
516	4/26/2011 14:56	0	0	0
517	4/26/2011 14:57	0	0	0
518	4/26/2011 14:58	0	0	0
519	4/26/2011 14:59	0	0	0
520	4/26/2011 15:00	0	0	0
521	4/26/2011 15:01	0	0	0
522	4/26/2011 15:02	0	0	0
523	4/26/2011 15:03	0	0	0
524	4/26/2011 15:04	0	0	0
525	4/26/2011 15:05	0	0	0
526	4/26/2011 15:06	0	0	0
527	4/26/2011 15:07	0	0	0
528	4/26/2011 15:08	0	0	0
529	4/26/2011 15:09	0	0	0
530	4/26/2011 15:10	0	0	0
531	4/26/2011 15:11	0	0	0
532	4/26/2011 15:12	0	0	0
533	4/26/2011 15:13	0	0	0
534	4/26/2011 15:14	0	0	0
535	4/26/2011 15:15	0	0	0
536	4/26/2011 15:16	0	0	0
537	4/26/2011 15:17	0	0	0
538	4/26/2011 15:18	0	0	0
539	4/26/2011 15:19	0	0	0
540	4/26/2011 15:20	0	0	0
541	4/26/2011 15:21	0	0	0

542	4/26/2011 15:22	0	0	0
543	4/26/2011 15:23	0	0	0
544	4/26/2011 15:24	0	0	0
545	4/26/2011 15:25	0	0	0
546	4/26/2011 15:26	0	0	0
547	4/26/2011 15:27	0	0	0
548	4/26/2011 15:28	0	0	0
549	4/26/2011 15:29	0	0	0
550	4/26/2011 15:30	0	0	0
551	4/26/2011 15:31	0	0	0
552	4/26/2011 15:32	0	0	0
553	4/26/2011 15:33	0	0	0
554	4/26/2011 15:34	0	0	0
555	4/26/2011 15:35	0	0	0
556	4/26/2011 15:36	0	0	0
557	4/26/2011 15:37	0	0	0
558	4/26/2011 15:38	0	0	0
559	4/26/2011 15:39	0	0	0
560	4/26/2011 15:40	0	0	0
561	4/26/2011 15:41	0	0	0
562	4/26/2011 15:42	0	0	0
563	4/26/2011 15:43	0	0	0
564	4/26/2011 15:44	0	0	0
565	4/26/2011 15:45	0	0	0
566	4/26/2011 15:46	0	0	0
567	4/26/2011 15:47	0	0	0
568	4/26/2011 15:48	0	0	0
569	4/26/2011 15:49	0	0	0
570	4/26/2011 15:50	0	0	0
571	4/26/2011 15:51	0	0	0
572	4/26/2011 15:52	0	0	0
573	4/26/2011 15:53	0	0	0
574	4/26/2011 15:54	0	0	0
575	4/26/2011 15:55	0	0	0
576	4/26/2011 15:56	0	0	0
577	4/26/2011 15:57	0	0	0
578	4/26/2011 15:58	0	0	0

=========Event #23 information (begin)=========
==========
[Event #23 name:]--[Event #23]2011-04-26 03:35<-->2011-04-26 13:12
[Event start time:]--2011-04-26 03:35:40[Event end time:]--2011-04-26 13:12:40
==========Event #23 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367
Data Points: 577 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID(ppb)
Measurement Gas : Isobutene
Calibration Time : 2011-04-26 03:34:00
Drift Value : ---
Low Alarm Levels : 21738
High Alarm Levels : 43476
Span Value : 100000
Correction Factor : 1.00
Over Alarm Levels : 15000000
==========Event #23 data informations==========

LINE#	Date/Time	PID(ppb)	PID(ppm)
1	4/26/2011 3:36	0	0
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508	4/26/2011 12:03	0	0
509	4/26/2011 12:04	0	0
510	4/26/2011 12:05	0	0
511	4/26/2011 12:06	0	0
512	4/26/2011 12:07	1	0.001
513	4/26/2011 12:08	0	0
514	4/26/2011 12:09	0	0
515	4/26/2011 12:10	0	0
516	4/26/2011 12:11	0	0
517	4/26/2011 12:12	0	0
518	4/26/2011 12:13	0	0
519	4/26/2011 12:14	0	0
520	4/26/2011 12:15	0	0
521	4/26/2011 12:16	0	0
522	4/26/2011 12:17	0	0
523	4/26/2011 12:18	0	0
524	4/26/2011 12:19	0	0
525	4/26/2011 12:20	0	0
526	4/26/2011 12:21	0	0
527	4/26/2011 12:22	0	0
528	4/26/2011 12:23	0	0
529	4/26/2011 12:24	0	0
530	4/26/2011 12:25	0	0
531	4/26/2011 12:26	0	0

532	4/26/2011 12:27	0	0
533	4/26/2011 12:28	0	0
534	4/26/2011 12:29	0	0
535	4/26/2011 12:30	0	0
536	4/26/2011 12:31	0	0
537	4/26/2011 12:32	0	0
538	4/26/2011 12:33	0	0
539	4/26/2011 12:34	0	0
540	4/26/2011 12:35	0	0
541	4/26/2011 12:36	0	0
542	4/26/2011 12:37	0	0
543	4/26/2011 12:38	0	0
544	4/26/2011 12:39	1	0.001
545	4/26/2011 12:40	0	0
546	4/26/2011 12:41	0	0
547	4/26/2011 12:42	0	0
548	4/26/2011 12:43	0	0
549	4/26/2011 12:44	0	0
550	4/26/2011 12:45	0	0
551	4/26/2011 12:46	0	0
552	4/26/2011 12:47	0	0
553	4/26/2011 12:48	0	0
554	4/26/2011 12:49	0	0
555	4/26/2011 12:50	0	0
556	4/26/2011 12:51	0	0
557	4/26/2011 12:52	0	0
558	4/26/2011 12:53	0	0
559	4/26/2011 12:54	0	0
560	4/26/2011 12:55	0	0
561	4/26/2011 12:56	0	0
562	4/26/2011 12:57	0	0
563	4/26/2011 12:58	0	0
564	4/26/2011 12:59	0	0
565	4/26/2011 13:00	0	0
566	4/26/2011 13:01	0	0
567	4/26/2011 13:02	0	0
568	4/26/2011 13:03	0	0
569	4/26/2011 13:04	0	0
570	4/26/2011 13:05	0	0
571	4/26/2011 13:06	0	0
572	4/26/2011 13:07	0	0
573	4/26/2011 13:08	0	0
574	4/26/2011 13:09	0	0
575	4/26/2011 13:10	0	0
576	4/26/2011 13:11	0	0
577	4/26/2011 13:12	0	0

==========Event #23 information (end)==========

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530110314
Firmware Version	2.7
Calibration Date	1/17/2011
Test Name	MANUAL_007
Test Start Time	7:54:50 AM
Test Start Date	4/26/2011
Test Length [D:H:M]	0:09:04
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.043
Mass Minimum [mg/m3]	0.018
Mass Maximum [mg/m3]	0.15
Mass TWA [mg/m3]	0.046
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	544

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.073		
120	0.058		
180	0.061		
240	0.057		
300	0.082		
360	0.072		
420	0.062		
480	0.06		
540	0.061		
600	0.066		
660	0.068		
720	0.074		
780	0.064		
840	0.061		
900	0.059		
960	0.065		
1020	0.065		
1080	0.06		
1140	0.058		
1200	0.057		
1260	0.058		
1320	0.102		
1380	0.074		
1440	0.062		
1500	0.066		
1560	0.075		
1620	0.085		
1680	0.077		
1740	0.094		
1800	0.097		
1860	0.08		
1920	0.093		
1980	0.097		
2040	0.074		
2100	0.066		
2160	0.101		
2220	0.071		
2280	0.089		
2340	0.068		
2400	0.064		
2460	0.066		
2520	0.07		
2580	0.064		
2640	0.068		
2700	0.072		
2760	0.077		
2820	0.077		
2880	0.089		
2940	0.066		

3000	0.057
3060	0.054
3120	0.055
3180	0.055
3240	0.054
3300	0.054
3360	0.056
3420	0.053
3480	0.062
3540	0.056
3600	0.055
3660	0.052
3720	0.052
3780	0.066
3840	0.059
3900	0.053
3960	0.055
4020	0.051
4080	0.052
4140	0.052
4200	0.053
4260	0.052
4320	0.054
4380	0.059
4440	0.059
4500	0.059
4560	0.062
4620	0.058
4680	0.058
4740	0.067
4800	0.061
4860	0.055
4920	0.058
4980	0.063
5040	0.058
5100	0.054
5160	0.055
5220	0.058
5280	0.069
5340	0.063
5400	0.055
5460	0.053
5520	0.049
5580	0.051
5640	0.048
5700	0.055
5760	0.049
5820	0.044
5880	0.048
5940	0.047
6000	0.049
6060	0.046
6120	0.045
6180	0.046
6240	0.048
6300	0.047
6360	0.046
6420	0.044
6480	0.042
6540	0.045
6600	0.045
6660	0.046
6720	0.045
6780	0.045
6840	0.047
6900	0.042
6960	0.041
7020	0.042
7080	0.039

7140	0.041
7200	0.044
7260	0.042
7320	0.04
7380	0.042
7440	0.043
7500	0.042
7560	0.043
7620	0.041
7680	0.041
7740	0.04
7800	0.04
7860	0.04
7920	0.039
7980	0.042
8040	0.041
8100	0.041
8160	0.04
8220	0.04
8280	0.037
8340	0.038
8400	0.055
8460	0.049
8520	0.044
8580	0.039
8640	0.036
8700	0.035
8760	0.041
8820	0.038
8880	0.037
8940	0.041
9000	0.045
9060	0.041
9120	0.041
9180	0.038
9240	0.042
9300	0.04
9360	0.041
9420	0.039
9480	0.044
9540	0.044
9600	0.052
9660	0.044
9720	0.046
9780	0.038
9840	0.037
9900	0.038
9960	0.038
10020	0.036
10080	0.038
10140	0.038
10200	0.038
10260	0.038
10320	0.039
10380	0.036
10440	0.039
10500	0.037
10560	0.037
10620	0.038
10680	0.04
10740	0.036
10800	0.037
10860	0.038
10920	0.043
10980	0.041
11040	0.048
11100	0.039
11160	0.047
11220	0.04

11280	0.058
11340	0.057
11400	0.059
11460	0.039
11520	0.037
11580	0.036
11640	0.038
11700	0.038
11760	0.044
11820	0.038
11880	0.04
11940	0.034
12000	0.035
12060	0.037
12120	0.042
12180	0.046
12240	0.043
12300	0.05
12360	0.059
12420	0.048
12480	0.044
12540	0.046
12600	0.056
12660	0.05
12720	0.046
12780	0.054
12840	0.051
12900	0.043
12960	0.042
13020	0.038
13080	0.04
13140	0.035
13200	0.05
13260	0.058
13320	0.041
13380	0.035
13440	0.037
13500	0.035
13560	0.035
13620	0.036
13680	0.038
13740	0.038
13800	0.04
13860	0.054
13920	0.047
13980	0.055
14040	0.067
14100	0.059
14160	0.062
14220	0.052
14280	0.04
14340	0.042
14400	0.043
14460	0.048
14520	0.079
14580	0.068
14640	0.046
14700	0.04
14760	0.038
14820	0.04
14880	0.059
14940	0.045
15000	0.038
15060	0.037
15120	0.038
15180	0.04
15240	0.045
15300	0.038
15360	0.037

15420	0.037
15480	0.043
15540	0.038
15600	0.046
15660	0.048
15720	0.038
15780	0.037
15840	0.041
15900	0.041
15960	0.043
16020	0.041
16080	0.046
16140	0.043
16200	0.039
16260	0.041
16320	0.047
16380	0.046
16440	0.044
16500	0.037
16560	0.043
16620	0.052
16680	0.046
16740	0.036
16800	0.041
16860	0.063
16920	0.047
16980	0.054
17040	0.044
17100	0.044
17160	0.057
17220	0.045
17280	0.045
17340	0.04
17400	0.047
17460	0.046
17520	0.043
17580	0.057
17640	0.056
17700	0.048
17760	0.04
17820	0.044
17880	0.039
17940	0.045
18000	0.078
18060	0.095
18120	0.079
18180	0.047
18240	0.047
18300	0.053
18360	0.04
18420	0.045
18480	0.054
18540	0.054
18600	0.052
18660	0.073
18720	0.048
18780	0.056
18840	0.046
18900	0.062
18960	0.068
19020	0.073
19080	0.061
19140	0.05
19200	0.054
19260	0.044
19320	0.046
19380	0.046
19440	0.106
19500	0.053

19560	0.052
19620	0.051
19680	0.051
19740	0.074
19800	0.061
19860	0.044
19920	0.044
19980	0.04
20040	0.04
20100	0.034
20160	0.037
20220	0.041
20280	0.036
20340	0.04
20400	0.037
20460	0.042
20520	0.042
20580	0.04
20640	0.047
20700	0.039
20760	0.036
20820	0.033
20880	0.041
20940	0.038
21000	0.042
21060	0.037
21120	0.038
21180	0.047
21240	0.048
21300	0.043
21360	0.037
21420	0.039
21480	0.037
21540	0.037
21600	0.035
21660	0.038
21720	0.048
21780	0.049
21840	0.109
21900	0.074
21960	0.089
22020	0.066
22080	0.09
22140	0.066
22200	0.053
22260	0.15
22320	0.087
22380	0.047
22440	0.05
22500	0.045
22560	0.045
22620	0.04
22680	0.053
22740	0.046
22800	0.046
22860	0.035
22920	0.033
22980	0.035
23040	0.034
23100	0.034
23160	0.037
23220	0.032
23280	0.033
23340	0.033
23400	0.045
23460	0.033
23520	0.031
23580	0.031
23640	0.03

23700	0.029
23760	0.031
23820	0.031
23880	0.035
23940	0.031
24000	0.029
24060	0.052
24120	0.046
24180	0.028
24240	0.028
24300	0.028
24360	0.028
24420	0.027
24480	0.027
24540	0.026
24600	0.026
24660	0.025
24720	0.025
24780	0.025
24840	0.034
24900	0.026
24960	0.026
25020	0.025
25080	0.03
25140	0.026
25200	0.025
25260	0.023
25320	0.023
25380	0.023
25440	0.023
25500	0.024
25560	0.023
25620	0.025
25680	0.025
25740	0.024
25800	0.023
25860	0.025
25920	0.025
25980	0.024
26040	0.022
26100	0.024
26160	0.024
26220	0.024
26280	0.026
26340	0.029
26400	0.025
26460	0.026
26520	0.027
26580	0.024
26640	0.023
26700	0.025
26760	0.024
26820	0.025
26880	0.022
26940	0.024
27000	0.024
27060	0.023
27120	0.022
27180	0.022
27240	0.022
27300	0.021
27360	0.022
27420	0.021
27480	0.021
27540	0.021
27600	0.021
27660	0.022
27720	0.022
27780	0.025

27840	0.026
27900	0.021
27960	0.021
28020	0.022
28080	0.02
28140	0.021
28200	0.021
28260	0.021
28320	0.021
28380	0.02
28440	0.021
28500	0.021
28560	0.021
28620	0.021
28680	0.022
28740	0.023
28800	0.021
28860	0.021
28920	0.024
28980	0.024
29040	0.022
29100	0.021
29160	0.024
29220	0.02
29280	0.02
29340	0.021
29400	0.02
29460	0.02
29520	0.021
29580	0.021
29640	0.019
29700	0.019
29760	0.02
29820	0.019
29880	0.018
29940	0.019
30000	0.019
30060	0.019
30120	0.02
30180	0.02
30240	0.02
30300	0.02
30360	0.02
30420	0.02
30480	0.021
30540	0.021
30600	0.021
30660	0.021
30720	0.021
30780	0.02
30840	0.02
30900	0.02
30960	0.02
31020	0.02
31080	0.02
31140	0.02
31200	0.019
31260	0.019
31320	0.02
31380	0.021
31440	0.021
31500	0.019
31560	0.019
31620	0.024
31680	0.023
31740	0.03
31800	0.022
31860	0.019
31920	0.021

31980	0.022
32040	0.02
32100	0.019
32160	0.019
32220	0.019
32280	0.02
32340	0.019
32400	0.02
32460	0.02
32520	0.019
32580	0.021
32640	0.021

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530103310
Firmware Version	2.6
Calibration Date	8/12/2010
Test Name	MANUAL_002
Test Start Time	7:57:21 AM
Test Start Date	4/26/2011
Test Length [D:H:M]	0:09:00
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.042
Mass Minimum [mg/m3]	0.016
Mass Maximum [mg/m3]	0.495
Mass TWA [mg/m3]	0.043
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	540

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.057		
120	0.06		
180	0.064		
240	0.083		
300	0.069		
360	0.059		
420	0.066		
480	0.071		
540	0.063		
600	0.061		
660	0.061		
720	0.062		
780	0.057		
840	0.056		
900	0.058		
960	0.067		
1020	0.053		
1080	0.053		
1140	0.057		
1200	0.056		
1260	0.056		
1320	0.057		
1380	0.058		
1440	0.07		
1500	0.078		
1560	0.08		
1620	0.071		
1680	0.081		
1740	0.082		
1800	0.077		
1860	0.078		
1920	0.081		
1980	0.063		
2040	0.074		
2100	0.082		
2160	0.066		
2220	0.084		
2280	0.06		
2340	0.06		
2400	0.064		
2460	0.072		
2520	0.069		
2580	0.069		
2640	0.066		
2700	0.075		
2760	0.064		
2820	0.057		
2880	0.056		
2940	0.052		

3000	0.052
3060	0.052
3120	0.053
3180	0.051
3240	0.053
3300	0.051
3360	0.051
3420	0.052
3480	0.052
3540	0.051
3600	0.049
3660	0.048
3720	0.053
3780	0.051
3840	0.052
3900	0.049
3960	0.046
4020	0.048
4080	0.048
4140	0.05
4200	0.048
4260	0.05
4320	0.054
4380	0.055
4440	0.055
4500	0.054
4560	0.051
4620	0.05
4680	0.057
4740	0.048
4800	0.049
4860	0.048
4920	0.051
4980	0.048
5040	0.049
5100	0.049
5160	0.053
5220	0.056
5280	0.047
5340	0.046
5400	0.043
5460	0.045
5520	0.046
5580	0.04
5640	0.043
5700	0.038
5760	0.038
5820	0.038
5880	0.039
5940	0.038
6000	0.037
6060	0.036
6120	0.037
6180	0.04
6240	0.034
6300	0.034
6360	0.034
6420	0.037
6480	0.032
6540	0.034
6600	0.038
6660	0.096
6720	0.045
6780	0.036
6840	0.033
6900	0.03
6960	0.033
7020	0.03
7080	0.032

7140	0.032
7200	0.042
7260	0.028
7320	0.03
7380	0.029
7440	0.028
7500	0.029
7560	0.028
7620	0.028
7680	0.029
7740	0.028
7800	0.052
7860	0.028
7920	0.029
7980	0.027
8040	0.029
8100	0.027
8160	0.026
8220	0.025
8280	0.027
8340	0.036
8400	0.034
8460	0.031
8520	0.027
8580	0.024
8640	0.025
8700	0.027
8760	0.026
8820	0.026
8880	0.03
8940	0.029
9000	0.028
9060	0.026
9120	0.025
9180	0.027
9240	0.026
9300	0.027
9360	0.026
9420	0.028
9480	0.032
9540	0.031
9600	0.028
9660	0.028
9720	0.025
9780	0.023
9840	0.027
9900	0.09
9960	0.09
10020	0.026
10080	0.023
10140	0.026
10200	0.025
10260	0.026
10320	0.025
10380	0.025
10440	0.024
10500	0.023
10560	0.026
10620	0.026
10680	0.025
10740	0.024
10800	0.026
10860	0.029
10920	0.073
10980	0.042
11040	0.031
11100	0.036
11160	0.029
11220	0.037

11280	0.043
11340	0.036
11400	0.027
11460	0.022
11520	0.024
11580	0.024
11640	0.037
11700	0.029
11760	0.026
11820	0.024
11880	0.063
11940	0.025
12000	0.028
12060	0.039
12120	0.038
12180	0.037
12240	0.045
12300	0.038
12360	0.029
12420	0.046
12480	0.032
12540	0.035
12600	0.031
12660	0.094
12720	0.104
12780	0.03
12840	0.027
12900	0.03
12960	0.024
13020	0.023
13080	0.023
13140	0.027
13200	0.027
13260	0.023
13320	0.022
13380	0.023
13440	0.023
13500	0.174
13560	0.025
13620	0.021
13680	0.023
13740	0.023
13800	0.027
13860	0.026
13920	0.044
13980	0.045
14040	0.039
14100	0.035
14160	0.034
14220	0.023
14280	0.031
14340	0.026
14400	0.139
14460	0.077
14520	0.038
14580	0.03
14640	0.026
14700	0.024
14760	0.029
14820	0.034
14880	0.031
14940	0.026
15000	0.024
15060	0.024
15120	0.027
15180	0.025
15240	0.022
15300	0.022
15360	0.023

15420	0.027
15480	0.023
15540	0.028
15600	0.026
15660	0.023
15720	0.023
15780	0.024
15840	0.028
15900	0.026
15960	0.024
16020	0.031
16080	0.025
16140	0.028
16200	0.028
16260	0.029
16320	0.026
16380	0.029
16440	0.024
16500	0.032
16560	0.03
16620	0.031
16680	0.025
16740	0.032
16800	0.038
16860	0.03
16920	0.029
16980	0.028
17040	0.03
17100	0.039
17160	0.033
17220	0.028
17280	0.03
17340	0.026
17400	0.03
17460	0.033
17520	0.043
17580	0.033
17640	0.03
17700	0.026
17760	0.026
17820	0.028
17880	0.032
17940	0.056
18000	0.071
18060	0.04
18120	0.031
18180	0.03
18240	0.029
18300	0.03
18360	0.029
18420	0.044
18480	0.038
18540	0.04
18600	0.038
18660	0.033
18720	0.031
18780	0.032
18840	0.067
18900	0.075
18960	0.075
19020	0.036
19080	0.035
19140	0.043
19200	0.036
19260	0.034
19320	0.036
19380	0.042
19440	0.042
19500	0.039

19560	0.039
19620	0.05
19680	0.061
19740	0.03
19800	0.032
19860	0.03
19920	0.032
19980	0.053
20040	0.028
20100	0.038
20160	0.026
20220	0.025
20280	0.032
20340	0.105
20400	0.091
20460	0.034
20520	0.032
20580	0.036
20640	0.027
20700	0.023
20760	0.024
20820	0.029
20880	0.028
20940	0.03
21000	0.023
21060	0.031
21120	0.129
21180	0.169
21240	0.027
21300	0.027
21360	0.028
21420	0.029
21480	0.029
21540	0.025
21600	0.028
21660	0.029
21720	0.033
21780	0.067
21840	0.069
21900	0.05
21960	0.045
22020	0.058
22080	0.043
22140	0.051
22200	0.098
22260	0.312
22320	0.086
22380	0.033
22440	0.033
22500	0.035
22560	0.029
22620	0.033
22680	0.029
22740	0.034
22800	0.038
22860	0.03
22920	0.043
22980	0.047
23040	0.125
23100	0.141
23160	0.078
23220	0.039
23280	0.032
23340	0.023
23400	0.021
23460	0.021
23520	0.02
23580	0.019
23640	0.019

23700	0.021
23760	0.022
23820	0.024
23880	0.02
23940	0.018
24000	0.019
24060	0.44
24120	0.119
24180	0.041
24240	0.019
24300	0.018
24360	0.018
24420	0.032
24480	0.059
24540	0.04
24600	0.047
24660	0.059
24720	0.029
24780	0.038
24840	0.034
24900	0.032
24960	0.044
25020	0.048
25080	0.067
25140	0.033
25200	0.03
25260	0.036
25320	0.07
25380	0.046
25440	0.056
25500	0.035
25560	0.029
25620	0.027
25680	0.028
25740	0.03
25800	0.032
25860	0.03
25920	0.021
25980	0.02
26040	0.025
26100	0.021
26160	0.022
26220	0.023
26280	0.027
26340	0.032
26400	0.039
26460	0.039
26520	0.022
26580	0.019
26640	0.023
26700	0.025
26760	0.056
26820	0.028
26880	0.044
26940	0.043
27000	0.04
27060	0.057
27120	0.034
27180	0.037
27240	0.052
27300	0.034
27360	0.032
27420	0.021
27480	0.025
27540	0.027
27600	0.045
27660	0.045
27720	0.035
27780	0.052

27840	0.495
27900	0.18
27960	0.033
28020	0.044
28080	0.02
28140	0.028
28200	0.033
28260	0.026
28320	0.021
28380	0.032
28440	0.018
28500	0.044
28560	0.024
28620	0.022
28680	0.037
28740	0.023
28800	0.021
28860	0.048
28920	0.034
28980	0.047
29040	0.065
29100	0.03
29160	0.051
29220	0.034
29280	0.031
29340	0.028
29400	0.031
29460	0.043
29520	0.039
29580	0.053
29640	0.044
29700	0.072
29760	0.033
29820	0.025
29880	0.032
29940	0.025
30000	0.023
30060	0.033
30120	0.051
30180	0.054
30240	0.034
30300	0.033
30360	0.049
30420	0.04
30480	0.03
30540	0.03
30600	0.024
30660	0.024
30720	0.028
30780	0.025
30840	0.021
30900	0.024
30960	0.02
31020	0.025
31080	0.024
31140	0.025
31200	0.019
31260	0.022
31320	0.028
31380	0.022
31440	0.023
31500	0.033
31560	0.027
31620	0.024
31680	0.029
31740	0.028
31800	0.03
31860	0.024
31920	0.023

31980	0.033
32040	0.016
32100	0.024
32160	0.023
32220	0.016
32280	0.019
32340	0.036
32400	0.03

AECOM

Client: National Grid
Location: Metropolitan
Date: 4/27/11
Field Personnel: J. Ehlen

Project:
Project Number: 60137361
Weather: ~65°F, mostly cloudy, light wind
Ambient Noise:

Community Air Monitoring Plan / Noise Field Log

Pg 1 of 2

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
830	NA	0.029	0.0	0.0	0.037	79.3	Drilling MW 4D2
846	0.0	0.030	0.0	0.0	0.040	90.2	"
904	0.0	0.033	0.0	0.0	0.045	89.2	"
915	0.0	0.029	0.0	0.0	0.034	79.7	Pulling up sonde/breaking down drill rod
932	0.0	0.025	0.0	0.0	0.031	75.3	waiting to see where to install well.
947	0.0	0.025	0.0	0.0	0.035	72.8	"
1100	0.0	0.023	0.0	0.0	0.034	73.8	Installing MW-4D2.
1115	0.0	0.019	0.0	0.0	0.026	78.7	"
1135	0.0	0.019	0.0	0.0	0.034	72.0	"
1146	0.0	0.017	0.0	0.0	0.015	74.2	"
1202	0.0	0.020	0.0	0.0	0.018	75.3	"
1217	0.0	0.022	0.0	0.0	0.030	74.1	"
1300	0.0	0.019	0.0	0.0	0.032	72.3	"
1315	0.0	0.024	0.0	0.0	0.031	70.0	"
1330	0.0	0.023	0.0	0.0	0.028	74.2	"
1345	0.0	0.024	0.0	0.0	0.024	76.2	"
1359	0.0	0.022	0.0	0.0	0.029	82.9	"
1414	0.0	0.017	0.0	0.0	0.069	77.7	grouting MW-4D2
1429	0.0	0.014	0.0	0.0	0.029	76.8	"
1444	0.0	0.017	0.0	0.0	0.024	78.8	pulling casing from MW-4D2
1500	0.0	0.019	0.0	0.0	0.085	78.1	mixing more grout.
1516	0.0	0.020	0.0	0.0	0.027	85.0	finishing grouting MW-4D2

getting cement & making well materials to location, no drilling.

* 830 re-caled upwind pid, was reading 1.2 ppm. Upwind pid reading 0.0 ppm after re-calibration.

AECOM

Client: National Grid
Location: Metropolitan
Date: 4/27/11
Field Personnel: J. Ehlen

Project:
Project Number: 60137361
Weather: Same; increase in wind.
Ambient Noise:

Community Air Monitoring Plan / Noise Field Log

pg 2 of 2

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
1530	0.0	0.026	0.4	0.0	0.027	78.2	Demob from MW-4D2
1546	0.0	0.026	0.1	0.0	0.025	70.2	"

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 902685
User ID: 00000001 Site ID: 00000018
Data Points: 72 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 04/27/2011 06:15

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	4/27/2011 6:17	0.2		0.2		0.3	
2	4/27/2011 6:18	0.3		5.7		87	L
3	4/27/2011 6:19	0.5		34.2		95.2	L
4	4/27/2011 6:20	0.4		0.4		0.5	
5	4/27/2011 6:21	0.4		0.5		0.6	
6	4/27/2011 6:22	0.5		0.5		0.6	
7	4/27/2011 6:23	0.6		0.6		0.7	
8	4/27/2011 6:24	0.6		0.6		0.6	
9	4/27/2011 6:25	0.6		0.6		0.6	
10	4/27/2011 6:26	0.6		0.6		0.6	
11	4/27/2011 6:27	0.6		0.6		0.7	
12	4/27/2011 6:28	0.6		0.6		0.7	
13	4/27/2011 6:29	0.6		0.6		0.7	
14	4/27/2011 6:30	0.6		0.6		0.7	
15	4/27/2011 6:31	0.6		0.6		0.7	
16	4/27/2011 6:32	0.5		0.7		0.9	
17	4/27/2011 6:33	0.7		0.7		0.8	
18	4/27/2011 6:34	0.7		0.7		0.7	
19	4/27/2011 6:35	0.7		0.7		0.9	
20	4/27/2011 6:36	0.7		0.7		0.8	
21	4/27/2011 6:37	0.7		0.7		0.8	
22	4/27/2011 6:38	0.7		0.7		0.8	
23	4/27/2011 6:39	0.7		0.7		0.8	
24	4/27/2011 6:40	0.7		0.7		0.8	
25	4/27/2011 6:41	0.8		0.8		0.8	
26	4/27/2011 6:42	0.8		0.8		0.8	
27	4/27/2011 6:43	0.8		0.8		0.8	
28	4/27/2011 6:44	0.8		0.8		0.9	
29	4/27/2011 6:45	0.8		0.8		0.9	
30	4/27/2011 6:46	0.8		0.8		0.9	
31	4/27/2011 6:47	0.8		0.8		0.9	
32	4/27/2011 6:48	0.8		0.8		0.9	
33	4/27/2011 6:49	0.8		0.8		0.9	
34	4/27/2011 6:50	0.8		0.8		0.9	
35	4/27/2011 6:51	0.9		0.9		0.9	
36	4/27/2011 6:52	0.9		0.9		0.9	
37	4/27/2011 6:53	0.9		0.9		0.9	
38	4/27/2011 6:54	0.9		0.9		0.9	
39	4/27/2011 6:55	0.9		0.9		0.9	
40	4/27/2011 6:56	0.9		0.9		0.9	
41	4/27/2011 6:57	0.9		0.9		1	
42	4/27/2011 6:58	0.9		0.9		1	
43	4/27/2011 6:59	0.9		0.9		1	
44	4/27/2011 7:00	0.9		0.9		1	
45	4/27/2011 7:01	1		1		1	
46	4/27/2011 7:02	1		1		1	
47	4/27/2011 7:03	1		1		1	
48	4/27/2011 7:04	1		1		1	
49	4/27/2011 7:05	1		1		1.1	
50	4/27/2011 7:06	1		1		1.1	
51	4/27/2011 7:07	1		1		1.1	
52	4/27/2011 7:08	1		1		1.1	
53	4/27/2011 7:09	1		1		1.1	
54	4/27/2011 7:10	1.1		1.1		1.1	
55	4/27/2011 7:11	1.1		1.1		1.2	
56	4/27/2011 7:12	1.1		1.1		1.1	
57	4/27/2011 7:13	1.1		1.1		1.1	
58	4/27/2011 7:14	1.1		1.1		1.1	

59	4/27/2011 7:15	1.1	1.1	1.2
60	4/27/2011 7:16	1.1	1.1	1.2
61	4/27/2011 7:17	1.1	1.1	1.2
62	4/27/2011 7:18	1.1	1.1	1.2
63	4/27/2011 7:19	1.1	1.1	1.2
64	4/27/2011 7:20	1.1	1.1	1.2
65	4/27/2011 7:21	1.1	1.1	1.2
66	4/27/2011 7:22	1.1	1.1	1.2
67	4/27/2011 7:23	1.1	1.1	1.2
68	4/27/2011 7:24	1.1	1.1	1.2
69	4/27/2011 7:25	1.1	1.1	1.2
70	4/27/2011 7:26	1.1	1.1	1.2
71	4/27/2011 7:27	1.1	1.1	1.2
72	4/27/2011 7:28	1.1	1.1	1.2

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 902685
User ID: 00000001 Site ID: 00000019
Data Points: 446 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 04/27/2011 06:15

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	4/27/2011 7:33	0		0		0	
2	4/27/2011 7:34	0		0		0	
3	4/27/2011 7:35	0		0		0	
4	4/27/2011 7:36	0		0		0	
5	4/27/2011 7:37	0		0		0	
6	4/27/2011 7:38	0		0		0	
7	4/27/2011 7:39	0		0		0	
8	4/27/2011 7:40	0		0		0	
9	4/27/2011 7:41	0		0		0	
10	4/27/2011 7:42	0		0		0.1	
11	4/27/2011 7:43	0		0		0.1	
12	4/27/2011 7:44	0		0		0.1	
13	4/27/2011 7:45	0		0		0.1	
14	4/27/2011 7:46	0		0		0.1	
15	4/27/2011 7:47	0		0		0.1	
16	4/27/2011 7:48	0		0		0.1	
17	4/27/2011 7:49	0		0		0.1	
18	4/27/2011 7:50	0		0		0.1	
19	4/27/2011 7:51	0		0		0.1	
20	4/27/2011 7:52	0		0		0.1	
21	4/27/2011 7:53	0		0		0	
22	4/27/2011 7:54	0		0		0	
23	4/27/2011 7:55	0		0		0	
24	4/27/2011 7:56	0		0		0	
25	4/27/2011 7:57	0		0		0	
26	4/27/2011 7:58	0		0		0	
27	4/27/2011 7:59	0		0		0	
28	4/27/2011 8:00	0		0		0	
29	4/27/2011 8:01	0		0		0	
30	4/27/2011 8:02	0		0		0	
31	4/27/2011 8:03	0		0		0	
32	4/27/2011 8:04	0		0		0	
33	4/27/2011 8:05	0		0		0	
34	4/27/2011 8:06	0		0		0	
35	4/27/2011 8:07	0		0		0	
36	4/27/2011 8:08	0		0		0	
37	4/27/2011 8:09	0		0		0	
38	4/27/2011 8:10	0		0		0	
39	4/27/2011 8:11	0		0		0	
40	4/27/2011 8:12	0		0		0	
41	4/27/2011 8:13	0		0		0	
42	4/27/2011 8:14	0		0		0	
43	4/27/2011 8:15	0		0		0	
44	4/27/2011 8:16	0		0		0	
45	4/27/2011 8:17	0		0		0	
46	4/27/2011 8:18	0		0		0	
47	4/27/2011 8:19	0		0		0	
48	4/27/2011 8:20	0		0		0	
49	4/27/2011 8:21	0		0		0	
50	4/27/2011 8:22	0		0		0	
51	4/27/2011 8:23	0		0		0	
52	4/27/2011 8:24	0		0		0	
53	4/27/2011 8:25	0		0		0	
54	4/27/2011 8:26	0		0		0	
55	4/27/2011 8:27	0		0		0	
56	4/27/2011 8:28	0		0		0	
57	4/27/2011 8:29	0		0		0	
58	4/27/2011 8:30	0		0		0	

59	4/27/2011 8:31	0	0	0
60	4/27/2011 8:32	0	0	0
61	4/27/2011 8:33	0	0	0
62	4/27/2011 8:34	0	0	0
63	4/27/2011 8:35	0	0	0
64	4/27/2011 8:36	0	0	0
65	4/27/2011 8:37	0	0	0
66	4/27/2011 8:38	0	0	0
67	4/27/2011 8:39	0	0	0
68	4/27/2011 8:40	0	0	0
69	4/27/2011 8:41	0	0	0
70	4/27/2011 8:42	0	0	0
71	4/27/2011 8:43	0	0	0
72	4/27/2011 8:44	0	0	0
73	4/27/2011 8:45	0	0	0
74	4/27/2011 8:46	0	0	0
75	4/27/2011 8:47	0	0	0
76	4/27/2011 8:48	0	0	0
77	4/27/2011 8:49	0	0	0
78	4/27/2011 8:50	0	0	0
79	4/27/2011 8:51	0	0	0
80	4/27/2011 8:52	0	0	0
81	4/27/2011 8:53	0	0	0
82	4/27/2011 8:54	0	0	0
83	4/27/2011 8:55	0	0	0
84	4/27/2011 8:56	0	0	0
85	4/27/2011 8:57	0	0	0
86	4/27/2011 8:58	0	0.1	1.8
87	4/27/2011 8:59	0	0	0
88	4/27/2011 9:00	0	0	0
89	4/27/2011 9:01	0	0	0
90	4/27/2011 9:02	0	0	0
91	4/27/2011 9:03	0	0	0
92	4/27/2011 9:04	0	0	0
93	4/27/2011 9:05	0	0	0
94	4/27/2011 9:06	0	0	0
95	4/27/2011 9:07	0	0	0
96	4/27/2011 9:08	0	0	0
97	4/27/2011 9:09	0	0	0
98	4/27/2011 9:10	0	0	0
99	4/27/2011 9:11	0	0	0
100	4/27/2011 9:12	0	0	0
101	4/27/2011 9:13	0	0	0
102	4/27/2011 9:14	0	0	0
103	4/27/2011 9:15	0	0	0
104	4/27/2011 9:16	0	0	0
105	4/27/2011 9:17	0	0	0
106	4/27/2011 9:18	0	0	0
107	4/27/2011 9:19	0	0	0
108	4/27/2011 9:20	0	0	0
109	4/27/2011 9:21	0	0	0
110	4/27/2011 9:22	0	0	0
111	4/27/2011 9:23	0	0	0
112	4/27/2011 9:24	0	0	0
113	4/27/2011 9:25	0	0	0
114	4/27/2011 9:26	0	0	0
115	4/27/2011 9:27	0	0	0
116	4/27/2011 9:28	0	0	0
117	4/27/2011 9:29	0	0	0
118	4/27/2011 9:30	0	0	0
119	4/27/2011 9:31	0	0	0
120	4/27/2011 9:32	0	0	0
121	4/27/2011 9:33	0	0	0
122	4/27/2011 9:34	0	0	0
123	4/27/2011 9:35	0	0	0
124	4/27/2011 9:36	0	0	0
125	4/27/2011 9:37	0	0	0
126	4/27/2011 9:38	0	0	0
127	4/27/2011 9:39	0	0	0

128	4/27/2011 9:40	0	0	0
129	4/27/2011 9:41	0	0	0
130	4/27/2011 9:42	0	0	0
131	4/27/2011 9:43	0	0	0
132	4/27/2011 9:44	0	0	0
133	4/27/2011 9:45	0	0	0
134	4/27/2011 9:46	0	0	0
135	4/27/2011 9:47	0	0	0
136	4/27/2011 9:48	0	0	0
137	4/27/2011 9:49	0	0	0
138	4/27/2011 9:50	0	0	0
139	4/27/2011 9:51	0	0	0
140	4/27/2011 9:52	0	0	0
141	4/27/2011 9:53	0	0	0
142	4/27/2011 9:54	0	0	0
143	4/27/2011 9:55	0	0	0
144	4/27/2011 9:56	0	0	0
145	4/27/2011 9:57	0	0	0
146	4/27/2011 9:58	0	0	0
147	4/27/2011 9:59	0	0	0
148	4/27/2011 10:00	0	0	0
149	4/27/2011 10:01	0	0	0
150	4/27/2011 10:02	0	0	0
151	4/27/2011 10:03	0	0	0
152	4/27/2011 10:04	0	0	0
153	4/27/2011 10:05	0	0	0
154	4/27/2011 10:06	0	0	0
155	4/27/2011 10:07	0	0	0
156	4/27/2011 10:08	0	0	0
157	4/27/2011 10:09	0	0	0
158	4/27/2011 10:10	0	0	0
159	4/27/2011 10:11	0	0	0
160	4/27/2011 10:12	0	0	0
161	4/27/2011 10:13	0	0	0
162	4/27/2011 10:14	0	0	0
163	4/27/2011 10:15	0	0	0
164	4/27/2011 10:16	0	0	0
165	4/27/2011 10:17	0	0	0
166	4/27/2011 10:18	0	0	0
167	4/27/2011 10:19	0	0	0
168	4/27/2011 10:20	0	0	0
169	4/27/2011 10:21	0	0	0
170	4/27/2011 10:22	0	0	0
171	4/27/2011 10:23	0	0	0
172	4/27/2011 10:24	0	0	0
173	4/27/2011 10:25	0	0	0
174	4/27/2011 10:26	0	0	0
175	4/27/2011 10:27	0	0	0
176	4/27/2011 10:28	0	0	0
177	4/27/2011 10:29	0	0	0
178	4/27/2011 10:30	0	0	0
179	4/27/2011 10:31	0	0	0
180	4/27/2011 10:32	0	0	0
181	4/27/2011 10:33	0	0	0
182	4/27/2011 10:34	0	0	0
183	4/27/2011 10:35	0	0	0
184	4/27/2011 10:36	0	0	0
185	4/27/2011 10:37	0	0	0
186	4/27/2011 10:38	0	0	0
187	4/27/2011 10:39	0	0	0
188	4/27/2011 10:40	0	0	0
189	4/27/2011 10:41	0	0	0
190	4/27/2011 10:42	0	0	0
191	4/27/2011 10:43	0	0	0
192	4/27/2011 10:44	0	0	0
193	4/27/2011 10:45	0	0	0
194	4/27/2011 10:46	0	0	0
195	4/27/2011 10:47	0	0	0
196	4/27/2011 10:48	0	0	0

197	4/27/2011 10:49	0	0	0
198	4/27/2011 10:50	0	0	0
199	4/27/2011 10:51	0	0	0
200	4/27/2011 10:52	0	0	0
201	4/27/2011 10:53	0	0	0
202	4/27/2011 10:54	0	0	0
203	4/27/2011 10:55	0	0	0
204	4/27/2011 10:56	0	0	0
205	4/27/2011 10:57	0	0	0
206	4/27/2011 10:58	0	0	0
207	4/27/2011 10:59	0	0	0
208	4/27/2011 11:00	0	0	0
209	4/27/2011 11:01	0	0	0
210	4/27/2011 11:02	0	0	0
211	4/27/2011 11:03	0	0	0
212	4/27/2011 11:04	0	0	0
213	4/27/2011 11:05	0	0	0
214	4/27/2011 11:06	0	0	0
215	4/27/2011 11:07	0	0	0
216	4/27/2011 11:08	0	0	0
217	4/27/2011 11:09	0	0	0
218	4/27/2011 11:10	0	0	0
219	4/27/2011 11:11	0	0	0
220	4/27/2011 11:12	0	0	0
221	4/27/2011 11:13	0	0	0
222	4/27/2011 11:14	0	0	0
223	4/27/2011 11:15	0	0	0
224	4/27/2011 11:16	0	0	0
225	4/27/2011 11:17	0	0	0
226	4/27/2011 11:18	0	0	0
227	4/27/2011 11:19	0	0	0
228	4/27/2011 11:20	0	0	0
229	4/27/2011 11:21	0	0.6	5
230	4/27/2011 11:22	0	0	0
231	4/27/2011 11:23	0	0	0
232	4/27/2011 11:24	0	0	0
233	4/27/2011 11:25	0	0	0
234	4/27/2011 11:26	0	0	0
235	4/27/2011 11:27	0	0	0
236	4/27/2011 11:28	0	0	0
237	4/27/2011 11:29	0	0	0
238	4/27/2011 11:30	0	0	0
239	4/27/2011 11:31	0	0	0
240	4/27/2011 11:32	0	0	0
241	4/27/2011 11:33	0	0	0
242	4/27/2011 11:34	0	0	0
243	4/27/2011 11:35	0	0	0
244	4/27/2011 11:36	0	0	0
245	4/27/2011 11:37	0	0	0
246	4/27/2011 11:38	0	0	0
247	4/27/2011 11:39	0	0	0
248	4/27/2011 11:40	0	0	0
249	4/27/2011 11:41	0	0	0
250	4/27/2011 11:42	0	0	0
251	4/27/2011 11:43	0	0	0
252	4/27/2011 11:44	0	0	0
253	4/27/2011 11:45	0	0	0
254	4/27/2011 11:46	0	0	0
255	4/27/2011 11:47	0	0	0
256	4/27/2011 11:48	0	0	0
257	4/27/2011 11:49	0	0	0
258	4/27/2011 11:50	0	0	0
259	4/27/2011 11:51	0	0	0
260	4/27/2011 11:52	0	0	0
261	4/27/2011 11:53	0	0	0
262	4/27/2011 11:54	0	0	0
263	4/27/2011 11:55	0	0	0
264	4/27/2011 11:56	0	0	0
265	4/27/2011 11:57	0	0	0

266	4/27/2011 11:58	0	0	0
267	4/27/2011 11:59	0	0	0
268	4/27/2011 12:00	0	0	0
269	4/27/2011 12:01	0	0	0
270	4/27/2011 12:02	0	0	0
271	4/27/2011 12:03	0	0	0
272	4/27/2011 12:04	0	0	0
273	4/27/2011 12:05	0	0	0
274	4/27/2011 12:06	0	0	0
275	4/27/2011 12:07	0	0	0
276	4/27/2011 12:08	0	0	0
277	4/27/2011 12:09	0	0	0
278	4/27/2011 12:10	0	0	0
279	4/27/2011 12:11	0	0	0
280	4/27/2011 12:12	0	0	0
281	4/27/2011 12:13	0	0	0
282	4/27/2011 12:14	0	0	0
283	4/27/2011 12:15	0	0	0
284	4/27/2011 12:16	0	0	0
285	4/27/2011 12:17	0	0	0
286	4/27/2011 12:18	0	0	0
287	4/27/2011 12:19	0	0	0
288	4/27/2011 12:20	0	0	0
289	4/27/2011 12:21	0	0	0
290	4/27/2011 12:22	0	0	0
291	4/27/2011 12:23	0	0	0
292	4/27/2011 12:24	0	0	0
293	4/27/2011 12:25	0	0	0
294	4/27/2011 12:26	0	0	0
295	4/27/2011 12:27	0	0	0
296	4/27/2011 12:28	0	0	0
297	4/27/2011 12:29	0	0	0
298	4/27/2011 12:30	0	0	0
299	4/27/2011 12:31	0	0	0
300	4/27/2011 12:32	0	0	0
301	4/27/2011 12:33	0	0	0
302	4/27/2011 12:34	0	0	0
303	4/27/2011 12:35	0	0	0
304	4/27/2011 12:36	0	0	0
305	4/27/2011 12:37	0	0	0
306	4/27/2011 12:38	0	0	0
307	4/27/2011 12:39	0	0	0
308	4/27/2011 12:40	0	0	0
309	4/27/2011 12:41	0	0	0
310	4/27/2011 12:42	0	0	0
311	4/27/2011 12:43	0	0	0
312	4/27/2011 12:44	0	0	0
313	4/27/2011 12:45	0	0	0
314	4/27/2011 12:46	0	0	0
315	4/27/2011 12:47	0	0	0
316	4/27/2011 12:48	0	0	0
317	4/27/2011 12:49	0	0	0
318	4/27/2011 12:50	0	0	0
319	4/27/2011 12:51	0	0	0
320	4/27/2011 12:52	0	0	0
321	4/27/2011 12:53	0	0	0
322	4/27/2011 12:54	0	0	0
323	4/27/2011 12:55	0	0	0
324	4/27/2011 12:56	0	0	0
325	4/27/2011 12:57	0	0	0
326	4/27/2011 12:58	0	0	0
327	4/27/2011 12:59	0	0	0
328	4/27/2011 13:00	0	0	0
329	4/27/2011 13:01	0	0	0
330	4/27/2011 13:02	0	0	0
331	4/27/2011 13:03	0	0	0
332	4/27/2011 13:04	0	0	0
333	4/27/2011 13:05	0	0	0
334	4/27/2011 13:06	0	0	0

335	4/27/2011 13:07	0	0	0
336	4/27/2011 13:08	0	0	0
337	4/27/2011 13:09	0	0	0
338	4/27/2011 13:10	0	0	0
339	4/27/2011 13:11	0	0	0
340	4/27/2011 13:12	0	0	0
341	4/27/2011 13:13	0	0	0
342	4/27/2011 13:14	0	0	0
343	4/27/2011 13:15	0	0	0
344	4/27/2011 13:16	0	0	0
345	4/27/2011 13:17	0	0	0
346	4/27/2011 13:18	0	0	0
347	4/27/2011 13:19	0	0	0
348	4/27/2011 13:20	0	0	0
349	4/27/2011 13:21	0	0	0
350	4/27/2011 13:22	0	0	0
351	4/27/2011 13:23	0	0	0
352	4/27/2011 13:24	0	0	0
353	4/27/2011 13:25	0	0	0
354	4/27/2011 13:26	0	0	0
355	4/27/2011 13:27	0	0	0
356	4/27/2011 13:28	0	0	0
357	4/27/2011 13:29	0	0	0
358	4/27/2011 13:30	0	0	0
359	4/27/2011 13:31	0	0	0
360	4/27/2011 13:32	0	0	0
361	4/27/2011 13:33	0	0	0
362	4/27/2011 13:34	0	0	0
363	4/27/2011 13:35	0	0	0
364	4/27/2011 13:36	0	0	0
365	4/27/2011 13:37	0	0	0
366	4/27/2011 13:38	0	0	0
367	4/27/2011 13:39	0	0	0
368	4/27/2011 13:40	0	0	0
369	4/27/2011 13:41	0	0	0
370	4/27/2011 13:42	0	0	0
371	4/27/2011 13:43	0	0	0
372	4/27/2011 13:44	0	0	0
373	4/27/2011 13:45	0	0	0
374	4/27/2011 13:46	0	0	0
375	4/27/2011 13:47	0	0	0
376	4/27/2011 13:48	0	0	0
377	4/27/2011 13:49	0	0	0
378	4/27/2011 13:50	0	0	0
379	4/27/2011 13:51	0	0	0
380	4/27/2011 13:52	0	0	0
381	4/27/2011 13:53	0	0	0
382	4/27/2011 13:54	0	0	0
383	4/27/2011 13:55	0	0	0
384	4/27/2011 13:56	0	0	0
385	4/27/2011 13:57	0	0	0
386	4/27/2011 13:58	0	0	0
387	4/27/2011 13:59	0	0	0
388	4/27/2011 14:00	0	0	0
389	4/27/2011 14:01	0	0	0
390	4/27/2011 14:02	0	0	0
391	4/27/2011 14:03	0	0	0
392	4/27/2011 14:04	0	0	0
393	4/27/2011 14:05	0	0	0
394	4/27/2011 14:06	0	0	0
395	4/27/2011 14:07	0	0	0
396	4/27/2011 14:08	0	0	0
397	4/27/2011 14:09	0	0	0
398	4/27/2011 14:10	0	0	0
399	4/27/2011 14:11	0	0	0
400	4/27/2011 14:12	0	0	0
401	4/27/2011 14:13	0	0	0
402	4/27/2011 14:14	0	0	0
403	4/27/2011 14:15	0	0	0

404	4/27/2011 14:16	0	0	0
405	4/27/2011 14:17	0	0	0
406	4/27/2011 14:18	0	0	0
407	4/27/2011 14:19	0	0	0
408	4/27/2011 14:20	0	0	0
409	4/27/2011 14:21	0	0	0
410	4/27/2011 14:22	0	0	0
411	4/27/2011 14:23	0	0	0
412	4/27/2011 14:24	0	0	0
413	4/27/2011 14:25	0	0	0
414	4/27/2011 14:26	0	0	0
415	4/27/2011 14:27	0	0	0
416	4/27/2011 14:28	0	0	0
417	4/27/2011 14:29	0	0	0
418	4/27/2011 14:30	0	0	0
419	4/27/2011 14:31	0	0	0
420	4/27/2011 14:32	0	0	0
421	4/27/2011 14:33	0	0	0
422	4/27/2011 14:34	0	0	0
423	4/27/2011 14:35	0	0	0
424	4/27/2011 14:36	0	0	0
425	4/27/2011 14:37	0	0	0
426	4/27/2011 14:38	0	0	0
427	4/27/2011 14:39	0	0	0
428	4/27/2011 14:40	0	0	0
429	4/27/2011 14:41	0	0	0
430	4/27/2011 14:42	0	0	0
431	4/27/2011 14:43	0	0	0
432	4/27/2011 14:44	0	0	0
433	4/27/2011 14:45	0	0	0
434	4/27/2011 14:46	0	0	0
435	4/27/2011 14:47	0	0	0
436	4/27/2011 14:48	0	0	0
437	4/27/2011 14:49	0	0	0
438	4/27/2011 14:50	0	0	0
439	4/27/2011 14:51	0	0	0
440	4/27/2011 14:52	0	0	0
441	4/27/2011 14:53	0	0	0
442	4/27/2011 14:54	0	0	0
443	4/27/2011 14:55	0	0	0
444	4/27/2011 14:56	0	0	0
445	4/27/2011 14:57	0	0	0
446	4/27/2011 14:58	0	0	0

=========Event #25 information (begin)=========
==========
[Event #25 name:]--[Event #25]2011-04-27 03:34<-->2011-04-27 12:14
[Event start time:]--2011-04-27 03:34:39[Event end time:]--2011-04-27 12:14:39
==========Event #25 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367
Data Points: 520 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID(ppb)
Measurement Gas : Isobutene
Calibration Time : 2011-04-27 03:34:00
Drift Value : ---
Low Alarm Levels : 21738
High Alarm Levels : 43476
Span Value : 100000
Correction Factor : 1.00
Over Alarm Levels : 15000000
==========Event #25 data informations==========

LINE#	Date/Time	PID(ppb)	PID(ppm)
1	4/27/2011 3:35	29911	29.911
2	4/27/2011 3:36	0	0
3	4/27/2011 3:37	0	0
4	4/27/2011 3:38	0	0
5	4/27/2011 3:39	0	0
6	4/27/2011 3:40	0	0
7	4/27/2011 3:41	0	0
8	4/27/2011 3:42	0	0
9	4/27/2011 3:43	0	0
10	4/27/2011 3:44	0	0
11	4/27/2011 3:45	0	0
12	4/27/2011 3:46	0	0
13	4/27/2011 3:47	0	0
14	4/27/2011 3:48	0	0
15	4/27/2011 3:49	0	0
16	4/27/2011 3:50	0	0
17	4/27/2011 3:51	0	0
18	4/27/2011 3:52	0	0
19	4/27/2011 3:53	0	0
20	4/27/2011 3:54	0	0
21	4/27/2011 3:55	0	0
22	4/27/2011 3:56	0	0
23	4/27/2011 3:57	0	0
24	4/27/2011 3:58	0	0
25	4/27/2011 3:59	0	0
26	4/27/2011 4:00	0	0
27	4/27/2011 4:01	0	0
28	4/27/2011 4:02	0	0
29	4/27/2011 4:03	0	0
30	4/27/2011 4:04	0	0
31	4/27/2011 4:05	0	0
32	4/27/2011 4:06	0	0
33	4/27/2011 4:07	0	0
34	4/27/2011 4:08	0	0
35	4/27/2011 4:09	0	0
36	4/27/2011 4:10	0	0
37	4/27/2011 4:11	0	0
38	4/27/2011 4:12	0	0
39	4/27/2011 4:13	0	0
40	4/27/2011 4:14	0	0
41	4/27/2011 4:15	0	0
42	4/27/2011 4:16	0	0
43	4/27/2011 4:17	0	0
44	4/27/2011 4:18	0	0
45	4/27/2011 4:19	0	0
46	4/27/2011 4:20	0	0
47	4/27/2011 4:21	0	0
48	4/27/2011 4:22	0	0

49	4/27/2011 4:23	0	0
50	4/27/2011 4:24	0	0
51	4/27/2011 4:25	0	0
52	4/27/2011 4:26	0	0
53	4/27/2011 4:27	0	0
54	4/27/2011 4:28	0	0
55	4/27/2011 4:29	0	0
56	4/27/2011 4:30	0	0
57	4/27/2011 4:31	0	0
58	4/27/2011 4:32	0	0
59	4/27/2011 4:33	0	0
60	4/27/2011 4:34	0	0
61	4/27/2011 4:35	0	0
62	4/27/2011 4:36	0	0
63	4/27/2011 4:37	0	0
64	4/27/2011 4:38	0	0
65	4/27/2011 4:39	0	0
66	4/27/2011 4:40	0	0
67	4/27/2011 4:41	0	0
68	4/27/2011 4:42	0	0
69	4/27/2011 4:43	0	0
70	4/27/2011 4:44	0	0
71	4/27/2011 4:45	0	0
72	4/27/2011 4:46	0	0
73	4/27/2011 4:47	0	0
74	4/27/2011 4:48	0	0
75	4/27/2011 4:49	0	0
76	4/27/2011 4:50	0	0
77	4/27/2011 4:51	0	0
78	4/27/2011 4:52	0	0
79	4/27/2011 4:53	0	0
80	4/27/2011 4:54	0	0
81	4/27/2011 4:55	0	0
82	4/27/2011 4:56	0	0
83	4/27/2011 4:57	0	0
84	4/27/2011 4:58	0	0
85	4/27/2011 4:59	0	0
86	4/27/2011 5:00	0	0
87	4/27/2011 5:01	0	0
88	4/27/2011 5:02	0	0
89	4/27/2011 5:03	0	0
90	4/27/2011 5:04	0	0
91	4/27/2011 5:05	0	0
92	4/27/2011 5:06	0	0
93	4/27/2011 5:07	0	0
94	4/27/2011 5:08	0	0
95	4/27/2011 5:09	0	0
96	4/27/2011 5:10	0	0
97	4/27/2011 5:11	0	0
98	4/27/2011 5:12	0	0
99	4/27/2011 5:13	0	0
100	4/27/2011 5:14	0	0
101	4/27/2011 5:15	0	0
102	4/27/2011 5:16	0	0
103	4/27/2011 5:17	0	0
104	4/27/2011 5:18	0	0
105	4/27/2011 5:19	0	0
106	4/27/2011 5:20	0	0
107	4/27/2011 5:21	0	0
108	4/27/2011 5:22	0	0
109	4/27/2011 5:23	0	0
110	4/27/2011 5:24	0	0
111	4/27/2011 5:25	0	0
112	4/27/2011 5:26	0	0
113	4/27/2011 5:27	0	0
114	4/27/2011 5:28	0	0
115	4/27/2011 5:29	1	0.001
116	4/27/2011 5:30	0	0
117	4/27/2011 5:31	1	0.001

118	4/27/2011 5:32	0	0
119	4/27/2011 5:33	0	0
120	4/27/2011 5:34	0	0
121	4/27/2011 5:35	0	0
122	4/27/2011 5:36	0	0
123	4/27/2011 5:37	0	0
124	4/27/2011 5:38	0	0
125	4/27/2011 5:39	0	0
126	4/27/2011 5:40	0	0
127	4/27/2011 5:41	0	0
128	4/27/2011 5:42	0	0
129	4/27/2011 5:43	0	0
130	4/27/2011 5:44	0	0
131	4/27/2011 5:45	0	0
132	4/27/2011 5:46	0	0
133	4/27/2011 5:47	0	0
134	4/27/2011 5:48	0	0
135	4/27/2011 5:49	0	0
136	4/27/2011 5:50	0	0
137	4/27/2011 5:51	0	0
138	4/27/2011 5:52	0	0
139	4/27/2011 5:53	0	0
140	4/27/2011 5:54	0	0
141	4/27/2011 5:55	0	0
142	4/27/2011 5:56	3	0.003
143	4/27/2011 5:57	0	0
144	4/27/2011 5:58	0	0
145	4/27/2011 5:59	0	0
146	4/27/2011 6:00	0	0
147	4/27/2011 6:01	1	0.001
148	4/27/2011 6:02	0	0
149	4/27/2011 6:03	0	0
150	4/27/2011 6:04	0	0
151	4/27/2011 6:05	0	0
152	4/27/2011 6:06	0	0
153	4/27/2011 6:07	0	0
154	4/27/2011 6:08	0	0
155	4/27/2011 6:09	0	0
156	4/27/2011 6:10	0	0
157	4/27/2011 6:11	0	0
158	4/27/2011 6:12	0	0
159	4/27/2011 6:13	0	0
160	4/27/2011 6:14	0	0
161	4/27/2011 6:15	0	0
162	4/27/2011 6:16	0	0
163	4/27/2011 6:17	0	0
164	4/27/2011 6:18	0	0
165	4/27/2011 6:19	0	0
166	4/27/2011 6:20	0	0
167	4/27/2011 6:21	0	0
168	4/27/2011 6:22	0	0
169	4/27/2011 6:23	0	0
170	4/27/2011 6:24	0	0
171	4/27/2011 6:25	0	0
172	4/27/2011 6:26	0	0
173	4/27/2011 6:27	0	0
174	4/27/2011 6:28	0	0
175	4/27/2011 6:29	0	0
176	4/27/2011 6:30	0	0
177	4/27/2011 6:31	0	0
178	4/27/2011 6:32	0	0
179	4/27/2011 6:33	0	0
180	4/27/2011 6:34	0	0
181	4/27/2011 6:35	0	0
182	4/27/2011 6:36	0	0
183	4/27/2011 6:37	0	0
184	4/27/2011 6:38	0	0
185	4/27/2011 6:39	0	0
186	4/27/2011 6:40	0	0

187	4/27/2011 6:41	0	0
188	4/27/2011 6:42	0	0
189	4/27/2011 6:43	0	0
190	4/27/2011 6:44	0	0
191	4/27/2011 6:45	0	0
192	4/27/2011 6:46	0	0
193	4/27/2011 6:47	0	0
194	4/27/2011 6:48	0	0
195	4/27/2011 6:49	0	0
196	4/27/2011 6:50	0	0
197	4/27/2011 6:51	0	0
198	4/27/2011 6:52	0	0
199	4/27/2011 6:53	0	0
200	4/27/2011 6:54	0	0
201	4/27/2011 6:55	0	0
202	4/27/2011 6:56	0	0
203	4/27/2011 6:57	0	0
204	4/27/2011 6:58	0	0
205	4/27/2011 6:59	0	0
206	4/27/2011 7:00	0	0
207	4/27/2011 7:01	0	0
208	4/27/2011 7:02	0	0
209	4/27/2011 7:03	0	0
210	4/27/2011 7:04	0	0
211	4/27/2011 7:05	0	0
212	4/27/2011 7:06	0	0
213	4/27/2011 7:07	0	0
214	4/27/2011 7:08	0	0
215	4/27/2011 7:09	0	0
216	4/27/2011 7:10	0	0
217	4/27/2011 7:11	1	0.001
218	4/27/2011 7:12	0	0
219	4/27/2011 7:13	0	0
220	4/27/2011 7:14	0	0
221	4/27/2011 7:15	0	0
222	4/27/2011 7:16	0	0
223	4/27/2011 7:17	0	0
224	4/27/2011 7:18	0	0
225	4/27/2011 7:19	0	0
226	4/27/2011 7:20	0	0
227	4/27/2011 7:21	0	0
228	4/27/2011 7:22	0	0
229	4/27/2011 7:23	0	0
230	4/27/2011 7:24	0	0
231	4/27/2011 7:25	0	0
232	4/27/2011 7:26	0	0
233	4/27/2011 7:27	0	0
234	4/27/2011 7:28	0	0
235	4/27/2011 7:29	0	0
236	4/27/2011 7:30	0	0
237	4/27/2011 7:31	0	0
238	4/27/2011 7:32	0	0
239	4/27/2011 7:33	0	0
240	4/27/2011 7:34	0	0
241	4/27/2011 7:35	0	0
242	4/27/2011 7:36	0	0
243	4/27/2011 7:37	0	0
244	4/27/2011 7:38	0	0
245	4/27/2011 7:39	0	0
246	4/27/2011 7:40	0	0
247	4/27/2011 7:41	0	0
248	4/27/2011 7:42	0	0
249	4/27/2011 7:43	0	0
250	4/27/2011 7:44	0	0
251	4/27/2011 7:45	0	0
252	4/27/2011 7:46	0	0
253	4/27/2011 7:47	0	0
254	4/27/2011 7:48	0	0
255	4/27/2011 7:49	0	0

256	4/27/2011 7:50	0	0
257	4/27/2011 7:51	6	0.006
258	4/27/2011 7:52	16	0.016
259	4/27/2011 7:53	0	0
260	4/27/2011 7:54	0	0
261	4/27/2011 7:55	0	0
262	4/27/2011 7:56	0	0
263	4/27/2011 7:57	0	0
264	4/27/2011 7:58	0	0
265	4/27/2011 7:59	0	0
266	4/27/2011 8:00	0	0
267	4/27/2011 8:01	0	0
268	4/27/2011 8:02	0	0
269	4/27/2011 8:03	0	0
270	4/27/2011 8:04	0	0
271	4/27/2011 8:05	0	0
272	4/27/2011 8:06	0	0
273	4/27/2011 8:07	0	0
274	4/27/2011 8:08	0	0
275	4/27/2011 8:09	1	0.001
276	4/27/2011 8:10	0	0
277	4/27/2011 8:11	0	0
278	4/27/2011 8:12	0	0
279	4/27/2011 8:13	20	0.02
280	4/27/2011 8:14	0	0
281	4/27/2011 8:15	0	0
282	4/27/2011 8:16	0	0
283	4/27/2011 8:17	0	0
284	4/27/2011 8:18	0	0
285	4/27/2011 8:19	0	0
286	4/27/2011 8:20	0	0
287	4/27/2011 8:21	0	0
288	4/27/2011 8:22	0	0
289	4/27/2011 8:23	0	0
290	4/27/2011 8:24	0	0
291	4/27/2011 8:25	0	0
292	4/27/2011 8:26	0	0
293	4/27/2011 8:27	0	0
294	4/27/2011 8:28	0	0
295	4/27/2011 8:29	0	0
296	4/27/2011 8:30	0	0
297	4/27/2011 8:31	0	0
298	4/27/2011 8:32	0	0
299	4/27/2011 8:33	0	0
300	4/27/2011 8:34	0	0
301	4/27/2011 8:35	0	0
302	4/27/2011 8:36	0	0
303	4/27/2011 8:37	0	0
304	4/27/2011 8:38	0	0
305	4/27/2011 8:39	0	0
306	4/27/2011 8:40	0	0
307	4/27/2011 8:41	0	0
308	4/27/2011 8:42	0	0
309	4/27/2011 8:43	0	0
310	4/27/2011 8:44	0	0
311	4/27/2011 8:45	0	0
312	4/27/2011 8:46	0	0
313	4/27/2011 8:47	0	0
314	4/27/2011 8:48	0	0
315	4/27/2011 8:49	0	0
316	4/27/2011 8:50	0	0
317	4/27/2011 8:51	0	0
318	4/27/2011 8:52	0	0
319	4/27/2011 8:53	0	0
320	4/27/2011 8:54	0	0
321	4/27/2011 8:55	0	0
322	4/27/2011 8:56	0	0
323	4/27/2011 8:57	0	0
324	4/27/2011 8:58	0	0

325	4/27/2011 8:59	0	0
326	4/27/2011 9:00	0	0
327	4/27/2011 9:01	0	0
328	4/27/2011 9:02	0	0
329	4/27/2011 9:03	0	0
330	4/27/2011 9:04	0	0
331	4/27/2011 9:05	0	0
332	4/27/2011 9:06	0	0
333	4/27/2011 9:07	0	0
334	4/27/2011 9:08	0	0
335	4/27/2011 9:09	0	0
336	4/27/2011 9:10	0	0
337	4/27/2011 9:11	0	0
338	4/27/2011 9:12	0	0
339	4/27/2011 9:13	0	0
340	4/27/2011 9:14	0	0
341	4/27/2011 9:15	94	0.094
342	4/27/2011 9:16	0	0
343	4/27/2011 9:17	0	0
344	4/27/2011 9:18	0	0
345	4/27/2011 9:19	0	0
346	4/27/2011 9:20	0	0
347	4/27/2011 9:21	0	0
348	4/27/2011 9:22	11	0.011
349	4/27/2011 9:23	0	0
350	4/27/2011 9:24	0	0
351	4/27/2011 9:25	0	0
352	4/27/2011 9:26	0	0
353	4/27/2011 9:27	0	0
354	4/27/2011 9:28	0	0
355	4/27/2011 9:29	0	0
356	4/27/2011 9:30	0	0
357	4/27/2011 9:31	0	0
358	4/27/2011 9:32	0	0
359	4/27/2011 9:33	0	0
360	4/27/2011 9:34	0	0
361	4/27/2011 9:35	0	0
362	4/27/2011 9:36	0	0
363	4/27/2011 9:37	0	0
364	4/27/2011 9:38	0	0
365	4/27/2011 9:39	0	0
366	4/27/2011 9:40	0	0
367	4/27/2011 9:41	0	0
368	4/27/2011 9:42	0	0
369	4/27/2011 9:43	0	0
370	4/27/2011 9:44	0	0
371	4/27/2011 9:45	0	0
372	4/27/2011 9:46	0	0
373	4/27/2011 9:47	0	0
374	4/27/2011 9:48	0	0
375	4/27/2011 9:49	0	0
376	4/27/2011 9:50	0	0
377	4/27/2011 9:51	0	0
378	4/27/2011 9:52	0	0
379	4/27/2011 9:53	0	0
380	4/27/2011 9:54	0	0
381	4/27/2011 9:55	0	0
382	4/27/2011 9:56	0	0
383	4/27/2011 9:57	0	0
384	4/27/2011 9:58	0	0
385	4/27/2011 9:59	0	0
386	4/27/2011 10:00	0	0
387	4/27/2011 10:01	0	0
388	4/27/2011 10:02	0	0
389	4/27/2011 10:03	0	0
390	4/27/2011 10:04	0	0
391	4/27/2011 10:05	0	0
392	4/27/2011 10:06	0	0
393	4/27/2011 10:07	0	0

394	4/27/2011 10:08	0	0
395	4/27/2011 10:09	1	0.001
396	4/27/2011 10:10	0	0
397	4/27/2011 10:11	0	0
398	4/27/2011 10:12	0	0
399	4/27/2011 10:13	0	0
400	4/27/2011 10:14	0	0
401	4/27/2011 10:15	0	0
402	4/27/2011 10:16	0	0
403	4/27/2011 10:17	0	0
404	4/27/2011 10:18	0	0
405	4/27/2011 10:19	0	0
406	4/27/2011 10:20	0	0
407	4/27/2011 10:21	0	0
408	4/27/2011 10:22	0	0
409	4/27/2011 10:23	0	0
410	4/27/2011 10:24	0	0
411	4/27/2011 10:25	0	0
412	4/27/2011 10:26	0	0
413	4/27/2011 10:27	0	0
414	4/27/2011 10:28	0	0
415	4/27/2011 10:29	0	0
416	4/27/2011 10:30	0	0
417	4/27/2011 10:31	0	0
418	4/27/2011 10:32	0	0
419	4/27/2011 10:33	0	0
420	4/27/2011 10:34	0	0
421	4/27/2011 10:35	0	0
422	4/27/2011 10:36	0	0
423	4/27/2011 10:37	0	0
424	4/27/2011 10:38	0	0
425	4/27/2011 10:39	0	0
426	4/27/2011 10:40	0	0
427	4/27/2011 10:41	0	0
428	4/27/2011 10:42	0	0
429	4/27/2011 10:43	0	0
430	4/27/2011 10:44	0	0
431	4/27/2011 10:45	0	0
432	4/27/2011 10:46	0	0
433	4/27/2011 10:47	0	0
434	4/27/2011 10:48	0	0
435	4/27/2011 10:49	0	0
436	4/27/2011 10:50	0	0
437	4/27/2011 10:51	0	0
438	4/27/2011 10:52	0	0
439	4/27/2011 10:53	0	0
440	4/27/2011 10:54	0	0
441	4/27/2011 10:55	0	0
442	4/27/2011 10:56	0	0
443	4/27/2011 10:57	0	0
444	4/27/2011 10:58	0	0
445	4/27/2011 10:59	0	0
446	4/27/2011 11:00	0	0
447	4/27/2011 11:01	0	0
448	4/27/2011 11:02	108	0.108
449	4/27/2011 11:03	0	0
450	4/27/2011 11:04	0	0
451	4/27/2011 11:05	0	0
452	4/27/2011 11:06	0	0
453	4/27/2011 11:07	0	0
454	4/27/2011 11:08	0	0
455	4/27/2011 11:09	0	0
456	4/27/2011 11:10	0	0
457	4/27/2011 11:11	0	0
458	4/27/2011 11:12	0	0
459	4/27/2011 11:13	0	0
460	4/27/2011 11:14	0	0
461	4/27/2011 11:15	0	0
462	4/27/2011 11:16	0	0

463	4/27/2011 11:17	0	0
464	4/27/2011 11:18	0	0
465	4/27/2011 11:19	0	0
466	4/27/2011 11:20	0	0
467	4/27/2011 11:21	0	0
468	4/27/2011 11:22	0	0
469	4/27/2011 11:23	0	0
470	4/27/2011 11:24	0	0
471	4/27/2011 11:25	0	0
472	4/27/2011 11:26	0	0
473	4/27/2011 11:27	0	0
474	4/27/2011 11:28	0	0
475	4/27/2011 11:29	0	0
476	4/27/2011 11:30	0	0
477	4/27/2011 11:31	0	0
478	4/27/2011 11:32	0	0
479	4/27/2011 11:33	0	0
480	4/27/2011 11:34	0	0
481	4/27/2011 11:35	0	0
482	4/27/2011 11:36	0	0
483	4/27/2011 11:37	0	0
484	4/27/2011 11:38	0	0
485	4/27/2011 11:39	0	0
486	4/27/2011 11:40	0	0
487	4/27/2011 11:41	0	0
488	4/27/2011 11:42	28	0.028
489	4/27/2011 11:43	21	0.021
490	4/27/2011 11:44	41	0.041
491	4/27/2011 11:45	239	0.239
492	4/27/2011 11:46	442	0.442
493	4/27/2011 11:47	17	0.017
494	4/27/2011 11:48	0	0
495	4/27/2011 11:49	0	0
496	4/27/2011 11:50	0	0
497	4/27/2011 11:51	0	0
498	4/27/2011 11:52	0	0
499	4/27/2011 11:53	0	0
500	4/27/2011 11:54	0	0
501	4/27/2011 11:55	0	0
502	4/27/2011 11:56	0	0
503	4/27/2011 11:57	0	0
504	4/27/2011 11:58	0	0
505	4/27/2011 11:59	0	0
506	4/27/2011 12:00	0	0
507	4/27/2011 12:01	0	0
508	4/27/2011 12:02	0	0
509	4/27/2011 12:03	0	0
510	4/27/2011 12:04	0	0
511	4/27/2011 12:05	0	0
512	4/27/2011 12:06	0	0
513	4/27/2011 12:07	0	0
514	4/27/2011 12:08	0	0
515	4/27/2011 12:09	0	0
516	4/27/2011 12:10	0	0
517	4/27/2011 12:11	0	0
518	4/27/2011 12:12	0	0
519	4/27/2011 12:13	0	0
520	4/27/2011 12:14	0	0

==========Event #25 information (end)==========

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530110314
Firmware Version	2.7
Calibration Date	1/17/2011
Test Name	MANUAL_008
Test Start Time	7:33:03 AM
Test Start Date	4/27/2011
Test Length [D:H:M]	0:13:55
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.025
Mass Minimum [mg/m3]	0
Mass Maximum [mg/m3]	0.125
Mass TWA [mg/m3]	0
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	507

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.023		
120	0.022		
180	0.022		
240	0.022		
300	0.022		
360	0.022		
420	0.024		
480	0.024		
540	0.026		
600	0.026		
660	0.028		
720	0.027		
780	0.027		
840	0.027		
900	0.027		
960	0.028		
1020	0.028		
1080	0.029		
1140	0.03		
1200	0.029		
1260	0.029		
1320	0.03		
1380	0.03		
1440	0.03		
1500	0.031		
1560	0.03		
1620	0.03		
1680	0.032		
1740	0.043		
1800	0.032		
1860	0.032		
1920	0.03		
1980	0.029		
2040	0.029		
2100	0.029		
2160	0.028		
2220	0.03		
2280	0.038		
2340	0.031		
2400	0.038		
2460	0.037		
2520	0.033		
2580	0.028		
2640	0.034		
2700	0.032		
2760	0.032		
2820	0.032		
2880	0.037		
2940	0.037		

3000	0.044
3060	0.032
3120	0.035
3180	0.033
3240	0.032
3300	0.03
3360	0.031
3420	0.035
3480	0.04
3540	0.036
3600	0.047
3660	0.035
3720	0.042
3780	0.028
3840	0.029
3900	0.031
3960	0.029
4020	0.03
4080	0.03
4140	0.03
4200	0.027
4260	0.028
4320	0.028
4380	0.03
4440	0.03
4500	0.038
4560	0.036
4620	0.033
4680	0.039
4740	0.043
4800	0.046
4860	0.047
4920	0.042
4980	0.035
5040	0.039
5100	0.039
5160	0.041
5220	0.025
5280	0.025
5340	0.026
5400	0.037
5460	0.034
5520	0.034
5580	0.033
5640	0.034
5700	0.032
5760	0.031
5820	0.028
5880	0.029
5940	0.026
6000	0.031
6060	0.029
6120	0.026
6180	0.038
6240	0.038
6300	0.03
6360	0.027
6420	0.025
6480	0.024
6540	0.024
6600	0.024
6660	0.024
6720	0.023
6780	0.024
6840	0.024
6900	0.024
6960	0.024
7020	0.027
7080	0.032

7140	0.029
7200	0.025
7260	0.027
7320	0.027
7380	0.027
7440	0.025
7500	0.026
7560	0.026
7620	0.027
7680	0.027
7740	0.025
7800	0.024
7860	0.024
7920	0.025
7980	0.024
8040	0.025
8100	0.025
8160	0.026
8220	0.025
8280	0.024
8340	0.027
8400	0.024
8460	0.025
8520	0.026
8580	0.024
8640	0.024
8700	0.025
8760	0.024
8820	0.024
8880	0.024
8940	0.027
9000	0.031
9060	0.029
9120	0.025
9180	0.027
9240	0.024
9300	0.026
9360	0.025
9420	0.023
9480	0.024
9540	0.024
9600	0.024
9660	0.025
9720	0.025
9780	0.027
9840	0.027
9900	0.027
9960	0.028
10020	0.029
10080	0.031
10140	0.03
10200	0.028
10260	0.027
10320	0.027
10380	0.027
10440	0.029
10500	0.028
10560	0.03
10620	0.027
10680	0.027
10740	0.027
10800	0.125
10860	0.058
10920	0.034
10980	0.032
11040	0.052
11100	0.032
11160	0.026
11220	0.026

11280	0.026
11340	0.03
11400	0.029
11460	0.03
11520	0.031
11580	0.031
11640	0.03
11700	0.031
11760	0.031
11820	0.029
11880	0.03
11940	0.029
12000	0.028
12060	0.026
12120	0.026
12180	0.025
12240	0.024
12300	0.023
12360	0.024
12420	0.022
12480	0.023
12540	0.025
12600	0.024
12660	0.021
12720	0.02
12780	0.02
12840	0.019
12900	0.018
12960	0.019
13020	0.019
13080	0.019
13140	0.019
13200	0.019
13260	0.025
13320	0.018
13380	0.019
13440	0.02
13500	0.02
13560	0.02
13620	0.02
13680	0.02
13740	0.02
13800	0.02
13860	0.021
13920	0.02
13980	0.021
14040	0.02
14100	0.02
14160	0.023
14220	0.019
14280	0.018
14340	0.019
14400	0.018
14460	0.018
14520	0.018
14580	0.122
14640	0.062
14700	0.018
14760	0.018
14820	0.018
14880	0.017
14940	0.017
15000	0.017
15060	0.02
15120	0.017
15180	0.09
15240	0.036
15300	0.017
15360	0.018

15420	0.02
15480	0.016
15540	0.016
15600	0.017
15660	0.017
15720	0.019
15780	0.018
15840	0.018
15900	0.017
15960	0.018
16020	0.018
16080	0.019
16140	0.02
16200	0.051
16260	0.048
16320	0.02
16380	0.019
16440	0.018
16500	0.022
16560	0.02
16620	0.02
16680	0.019
16740	0.02
16800	0.02
16860	0.019
16920	0.019
16980	0.02
17040	0.02
17100	0.023
17160	0.021
17220	0.023
17280	0.022
17340	0.022
17400	0.026
17460	0.078
17520	0.087
17580	0.038
17640	0.022
17700	0.021
17760	0.022
17820	0.022
17880	0.021
17940	0.021
18000	0.02
18060	0.02
18120	0.02
18180	0.02
18240	0.021
18300	0.019
18360	0.019
18420	0.021
18480	0.021
18540	0.032
18600	0.033
18660	0.031
18720	0.021
18780	0.022
18840	0.024
18900	0.023
18960	0.022
19020	0.022
19080	0.022
19140	0.021
19200	0.021
19260	0.02
19320	0.02
19380	0.021
19440	0.02
19500	0.02

19560	0.02
19620	0.02
19680	0.02
19740	0.021
19800	0.02
19860	0.021
19920	0.02
19980	0.022
20040	0.021
20100	0.021
20160	0.023
20220	0.045
20280	0.022
20340	0.021
20400	0.022
20460	0.021
20520	0.041
20580	0.021
20640	0.021
20700	0.022
20760	0.022
20820	0.022
20880	0.022
20940	0.024
21000	0.022
21060	0.023
21120	0.022
21180	0.022
21240	0.022
21300	0.022
21360	0.022
21420	0.023
21480	0.039
21540	0.021
21600	0.021
21660	0.021
21720	0.022
21780	0.022
21840	0.021
21900	0.022
21960	0.021
22020	0.021
22080	0.022
22140	0.021
22200	0.02
22260	0.021
22320	0.039
22380	0.021
22440	0.021
22500	0.022
22560	0.021
22620	0.02
22680	0.021
22740	0.019
22800	0.021
22860	0.02
22920	0.023
22980	0.022
23040	0.037
23100	0.02
23160	0.019
23220	0.018
23280	0.018
23340	0.018
23400	0.017
23460	0.016
23520	0.017
23580	0.018
23640	0.017

23700	0.018
23760	0.02
23820	0.018
23880	0.018
23940	0.017
24000	0.017
24060	0.016
24120	0.017
24180	0.017
24240	0.016
24300	0.016
24360	0.015
24420	0.016
24480	0.015
24540	0.015
24600	0.014
24660	0.013
24720	0.014
24780	0.016
24840	0.015
24900	0.015
24960	0.016
25020	0.015
25080	0.017
25140	0.017
25200	0.016
25260	0.016
25320	0.017
25380	0.017
25440	0.017
25500	0.017
25560	0.016
25620	0.016
25680	0.015
25740	0.018
25800	0.027
25860	0.018
25920	0.018
25980	0.018
26040	0.016
26100	0.016
26160	0.017
26220	0.018
26280	0.019
26340	0.018
26400	0.016
26460	0.017
26520	0.017
26580	0.016
26640	0.018
26700	0.021
26760	0.02
26820	0.021
26880	0.034
26940	0.018
27000	0.017
27060	0.016
27120	0.017
27180	0.019
27240	0.017
27300	0.018
27360	0.018
27420	0.018
27480	0.018
27540	0.019
27600	0.018
27660	0.018
27720	0.031
27780	0.021

27840	0.021
27900	0.022
27960	0.021
28020	0.021
28080	0.024
28140	0.024
28200	0.025
28260	0.024
28320	0.023
28380	0.022
28440	0.023
28500	0.024
28560	0.024
28620	0.024
28680	0.024
28740	0.027
28800	0.024
28860	0.024
28920	0.024
28980	0.024
29040	0.026
29100	0.023
29160	0.022
29220	0.023
29280	0.025
29340	0.023
29400	0.024
29460	0.024
29520	0.024
29580	0.038
29640	0.024
29700	0.023
29760	0.023
29820	0.023
29880	0.023
29940	0.022
30000	0.022
30060	0.023
30120	0.023
30180	0.025
30240	0.024
30300	0.022
30360	0.025
50104	0

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530103310
Firmware Version	2.6
Calibration Date	8/12/2010
Test Name	MANUAL_003
Test Start Time	7:38:20 AM
Test Start Date	4/27/2011
Test Length [D:H:M]	0:08:20
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.027
Mass Minimum [mg/m3]	0.011
Mass Maximum [mg/m3]	0.11
Mass TWA [mg/m3]	0.027
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	500

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.023		
120	0.033		
180	0.025		
240	0.046		
300	0.03		
360	0.046		
420	0.053		
480	0.036		
540	0.059		
600	0.044		
660	0.046		
720	0.037		
780	0.027		
840	0.026		
900	0.026		
960	0.026		
1020	0.026		
1080	0.027		
1140	0.028		
1200	0.028		
1260	0.027		
1320	0.027		
1380	0.027		
1440	0.028		
1500	0.051		
1560	0.037		
1620	0.032		
1680	0.027		
1740	0.026		
1800	0.028		
1860	0.031		
1920	0.05		
1980	0.049		
2040	0.054		
2100	0.063		
2160	0.051		
2220	0.045		
2280	0.039		
2340	0.029		
2400	0.046		
2460	0.035		
2520	0.041		
2580	0.039		
2640	0.043		
2700	0.034		
2760	0.057		
2820	0.041		
2880	0.045		
2940	0.044		

3000	0.033
3060	0.059
3120	0.05
3180	0.038
3240	0.037
3300	0.038
3360	0.045
3420	0.05
3480	0.05
3540	0.057
3600	0.045
3660	0.049
3720	0.036
3780	0.033
3840	0.049
3900	0.042
3960	0.045
4020	0.032
4080	0.031
4140	0.035
4200	0.033
4260	0.04
4320	0.044
4380	0.038
4440	0.055
4500	0.04
4560	0.058
4620	0.051
4680	0.041
4740	0.039
4800	0.041
4860	0.04
4920	0.049
4980	0.029
5040	0.052
5100	0.028
5160	0.042
5220	0.042
5280	0.043
5340	0.04
5400	0.039
5460	0.038
5520	0.036
5580	0.037
5640	0.043
5700	0.04
5760	0.047
5820	0.035
5880	0.049
5940	0.067
6000	0.046
6060	0.039
6120	0.037
6180	0.029
6240	0.033
6300	0.025
6360	0.02
6420	0.033
6480	0.021
6540	0.024
6600	0.042
6660	0.026
6720	0.023
6780	0.03
6840	0.052
6900	0.039
6960	0.026
7020	0.045
7080	0.026

7140	0.033
7200	0.051
7260	0.026
7320	0.025
7380	0.041
7440	0.024
7500	0.029
7560	0.021
7620	0.026
7680	0.024
7740	0.019
7800	0.019
7860	0.083
7920	0.02
7980	0.019
8040	0.018
8100	0.019
8160	0.019
8220	0.021
8280	0.019
8340	0.019
8400	0.019
8460	0.019
8520	0.018
8580	0.017
8640	0.018
8700	0.022
8760	0.035
8820	0.021
8880	0.019
8940	0.02
9000	0.018
9060	0.017
9120	0.017
9180	0.018
9240	0.017
9300	0.018
9360	0.017
9420	0.019
9480	0.018
9540	0.026
9600	0.02
9660	0.02
9720	0.022
9780	0.023
9840	0.025
9900	0.024
9960	0.021
10020	0.043
10080	0.023
10140	0.019
10200	0.032
10260	0.025
10320	0.021
10380	0.021
10440	0.023
10500	0.021
10560	0.02
10620	0.02
10680	0.02
10740	0.02
10800	0.02
10860	0.028
10920	0.02
10980	0.02
11040	0.02
11100	0.023
11160	0.023
11220	0.023

11280	0.024
11340	0.024
11400	0.024
11460	0.024
11520	0.023
11580	0.022
11640	0.024
11700	0.021
11760	0.02
11820	0.019
11880	0.034
11940	0.033
12000	0.025
12060	0.029
12120	0.033
12180	0.021
12240	0.02
12300	0.016
12360	0.075
12420	0.018
12480	0.019
12540	0.018
12600	0.033
12660	0.015
12720	0.016
12780	0.028
12840	0.031
12900	0.016
12960	0.02
13020	0.026
13080	0.042
13140	0.02
13200	0.02
13260	0.019
13320	0.016
13380	0.013
13440	0.017
13500	0.016
13560	0.02
13620	0.02
13680	0.014
13740	0.014
13800	0.013
13860	0.012
13920	0.013
13980	0.012
14040	0.011
14100	0.012
14160	0.016
14220	0.027
14280	0.055
14340	0.018
14400	0.021
14460	0.016
14520	0.027
14580	0.015
14640	0.014
14700	0.012
14760	0.014
14820	0.015
14880	0.02
14940	0.013
15000	0.017
15060	0.015
15120	0.016
15180	0.016
15240	0.014
15300	0.018
15360	0.013

15420	0.025
15480	0.019
15540	0.019
15600	0.018
15660	0.012
15720	0.019
15780	0.017
15840	0.014
15900	0.017
15960	0.017
16020	0.032
16080	0.018
16140	0.017
16200	0.016
16260	0.015
16320	0.024
16380	0.016
16440	0.013
16500	0.014
16560	0.013
16620	0.013
16680	0.012
16740	0.013
16800	0.013
16860	0.016
16920	0.014
16980	0.016
17040	0.015
17100	0.019
17160	0.031
17220	0.039
17280	0.035
17340	0.028
17400	0.015
17460	0.014
17520	0.014
17580	0.014
17640	0.014
17700	0.013
17760	0.014
17820	0.013
17880	0.013
17940	0.013
18000	0.013
18060	0.013
18120	0.014
18180	0.013
18240	0.013
18300	0.015
18360	0.014
18420	0.027
18480	0.014
18540	0.015
18600	0.015
18660	0.015
18720	0.015
18780	0.015
18840	0.014
18900	0.015
18960	0.013
19020	0.014
19080	0.013
19140	0.013
19200	0.012
19260	0.013
19320	0.013
19380	0.013
19440	0.015
19500	0.013

19560	0.014
19620	0.014
19680	0.014
19740	0.034
19800	0.018
19860	0.017
19920	0.017
19980	0.028
20040	0.031
20100	0.015
20160	0.016
20220	0.022
20280	0.03
20340	0.026
20400	0.025
20460	0.024
20520	0.02
20580	0.019
20640	0.025
20700	0.028
20760	0.019
20820	0.025
20880	0.032
20940	0.025
21000	0.019
21060	0.026
21120	0.018
21180	0.018
21240	0.019
21300	0.038
21360	0.017
21420	0.015
21480	0.015
21540	0.014
21600	0.014
21660	0.015
21720	0.014
21780	0.013
21840	0.014
21900	0.013
21960	0.014
22020	0.016
22080	0.018
22140	0.024
22200	0.017
22260	0.026
22320	0.03
22380	0.034
22440	0.03
22500	0.03
22560	0.024
22620	0.021
22680	0.018
22740	0.018
22800	0.03
22860	0.019
22920	0.022
22980	0.026
23040	0.024
23100	0.017
23160	0.021
23220	0.021
23280	0.015
23340	0.016
23400	0.016
23460	0.018
23520	0.023
23580	0.015
23640	0.018

23700	0.012
23760	0.072
23820	0.082
23880	0.069
23940	0.061
24000	0.037
24060	0.014
24120	0.019
24180	0.017
24240	0.021
24300	0.096
24360	0.02
24420	0.026
24480	0.017
24540	0.023
24600	0.029
24660	0.016
24720	0.017
24780	0.014
24840	0.015
24900	0.014
24960	0.015
25020	0.019
25080	0.071
25140	0.024
25200	0.018
25260	0.016
25320	0.018
25380	0.021
25440	0.026
25500	0.018
25560	0.026
25620	0.032
25680	0.022
25740	0.029
25800	0.037
25860	0.017
25920	0.033
25980	0.021
26040	0.017
26100	0.017
26160	0.016
26220	0.018
26280	0.043
26340	0.032
26400	0.04
26460	0.104
26520	0.11
26580	0.033
26640	0.029
26700	0.03
26760	0.025
26820	0.031
26880	0.022
26940	0.026
27000	0.025
27060	0.026
27120	0.024
27180	0.024
27240	0.028
27300	0.026
27360	0.028
27420	0.022
27480	0.023
27540	0.027
27600	0.026
27660	0.028
27720	0.022
27780	0.028

27840	0.02
27900	0.022
27960	0.02
28020	0.019
28080	0.02
28140	0.089
28200	0.021
28260	0.021
28320	0.039
28380	0.07
28440	0.022
28500	0.021
28560	0.031
28620	0.023
28680	0.027
28740	0.024
28800	0.028
28860	0.026
28920	0.032
28980	0.021
29040	0.025
29100	0.021
29160	0.02
29220	0.02
29280	0.022
29340	0.025
29400	0.031
29460	0.025
29520	0.044
29580	0.02
29640	0.027
29700	0.022
29760	0.028
29820	0.021
29880	0.026
29940	0.024
30000	0.028

AECOM

Client: National Grid
Location: Metropolitan
Date: 4/28/11
Field Personnel: J. Ehlen

Project:
Project Number: 60137361
Weather: ~65°F, breezy, cloudy
Ambient Noise: ~71.5 dB

Community Air Monitoring Plan / Noise Field Log

Pg 1 of 1

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
815	0.1	0.021	0.0	0.0	0.014	70.0	setting up on MW-4D1
833	0.0	0.020	0.0	0.0	0.026	75.6	"
846	0.2	0.022	0.0	0.0	0.026	77.6	Drilling MW-4D1
901	1.1	0.024	0.1	0.0	0.042	83.8	"
1045	0.5	0.033	0.2	0.0	0.079	70.0	Lubing grease fittings on rig
1104	0.0	0.022	0.0	0.0	0.074	84.1	Drilling MW-4D1
1115	0.0	0.020	0.0	0.0	0.031	74.4	"
1130	0.0	0.019	0.0	0.0	0.033	75.2	"
1145	0.0	0.022	0.0	0.0	0.029	89.6	"
1220	0.0	0.023	0.0	0.0	0.044	77.9	setting up to install ~~Installing~~ well MW-4D1
1237	0.0	0.025	0.0	0.0	0.030	70.8	Installing MW-4D1
1252	0.0	0.026	0.0	0.0	0.047	74.3	"
1308	0.0	0.026	0.0	0.0	0.043	76.2	cleaning up around rig.
1322	0.0	0.034	0.0	0.0	0.026	75.1	Installing MW 4D1

thunder & lightning, weather stand down.

little rain

stopped work

* Thunder & lightening @ 1340 & heavy downpours, no more camp readings for today.

* 815 - recaled upwind pid was reading 1.1 ppm

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 902685
User ID: 00000001 Site ID: 00000020
Data Points: 54 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 04/28/2011 06:19

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	4/28/2011 6:21	0		26.1		93.1	L
2	4/28/2011 6:22	0		4.6		93.5	L
3	4/28/2011 6:23	0		0		0.1	
4	4/28/2011 6:24	0.1		0.1		0.2	
5	4/28/2011 6:25	0.2		0.2		0.3	
6	4/28/2011 6:26	0.3		0.3		0.4	
7	4/28/2011 6:27	0.3		0.3		0.4	
8	4/28/2011 6:28	0.4		0.4		0.5	
9	4/28/2011 6:29	0.4		0.4		0.4	
10	4/28/2011 6:30	0.4		0.4		1.1	
11	4/28/2011 6:31	0.4		0.4		0.4	
12	4/28/2011 6:32	0.4		0.4		0.5	
13	4/28/2011 6:33	0.4		0.4		0.5	
14	4/28/2011 6:34	0.5		0.5		0.6	
15	4/28/2011 6:35	0.5		0.5		0.6	
16	4/28/2011 6:36	0.5		0.5		0.6	
17	4/28/2011 6:37	0.5		0.5		0.6	
18	4/28/2011 6:38	0.5		0.5		0.6	
19	4/28/2011 6:39	0.5		0.5		0.8	
20	4/28/2011 6:40	0.5		0.5		0.6	
21	4/28/2011 6:41	0.5		0.5		0.5	
22	4/28/2011 6:42	0.5		0.5		0.5	
23	4/28/2011 6:43	0.5		0.5		0.6	
24	4/28/2011 6:44	0.5		0.5		0.6	
25	4/28/2011 6:45	0.5		0.5		0.6	
26	4/28/2011 6:46	0.5		0.5		0.6	
27	4/28/2011 6:47	0.6		0.6		0.6	
28	4/28/2011 6:48	0.6		0.6		0.6	
29	4/28/2011 6:49	0.6		0.6		0.7	
30	4/28/2011 6:50	0.6		0.6		0.7	
31	4/28/2011 6:51	0.7		0.7		0.8	
32	4/28/2011 6:52	0.7		0.7		0.7	
33	4/28/2011 6:53	0.7		0.7		0.8	
34	4/28/2011 6:54	0.7		0.7		0.8	
35	4/28/2011 6:55	0.7		0.7		0.8	
36	4/28/2011 6:56	0.8		0.8		0.8	
37	4/28/2011 6:57	0.8		0.8		0.8	
38	4/28/2011 6:58	0.8		0.8		0.8	
39	4/28/2011 6:59	0.8		0.8		0.8	
40	4/28/2011 7:00	0.8		0.8		0.8	
41	4/28/2011 7:01	0.8		0.8		0.9	
42	4/28/2011 7:02	0.8		0.8		0.9	
43	4/28/2011 7:03	0.8		0.8		0.9	
44	4/28/2011 7:04	0.8		0.8		0.9	
45	4/28/2011 7:05	0.9		0.9		0.9	
46	4/28/2011 7:06	0.9		0.9		0.9	
47	4/28/2011 7:07	0.9		0.9		1	
48	4/28/2011 7:08	0.9		0.9		1	
49	4/28/2011 7:09	0.9		0.9		1	
50	4/28/2011 7:10	1		1		1.1	
51	4/28/2011 7:11	1		1		1.1	
52	4/28/2011 7:12	1.1		1.1		1.1	
53	4/28/2011 7:13	1.1		1.1		1.1	
54	4/28/2011 7:14	1		1		1.1	

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 902685
User ID: 00000001 Site ID: 00000021
Data Points: 529 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 04/28/2011 06:19

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	4/28/2011 7:17	0		0		0	
2	4/28/2011 7:18	0		0		0	
3	4/28/2011 7:19	0		0		0	
4	4/28/2011 7:20	0		0		0	
5	4/28/2011 7:21	0		0		0	
6	4/28/2011 7:22	0		0		0	
7	4/28/2011 7:23	0		0		0	
8	4/28/2011 7:24	0		0		0	
9	4/28/2011 7:25	0		0		0	
10	4/28/2011 7:26	0		0		0.1	
11	4/28/2011 7:27	0		0		0.1	
12	4/28/2011 7:28	0		0		0.1	
13	4/28/2011 7:29	0		0		0.1	
14	4/28/2011 7:30	0		0		0.1	
15	4/28/2011 7:31	0		0		0	
16	4/28/2011 7:32	0		0		0	
17	4/28/2011 7:33	0		0		0	
18	4/28/2011 7:34	0		0		0	
19	4/28/2011 7:35	0		0		0	
20	4/28/2011 7:36	0		0		0	
21	4/28/2011 7:37	0		0		0	
22	4/28/2011 7:38	0		0		0	
23	4/28/2011 7:39	0		0		0	
24	4/28/2011 7:40	0		0		0	
25	4/28/2011 7:41	0		0		0.1	
26	4/28/2011 7:42	0		0		0.1	
27	4/28/2011 7:43	0.1		0.1		0.1	
28	4/28/2011 7:44	0		0.1		0.2	
29	4/28/2011 7:45	0.1		0.1		0.2	
30	4/28/2011 7:46	0.1		0.1		0.1	
31	4/28/2011 7:47	0.1		0.1		0.2	
32	4/28/2011 7:48	0.1		0.1		0.2	
33	4/28/2011 7:49	0.2		0.2		0.3	
34	4/28/2011 7:50	0.2		0.2		0.4	
35	4/28/2011 7:51	0.3		0.3		0.4	
36	4/28/2011 7:52	0.3		0.3		0.4	
37	4/28/2011 7:53	0.4		0.4		0.5	
38	4/28/2011 7:54	0.5		0.5		0.6	
39	4/28/2011 7:55	0.6		0.6		0.7	
40	4/28/2011 7:56	0.6		0.6		0.7	
41	4/28/2011 7:57	0.7		0.7		0.8	
42	4/28/2011 7:58	0.7		0.7		0.8	
43	4/28/2011 7:59	0.8		0.8		1.1	
44	4/28/2011 8:00	1.1		1.1		1.2	
45	4/28/2011 8:01	1.2		1.3		1.4	
46	4/28/2011 8:02	1.4		1.4		1.5	
47	4/28/2011 8:03	1.5		1.5		1.6	
48	4/28/2011 8:04	1.6		1.6		1.6	
49	4/28/2011 8:05	1.6		1.6		1.7	
50	4/28/2011 8:06	1.7		1.7		1.9	
51	4/28/2011 8:07	1.8		1.8		1.9	
52	4/28/2011 8:08	1.8		1.8		1.9	
53	4/28/2011 8:09	1.9		1.9		2	
54	4/28/2011 8:10	1.8		1.8		1.9	
55	4/28/2011 8:11	1.7		1.7		1.8	
56	4/28/2011 8:12	1.7		1.7		1.8	
57	4/28/2011 8:13	1.6		1.6		1.7	
58	4/28/2011 8:14	1.6		1.6		1.7	

59	4/28/2011 8:15	1.7	1.8	2.1
60	4/28/2011 8:16	2.1	2.6	3
61	4/28/2011 8:17	3	3.2	3.5
62	4/28/2011 8:18	3.4	3.5	3.7
63	4/28/2011 8:19	3.7	3.9	4
64	4/28/2011 8:20	4	4	4.1
65	4/28/2011 8:21	4	4	4.1
66	4/28/2011 8:22	3.9	4	4.2
67	4/28/2011 8:23	3.9	4	4.2
68	4/28/2011 8:24	4.1	4.1	4.2
69	4/28/2011 8:25	4.1	4.3	4.6
70	4/28/2011 8:26	4.6	4.6	5
71	4/28/2011 8:27	4.8	4.9	5.1
72	4/28/2011 8:28	5	5.4	6.6
73	4/28/2011 8:29	5.9	6	6.2
74	4/28/2011 8:30	5.3	5.5	5.9
75	4/28/2011 8:31	5.3	5.4	5.5
76	4/28/2011 8:32	5.5	5.9	6.4
77	4/28/2011 8:33	6.4	6.9	7.5
78	4/28/2011 8:34	7.5	7.9	8.5
79	4/28/2011 8:35	8.4	8.5	8.8
80	4/28/2011 8:36	8.6	8.7	9
81	4/28/2011 8:37	9	9.7	10.6
82	4/28/2011 8:38	10.3	10.4	10.6
83	4/28/2011 8:39	10.3	10.5	10.8
84	4/28/2011 8:40	10.4	10.7	11
85	4/28/2011 8:41	10	10.3	10.8
86	4/28/2011 8:42	9.4	9.7	10.1
87	4/28/2011 8:43	9.2	9.3	9.5
88	4/28/2011 8:44	9.1	9.5	9.7
89	4/28/2011 8:45	8.4	8.6	9.1
90	4/28/2011 8:46	7.7	8	8.4
91	4/28/2011 8:47	7.7	7.8	8.1
92	4/28/2011 8:48	8.1	8.4	8.6
93	4/28/2011 8:49	8.1	8.3	8.6
94	4/28/2011 8:50	7.8	8.2	8.7
95	4/28/2011 8:51	7.6	7.7	7.9
96	4/28/2011 8:52	7.9	8.2	8.6
97	4/28/2011 8:53	8.4	8.6	8.8
98	4/28/2011 8:54	7.7	8	8.4
99	4/28/2011 8:55	6.7	7.2	7.7
100	4/28/2011 8:56	6.3	6.5	6.8
101	4/28/2011 8:57	6.1	6.2	6.5
102	4/28/2011 8:58	6.5	6.7	7
103	4/28/2011 8:59	5.6	6.3	7
104	4/28/2011 9:00	5.1	5.2	5.6
105	4/28/2011 9:01	5.2	5.3	5.5
106	4/28/2011 9:02	5.1	5.1	5.2
107	4/28/2011 9:03	5.3	5.4	5.5
108	4/28/2011 9:04	5.4	5.5	5.7
109	4/28/2011 9:05	4.8	5.2	5.6
110	4/28/2011 9:06	4.6	4.6	4.8
111	4/28/2011 9:07	4.6	4.6	4.8
112	4/28/2011 9:08	4.4	4.5	4.8
113	4/28/2011 9:09	4.3	4.3	4.5
114	4/28/2011 9:10	3.6	4	4.3
115	4/28/2011 9:11	3.4	3.6	3.8
116	4/28/2011 9:12	3.1	3.3	3.4
117	4/28/2011 9:13	3	3.2	3.4
118	4/28/2011 9:14	2.9	3	3.2
119	4/28/2011 9:15	3	3.1	3.2
120	4/28/2011 9:16	2.7	2.8	3.1
121	4/28/2011 9:17	2.3	2.6	2.8
122	4/28/2011 9:18	2.2	2.2	2.3
123	4/28/2011 9:19	2	2.1	2.2
124	4/28/2011 9:20	1.9	2	2.2
125	4/28/2011 9:21	1.8	1.9	2
126	4/28/2011 9:22	1.7	1.7	1.9
127	4/28/2011 9:23	1.5	1.5	1.7

128	4/28/2011 9:24	1.3	1.4	1.5
129	4/28/2011 9:25	1.3	1.4	1.5
130	4/28/2011 9:26	1.3	1.3	1.5
131	4/28/2011 9:27	1.1	1.2	1.3
132	4/28/2011 9:28	1	1.1	1.2
133	4/28/2011 9:29	1	1	1.1
134	4/28/2011 9:30	0.9	0.9	1
135	4/28/2011 9:31	0.9	0.9	1
136	4/28/2011 9:32	0.9	0.9	1
137	4/28/2011 9:33	0.9	0.9	1
138	4/28/2011 9:34	0.9	0.9	1
139	4/28/2011 9:35	0.8	0.8	0.9
140	4/28/2011 9:36	0.7	0.7	0.8
141	4/28/2011 9:37	0.7	0.7	0.8
142	4/28/2011 9:38	0.6	0.6	0.7
143	4/28/2011 9:39	0.6	0.6	0.7
144	4/28/2011 9:40	0.6	0.6	0.7
145	4/28/2011 9:41	0.6	0.6	0.7
146	4/28/2011 9:42	0.6	0.6	0.7
147	4/28/2011 9:43	0.5	0.5	0.6
148	4/28/2011 9:44	0.5	0.5	0.6
149	4/28/2011 9:45	0.4	0.4	0.5
150	4/28/2011 9:46	0.5	0.5	0.6
151	4/28/2011 9:47	0.5	0.5	0.6
152	4/28/2011 9:48	0.5	0.5	0.6
153	4/28/2011 9:49	0.4	0.4	0.5
154	4/28/2011 9:50	0.3	0.4	0.5
155	4/28/2011 9:51	0.3	0.3	0.4
156	4/28/2011 9:52	0.3	0.3	0.4
157	4/28/2011 9:53	0.3	0.3	0.4
158	4/28/2011 9:54	0.3	0.3	0.4
159	4/28/2011 9:55	0.3	0.3	0.4
160	4/28/2011 9:56	0.2	0.2	0.3
161	4/28/2011 9:57	0.1	0.1	0.3
162	4/28/2011 9:58	0	0	0.1
163	4/28/2011 9:59	0	0	0
164	4/28/2011 10:00	0	0	0
165	4/28/2011 10:01	0	0	0
166	4/28/2011 10:02	0	0	0
167	4/28/2011 10:03	0	0	0
168	4/28/2011 10:04	0	0	0
169	4/28/2011 10:05	0	0	0
170	4/28/2011 10:06	0	0	0
171	4/28/2011 10:07	0	0	0
172	4/28/2011 10:08	0	0	0
173	4/28/2011 10:09	0	0	0
174	4/28/2011 10:10	0	0	0
175	4/28/2011 10:11	0	0	0
176	4/28/2011 10:12	0	0	0
177	4/28/2011 10:13	0	0	0
178	4/28/2011 10:14	0	0	0
179	4/28/2011 10:15	0	0	0
180	4/28/2011 10:16	0	0	0
181	4/28/2011 10:17	0	0	0
182	4/28/2011 10:18	0	0	0
183	4/28/2011 10:19	0	0	0
184	4/28/2011 10:20	0	0	0
185	4/28/2011 10:21	0	0	0
186	4/28/2011 10:22	0	0	0
187	4/28/2011 10:23	0	0	0
188	4/28/2011 10:24	0	0	0
189	4/28/2011 10:25	0	0	0
190	4/28/2011 10:26	0	0	0
191	4/28/2011 10:27	0	0	0
192	4/28/2011 10:28	0	0	0
193	4/28/2011 10:29	0	0	0
194	4/28/2011 10:30	0	0	0
195	4/28/2011 10:31	0	0	0
196	4/28/2011 10:32	0	0	0

197	4/28/2011 10:33	0	0	0
198	4/28/2011 10:34	0	0	0
199	4/28/2011 10:35	0	0	0
200	4/28/2011 10:36	0	0	0
201	4/28/2011 10:37	0	0	0
202	4/28/2011 10:38	0	0	0
203	4/28/2011 10:39	0	0	0
204	4/28/2011 10:40	0	0	0
205	4/28/2011 10:41	0	0	0
206	4/28/2011 10:42	0	0	0
207	4/28/2011 10:43	0	0	0
208	4/28/2011 10:44	0	0	0
209	4/28/2011 10:45	0	0	0
210	4/28/2011 10:46	0	0	0
211	4/28/2011 10:47	0	0	0
212	4/28/2011 10:48	0	0	0
213	4/28/2011 10:49	0	0	0
214	4/28/2011 10:50	0	0	0
215	4/28/2011 10:51	0	0	0
216	4/28/2011 10:52	0	0	0
217	4/28/2011 10:53	0	0	0
218	4/28/2011 10:54	0	0	0
219	4/28/2011 10:55	0	0	0
220	4/28/2011 10:56	0	0	0
221	4/28/2011 10:57	0	0	0
222	4/28/2011 10:58	0	0	0
223	4/28/2011 10:59	0	0	0
224	4/28/2011 11:00	0	0	0
225	4/28/2011 11:01	0	0	0
226	4/28/2011 11:02	0	0	0
227	4/28/2011 11:03	0	0	0
228	4/28/2011 11:04	0	0	0
229	4/28/2011 11:05	0	0	0
230	4/28/2011 11:06	0	0	0
231	4/28/2011 11:07	0	0	0
232	4/28/2011 11:08	0	0	0
233	4/28/2011 11:09	0	0	0
234	4/28/2011 11:10	0	0	0
235	4/28/2011 11:11	0	0	0
236	4/28/2011 11:12	0	0	0
237	4/28/2011 11:13	0	0	0
238	4/28/2011 11:14	0	0	0
239	4/28/2011 11:15	0	0	0
240	4/28/2011 11:16	0	0	0
241	4/28/2011 11:17	0	0	0
242	4/28/2011 11:18	0	0	0
243	4/28/2011 11:19	0	0	0
244	4/28/2011 11:20	0	0	0
245	4/28/2011 11:21	0	0	0
246	4/28/2011 11:22	0	0	0
247	4/28/2011 11:23	0	0	0
248	4/28/2011 11:24	0	0	0
249	4/28/2011 11:25	0	0	0
250	4/28/2011 11:26	0	0	0
251	4/28/2011 11:27	0	0	0
252	4/28/2011 11:28	0	0	0
253	4/28/2011 11:29	0	0	0
254	4/28/2011 11:30	0	0	0
255	4/28/2011 11:31	0	0	0
256	4/28/2011 11:32	0	0	0
257	4/28/2011 11:33	0	0	0
258	4/28/2011 11:34	0	0	0
259	4/28/2011 11:35	0	0	0
260	4/28/2011 11:36	0	0	0
261	4/28/2011 11:37	0	0	0
262	4/28/2011 11:38	0	0	0
263	4/28/2011 11:39	0	0	0
264	4/28/2011 11:40	0	0	0
265	4/28/2011 11:41	0	0	0

266	4/28/2011 11:42	0	0	0
267	4/28/2011 11:43	0	0	0
268	4/28/2011 11:44	0	0	0
269	4/28/2011 11:45	0	0	0
270	4/28/2011 11:46	0	0	0
271	4/28/2011 11:47	0	0	0
272	4/28/2011 11:48	0	0	0
273	4/28/2011 11:49	0	0	0
274	4/28/2011 11:50	0	0	0
275	4/28/2011 11:51	0	0	0
276	4/28/2011 11:52	0	0	0
277	4/28/2011 11:53	0	0	0
278	4/28/2011 11:54	0	0	0
279	4/28/2011 11:55	0	0	0
280	4/28/2011 11:56	0	0	0
281	4/28/2011 11:57	0	0	0
282	4/28/2011 11:58	0	0	0
283	4/28/2011 11:59	0	0	0
284	4/28/2011 12:00	0	0	0
285	4/28/2011 12:01	0	0	0
286	4/28/2011 12:02	0	0	0
287	4/28/2011 12:03	0	0	0
288	4/28/2011 12:04	0	0	0
289	4/28/2011 12:05	0	0	0
290	4/28/2011 12:06	0	0	0
291	4/28/2011 12:07	0	0	0
292	4/28/2011 12:08	0	0	0
293	4/28/2011 12:09	0	0	0
294	4/28/2011 12:10	0	0	0
295	4/28/2011 12:11	0	0	0
296	4/28/2011 12:12	0	0	0
297	4/28/2011 12:13	0	0	0
298	4/28/2011 12:14	0	0	0
299	4/28/2011 12:15	0	0	0
300	4/28/2011 12:16	0	0	0
301	4/28/2011 12:17	0	0	0
302	4/28/2011 12:18	0	0	0
303	4/28/2011 12:19	0	0	0
304	4/28/2011 12:20	0	0	0
305	4/28/2011 12:21	0	0	0
306	4/28/2011 12:22	0	0	0
307	4/28/2011 12:23	0	0	0
308	4/28/2011 12:24	0	0	0
309	4/28/2011 12:25	0	0	0
310	4/28/2011 12:26	0	0	0
311	4/28/2011 12:27	0	0	0
312	4/28/2011 12:28	0	0	0
313	4/28/2011 12:29	0	0	0
314	4/28/2011 12:30	0	0	0
315	4/28/2011 12:31	0	0	0
316	4/28/2011 12:32	0	0	0
317	4/28/2011 12:33	0	0	0
318	4/28/2011 12:34	0	0	0
319	4/28/2011 12:35	0	0	0
320	4/28/2011 12:36	0	0	0
321	4/28/2011 12:37	0	0	0
322	4/28/2011 12:38	0	0	0
323	4/28/2011 12:39	0	0	0
324	4/28/2011 12:40	0	0	0
325	4/28/2011 12:41	0	0	0
326	4/28/2011 12:42	0	0	0.1
327	4/28/2011 12:43	0	0	0.1
328	4/28/2011 12:44	0	0	0.1
329	4/28/2011 12:45	0	0	0.1
330	4/28/2011 12:46	0	0	0.1
331	4/28/2011 12:47	0	0	0.1
332	4/28/2011 12:48	0	0	0.1
333	4/28/2011 12:49	0	0	0.1
334	4/28/2011 12:50	0.1	0.1	0.2

335	4/28/2011 12:51	0.1	0.1	0.3
336	4/28/2011 12:52	0.1	0.1	0.2
337	4/28/2011 12:53	0.2	0.2	0.3
338	4/28/2011 12:54	0.3	0.3	0.4
339	4/28/2011 12:55	0.3	0.3	0.4
340	4/28/2011 12:56	0.3	0.3	0.4
341	4/28/2011 12:57	0.3	0.4	0.5
342	4/28/2011 12:58	0.5	0.6	0.7
343	4/28/2011 12:59	0.4	0.4	0.6
344	4/28/2011 13:00	0.3	0.3	0.4
345	4/28/2011 13:01	0.4	0.4	0.5
346	4/28/2011 13:02	0.4	0.5	0.6
347	4/28/2011 13:03	0.4	0.4	0.6
348	4/28/2011 13:04	0.4	0.5	0.6
349	4/28/2011 13:05	0.6	0.6	0.7
350	4/28/2011 13:06	0.6	0.6	0.7
351	4/28/2011 13:07	0.7	0.7	0.8
352	4/28/2011 13:08	0.7	0.8	0.9
353	4/28/2011 13:09	0.8	0.9	1.1
354	4/28/2011 13:10	1	1.1	1.3
355	4/28/2011 13:11	1	1	1.2
356	4/28/2011 13:12	0.9	0.9	1.1
357	4/28/2011 13:13	0.8	0.8	1.1
358	4/28/2011 13:14	0.8	0.9	1.1
359	4/28/2011 13:15	1	1	1.1
360	4/28/2011 13:16	1.1	1.1	1.2
361	4/28/2011 13:17	1.1	1.2	1.5
362	4/28/2011 13:18	1.5	1.6	1.7
363	4/28/2011 13:19	1.6	1.6	1.8
364	4/28/2011 13:20	1.6	1.6	1.8
365	4/28/2011 13:21	1.7	1.9	2
366	4/28/2011 13:22	1.8	1.8	2
367	4/28/2011 13:23	1.7	1.7	1.8
368	4/28/2011 13:24	1.7	1.8	1.9
369	4/28/2011 13:25	1.9	2	2.1
370	4/28/2011 13:26	2.1	2.1	2.2
371	4/28/2011 13:27	2.1	2.1	2.2
372	4/28/2011 13:28	2.1	2.1	2.3
373	4/28/2011 13:29	2.2	2.2	2.3
374	4/28/2011 13:30	2.1	2.2	2.3
375	4/28/2011 13:31	2.2	2.2	2.4
376	4/28/2011 13:32	2.1	2.2	2.3
377	4/28/2011 13:33	2	2	2.1
378	4/28/2011 13:34	1.8	1.8	2
379	4/28/2011 13:35	1.8	1.8	1.9
380	4/28/2011 13:36	1.8	1.9	2.1
381	4/28/2011 13:37	1.9	1.9	2
382	4/28/2011 13:38	1.6	1.8	2
383	4/28/2011 13:39	1.6	1.6	1.8
384	4/28/2011 13:40	1.8	1.8	2
385	4/28/2011 13:41	2	2	2.1
386	4/28/2011 13:42	1.9	1.9	2.1
387	4/28/2011 13:43	1.8	1.8	1.9
388	4/28/2011 13:44	1.5	1.6	1.8
389	4/28/2011 13:45	1.5	1.5	1.7
390	4/28/2011 13:46	1.7	1.7	1.9
391	4/28/2011 13:47	1.8	1.9	2
392	4/28/2011 13:48	2	2.1	2.3
393	4/28/2011 13:49	2.3	2.5	2.6
394	4/28/2011 13:50	2.5	2.5	2.6
395	4/28/2011 13:51	2.4	2.4	2.5
396	4/28/2011 13:52	2.4	2.4	2.5
397	4/28/2011 13:53	2.3	2.3	2.4
398	4/28/2011 13:54	2.2	2.3	2.5
399	4/28/2011 13:55	2.5	2.5	2.8
400	4/28/2011 13:56	2.8	2.9	3.5
401	4/28/2011 13:57	3.2	3.5	4
402	4/28/2011 13:58	3.8	3.9	4.1
403	4/28/2011 13:59	4.1	4.3	4.7

404	4/28/2011 14:00	4.7	4.7	4.9
405	4/28/2011 14:01	4.9	4.9	5.1
406	4/28/2011 14:02	5	5	5.2
407	4/28/2011 14:03	5	5	5.1
408	4/28/2011 14:04	5	5.1	5.2
409	4/28/2011 14:05	5.2	5.3	5.6
410	4/28/2011 14:06	5.6	5.9	6.3
411	4/28/2011 14:07	6.3	6.3	6.4
412	4/28/2011 14:08	6.4	6.4	6.7
413	4/28/2011 14:09	6.7	6.9	7
414	4/28/2011 14:10	6.3	6.5	6.8
415	4/28/2011 14:11	6.1	6.1	6.3
416	4/28/2011 14:12	5.4	5.8	6.2
417	4/28/2011 14:13	5.1	5.1	5.4
418	4/28/2011 14:14	5.1	5.2	5.4
419	4/28/2011 14:15	5.3	5.3	5.4
420	4/28/2011 14:16	5.3	5.3	5.3
421	4/28/2011 14:17	5.3	5.4	5.6
422	4/28/2011 14:18	5.4	5.6	6
423	4/28/2011 14:19	6	6.1	6.3
424	4/28/2011 14:20	6.2	6.4	6.6
425	4/28/2011 14:21	6.2	6.3	6.6
426	4/28/2011 14:22	6.1	6.2	6.4
427	4/28/2011 14:23	6.4	6.6	6.8
428	4/28/2011 14:24	6.8	6.9	7
429	4/28/2011 14:25	7	7.1	7.2
430	4/28/2011 14:26	7.2	7.3	7.5
431	4/28/2011 14:27	7.6	7.9	8.1
432	4/28/2011 14:28	8.1	8.2	8.4
433	4/28/2011 14:29	8.3	8.6	8.9
434	4/28/2011 14:30	8.9	9.1	9.4
435	4/28/2011 14:31	9.4	9.6	10
436	4/28/2011 14:32	9.9	10.3	10.6
437	4/28/2011 14:33	10.6	11.5	12.2
438	4/28/2011 14:34	12	12.1	12.4
439	4/28/2011 14:35	11.9	12	12.4
440	4/28/2011 14:36	12.4	13.3	14
441	4/28/2011 14:37	13.8	14.7	15.4
442	4/28/2011 14:38	13.3	14.2	15.1
443	4/28/2011 14:39	13.2	13.4	13.8
444	4/28/2011 14:40	13.9	14.2	15.1
445	4/28/2011 14:41	15.2	17.1	19.2
446	4/28/2011 14:42	17.1	18	18.9
447	4/28/2011 14:43	16.7	17.5	18.2
448	4/28/2011 14:44	15.4	16.1	17.2
449	4/28/2011 14:45	12.7	14.7	16
450	4/28/2011 14:46	10.1	11.1	12.7
451	4/28/2011 14:47	8.5	9.2	10.1
452	4/28/2011 14:48	8.3	8.3	8.5
453	4/28/2011 14:49	8.3	8.4	8.5
454	4/28/2011 14:50	8.5	8.6	8.8
455	4/28/2011 14:51	8.2	8.5	8.8
456	4/28/2011 14:52	7.8	7.9	8.3
457	4/28/2011 14:53	7.9	8	8.3
458	4/28/2011 14:54	7.7	8.1	8.3
459	4/28/2011 14:55	7.7	7.7	7.8
460	4/28/2011 14:56	7.6	7.7	7.9
461	4/28/2011 14:57	6.9	7.2	7.7
462	4/28/2011 14:58	6.9	7.4	7.8
463	4/28/2011 14:59	6.9	7.3	8
464	4/28/2011 15:00	7.9	8	8.2
465	4/28/2011 15:01	6.6	7.1	7.9
466	4/28/2011 15:02	6.1	6.2	6.6
467	4/28/2011 15:03	6.3	6.4	6.5
468	4/28/2011 15:04	6.1	6.2	6.5
469	4/28/2011 15:05	6.1	6.2	6.5
470	4/28/2011 15:06	6.5	6.8	7
471	4/28/2011 15:07	6.1	6.5	6.8
472	4/28/2011 15:08	6.2	6.2	6.6

473	4/28/2011 15:09	6.6	6.9	7.2
474	4/28/2011 15:10	6.4	6.8	7.1
475	4/28/2011 15:11	6	6.1	6.4
476	4/28/2011 15:12	5.8	5.9	6.1
477	4/28/2011 15:13	5.7	5.9	6.1
478	4/28/2011 15:14	5.3	5.3	5.7
479	4/28/2011 15:15	4.2	4.7	5.4
480	4/28/2011 15:16	4	4.1	4.2
481	4/28/2011 15:17	4	4.1	4.4
482	4/28/2011 15:18	3.5	3.6	3.9
483	4/28/2011 15:19	3.3	3.5	3.9
484	4/28/2011 15:20	3.8	4	4.2
485	4/28/2011 15:21	3.5	3.6	3.8
486	4/28/2011 15:22	3.2	3.4	3.7
487	4/28/2011 15:23	2.8	3	3.3
488	4/28/2011 15:24	2.8	2.8	2.9
489	4/28/2011 15:25	2.7	2.8	3
490	4/28/2011 15:26	3	3	3.2
491	4/28/2011 15:27	2.6	2.8	3.1
492	4/28/2011 15:28	2.6	2.9	3.3
493	4/28/2011 15:29	3.2	3.2	3.3
494	4/28/2011 15:30	2.4	2.8	3.2
495	4/28/2011 15:31	1.9	2	2.4
496	4/28/2011 15:32	1.9	2.1	2.3
497	4/28/2011 15:33	2	2.1	2.3
498	4/28/2011 15:34	1.9	1.9	2.1
499	4/28/2011 15:35	1.8	1.8	2
500	4/28/2011 15:36	1.8	1.8	1.9
501	4/28/2011 15:37	1.8	1.8	1.9
502	4/28/2011 15:38	1.8	1.8	1.9
503	4/28/2011 15:39	1.9	1.9	2
504	4/28/2011 15:40	1.8	1.8	1.9
505	4/28/2011 15:41	1.8	1.8	2
506	4/28/2011 15:42	2	2	2.2
507	4/28/2011 15:43	2.1	2.1	2.3
508	4/28/2011 15:44	2	2.1	2.2
509	4/28/2011 15:45	2	2	2.1
510	4/28/2011 15:46	1.9	2	2.1
511	4/28/2011 15:47	1.9	1.9	2
512	4/28/2011 15:48	1.9	2	2.2
513	4/28/2011 15:49	2.1	2.2	2.3
514	4/28/2011 15:50	1.9	1.9	2.1
515	4/28/2011 15:51	2	2	2.1
516	4/28/2011 15:52	1.9	2	2.2
517	4/28/2011 15:53	1.7	1.7	1.8
518	4/28/2011 15:54	1.7	1.7	1.9
519	4/28/2011 15:55	1.6	1.6	1.8
520	4/28/2011 15:56	1.7	1.8	1.9
521	4/28/2011 15:57	1.7	1.7	1.9
522	4/28/2011 15:58	1.6	1.6	1.7
523	4/28/2011 15:59	1.4	1.5	1.6
524	4/28/2011 16:00	1.4	1.4	1.5
525	4/28/2011 16:01	1.3	1.3	1.4
526	4/28/2011 16:02	1.3	1.3	1.4
527	4/28/2011 16:03	1.3	1.3	1.4
528	4/28/2011 16:04	1.3	1.4	1.6
529	4/28/2011 16:05	1.5	1.5	1.6

=========Event #28 information (begin)=========
==========
[Event #28 name:]--[Event #28]2011-04-28 03:34<-->2011-04-28 13:32
[Event start time:]--2011-04-28 03:34:15[Event end time:]--2011-04-28 13:32:15
==========Event #28 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367
Data Points: 598 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID(ppb)
Measurement Gas : Isobutene
Calibration Time : 2011-04-28 03:33:00
Drift Value : ---
Low Alarm Levels : 21738
High Alarm Levels : 43476
Span Value : 100000
Correction Factor : 1.00
Over Alarm Levels : 15000000
==========Event #28 data informations==========

LINE#	Date/Time	PID(ppb)	PID(ppm)
1	4/28/2011 3:35	0	0
2	4/28/2011 3:36	0	0
3	4/28/2011 3:37	0	0
4	4/28/2011 3:38	31597	31.597
5	4/28/2011 3:39	0	0
6	4/28/2011 3:40	0	0
7	4/28/2011 3:41	0	0
8	4/28/2011 3:42	0	0
9	4/28/2011 3:43	0	0
10	4/28/2011 3:44	0	0
11	4/28/2011 3:45	0	0
12	4/28/2011 3:46	0	0
13	4/28/2011 3:47	0	0
14	4/28/2011 3:48	0	0
15	4/28/2011 3:49	0	0
16	4/28/2011 3:50	0	0
17	4/28/2011 3:51	0	0
18	4/28/2011 3:52	0	0
19	4/28/2011 3:53	0	0
20	4/28/2011 3:54	0	0
21	4/28/2011 3:55	0	0
22	4/28/2011 3:56	0	0
23	4/28/2011 3:57	0	0
24	4/28/2011 3:58	0	0
25	4/28/2011 3:59	0	0
26	4/28/2011 4:00	0	0
27	4/28/2011 4:01	0	0
28	4/28/2011 4:02	0	0
29	4/28/2011 4:03	0	0
30	4/28/2011 4:04	0	0
31	4/28/2011 4:05	0	0
32	4/28/2011 4:06	0	0
33	4/28/2011 4:07	0	0
34	4/28/2011 4:08	0	0
35	4/28/2011 4:09	0	0
36	4/28/2011 4:10	0	0
37	4/28/2011 4:11	0	0
38	4/28/2011 4:12	0	0
39	4/28/2011 4:13	0	0
40	4/28/2011 4:14	0	0
41	4/28/2011 4:15	0	0
42	4/28/2011 4:16	0	0
43	4/28/2011 4:17	0	0
44	4/28/2011 4:18	0	0
45	4/28/2011 4:19	0	0
46	4/28/2011 4:20	0	0
47	4/28/2011 4:21	0	0
48	4/28/2011 4:22	0	0

49	4/28/2011 4:23	0	0
50	4/28/2011 4:24	0	0
51	4/28/2011 4:25	0	0
52	4/28/2011 4:26	0	0
53	4/28/2011 4:27	0	0
54	4/28/2011 4:28	0	0
55	4/28/2011 4:29	0	0
56	4/28/2011 4:30	0	0
57	4/28/2011 4:31	0	0
58	4/28/2011 4:32	0	0
59	4/28/2011 4:33	0	0
60	4/28/2011 4:34	0	0
61	4/28/2011 4:35	0	0
62	4/28/2011 4:36	0	0
63	4/28/2011 4:37	0	0
64	4/28/2011 4:38	0	0
65	4/28/2011 4:39	0	0
66	4/28/2011 4:40	0	0
67	4/28/2011 4:41	0	0
68	4/28/2011 4:42	0	0
69	4/28/2011 4:43	0	0
70	4/28/2011 4:44	0	0
71	4/28/2011 4:45	0	0
72	4/28/2011 4:46	0	0
73	4/28/2011 4:47	0	0
74	4/28/2011 4:48	0	0
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76	4/28/2011 4:50	0	0
77	4/28/2011 4:51	0	0
78	4/28/2011 4:52	0	0
79	4/28/2011 4:53	0	0
80	4/28/2011 4:54	0	0
81	4/28/2011 4:55	0	0
82	4/28/2011 4:56	0	0
83	4/28/2011 4:57	0	0
84	4/28/2011 4:58	0	0
85	4/28/2011 4:59	0	0
86	4/28/2011 5:00	0	0
87	4/28/2011 5:01	0	0
88	4/28/2011 5:02	0	0
89	4/28/2011 5:03	0	0
90	4/28/2011 5:04	0	0
91	4/28/2011 5:05	0	0
92	4/28/2011 5:06	0	0
93	4/28/2011 5:07	0	0
94	4/28/2011 5:08	0	0
95	4/28/2011 5:09	0	0
96	4/28/2011 5:10	0	0
97	4/28/2011 5:11	0	0
98	4/28/2011 5:12	0	0
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101	4/28/2011 5:15	0	0
102	4/28/2011 5:16	0	0
103	4/28/2011 5:17	0	0
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105	4/28/2011 5:19	0	0
106	4/28/2011 5:20	0	0
107	4/28/2011 5:21	0	0
108	4/28/2011 5:22	0	0
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110	4/28/2011 5:24	0	0
111	4/28/2011 5:25	0	0
112	4/28/2011 5:26	0	0
113	4/28/2011 5:27	0	0
114	4/28/2011 5:28	0	0
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248	4/28/2011 7:42	0	0
249	4/28/2011 7:43	0	0
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251	4/28/2011 7:45	0	0
252	4/28/2011 7:46	0	0
253	4/28/2011 7:47	0	0
254	4/28/2011 7:48	0	0
255	4/28/2011 7:49	0	0

256	4/28/2011 7:50	0	0
257	4/28/2011 7:51	0	0
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259	4/28/2011 7:53	0	0
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262	4/28/2011 7:56	0	0
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265	4/28/2011 7:59	0	0
266	4/28/2011 8:00	0	0
267	4/28/2011 8:01	0	0
268	4/28/2011 8:02	0	0
269	4/28/2011 8:03	0	0
270	4/28/2011 8:04	0	0
271	4/28/2011 8:05	0	0
272	4/28/2011 8:06	0	0
273	4/28/2011 8:07	0	0
274	4/28/2011 8:08	0	0
275	4/28/2011 8:09	0	0
276	4/28/2011 8:10	0	0
277	4/28/2011 8:11	0	0
278	4/28/2011 8:12	0	0
279	4/28/2011 8:13	0	0
280	4/28/2011 8:14	0	0
281	4/28/2011 8:15	0	0
282	4/28/2011 8:16	0	0
283	4/28/2011 8:17	0	0
284	4/28/2011 8:18	0	0
285	4/28/2011 8:19	0	0
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287	4/28/2011 8:21	0	0
288	4/28/2011 8:22	0	0
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298	4/28/2011 8:32	0	0
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303	4/28/2011 8:37	0	0
304	4/28/2011 8:38	0	0
305	4/28/2011 8:39	0	0
306	4/28/2011 8:40	0	0
307	4/28/2011 8:41	0	0
308	4/28/2011 8:42	0	0
309	4/28/2011 8:43	0	0
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311	4/28/2011 8:45	0	0
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313	4/28/2011 8:47	0	0
314	4/28/2011 8:48	0	0
315	4/28/2011 8:49	0	0
316	4/28/2011 8:50	0	0
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320	4/28/2011 8:54	0	0
321	4/28/2011 8:55	0	0
322	4/28/2011 8:56	0	0
323	4/28/2011 8:57	0	0
324	4/28/2011 8:58	0	0

325	4/28/2011 8:59	0	0
326	4/28/2011 9:00	0	0
327	4/28/2011 9:01	0	0
328	4/28/2011 9:02	0	0
329	4/28/2011 9:03	0	0
330	4/28/2011 9:04	0	0
331	4/28/2011 9:05	0	0
332	4/28/2011 9:06	0	0
333	4/28/2011 9:07	0	0
334	4/28/2011 9:08	0	0
335	4/28/2011 9:09	0	0
336	4/28/2011 9:10	0	0
337	4/28/2011 9:11	0	0
338	4/28/2011 9:12	0	0
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341	4/28/2011 9:15	0	0
342	4/28/2011 9:16	0	0
343	4/28/2011 9:17	0	0
344	4/28/2011 9:18	0	0
345	4/28/2011 9:19	0	0
346	4/28/2011 9:20	0	0
347	4/28/2011 9:21	0	0
348	4/28/2011 9:22	0	0
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369	4/28/2011 9:43	0	0
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375	4/28/2011 9:49	0	0
376	4/28/2011 9:50	0	0
377	4/28/2011 9:51	0	0
378	4/28/2011 9:52	0	0
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383	4/28/2011 9:57	0	0
384	4/28/2011 9:58	0	0
385	4/28/2011 9:59	0	0
386	4/28/2011 10:00	0	0
387	4/28/2011 10:01	0	0
388	4/28/2011 10:02	0	0
389	4/28/2011 10:03	0	0
390	4/28/2011 10:04	0	0
391	4/28/2011 10:05	0	0
392	4/28/2011 10:06	0	0
393	4/28/2011 10:07	0	0

394	4/28/2011 10:08	0	0
395	4/28/2011 10:09	0	0
396	4/28/2011 10:10	0	0
397	4/28/2011 10:11	0	0
398	4/28/2011 10:12	0	0
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403	4/28/2011 10:17	0	0
404	4/28/2011 10:18	0	0
405	4/28/2011 10:19	0	0
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408	4/28/2011 10:22	0	0
409	4/28/2011 10:23	0	0
410	4/28/2011 10:24	0	0
411	4/28/2011 10:25	0	0
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413	4/28/2011 10:27	0	0
414	4/28/2011 10:28	0	0
415	4/28/2011 10:29	0	0
416	4/28/2011 10:30	0	0
417	4/28/2011 10:31	0	0
418	4/28/2011 10:32	0	0
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421	4/28/2011 10:35	0	0
422	4/28/2011 10:36	0	0
423	4/28/2011 10:37	0	0
424	4/28/2011 10:38	0	0
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426	4/28/2011 10:40	0	0
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443	4/28/2011 10:57	0	0
444	4/28/2011 10:58	0	0
445	4/28/2011 10:59	0	0
446	4/28/2011 11:00	0	0
447	4/28/2011 11:01	0	0
448	4/28/2011 11:02	0	0
449	4/28/2011 11:03	0	0
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454	4/28/2011 11:08	0	0
455	4/28/2011 11:09	0	0
456	4/28/2011 11:10	0	0
457	4/28/2011 11:11	0	0
458	4/28/2011 11:12	0	0
459	4/28/2011 11:13	0	0
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461	4/28/2011 11:15	0	0
462	4/28/2011 11:16	0	0

463	4/28/2011 11:17	0	0
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465	4/28/2011 11:19	0	0
466	4/28/2011 11:20	0	0
467	4/28/2011 11:21	0	0
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469	4/28/2011 11:23	0	0
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476	4/28/2011 11:30	0	0
477	4/28/2011 11:31	0	0
478	4/28/2011 11:32	0	0
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480	4/28/2011 11:34	0	0
481	4/28/2011 11:35	0	0
482	4/28/2011 11:36	0	0
483	4/28/2011 11:37	0	0
484	4/28/2011 11:38	0	0
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486	4/28/2011 11:40	0	0
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505	4/28/2011 11:59	0	0
506	4/28/2011 12:00	0	0
507	4/28/2011 12:01	0	0
508	4/28/2011 12:02	0	0
509	4/28/2011 12:03	0	0
510	4/28/2011 12:04	0	0
511	4/28/2011 12:05	0	0
512	4/28/2011 12:06	0	0
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515	4/28/2011 12:09	0	0
516	4/28/2011 12:10	0	0
517	4/28/2011 12:11	0	0
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519	4/28/2011 12:13	0	0
520	4/28/2011 12:14	0	0
521	4/28/2011 12:15	0	0
522	4/28/2011 12:16	0	0
523	4/28/2011 12:17	0	0
524	4/28/2011 12:18	0	0
525	4/28/2011 12:19	0	0
526	4/28/2011 12:20	0	0
527	4/28/2011 12:21	0	0
528	4/28/2011 12:22	0	0
529	4/28/2011 12:23	0	0
530	4/28/2011 12:24	0	0
531	4/28/2011 12:25	0	0

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536	4/28/2011 12:30	0	0
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555	4/28/2011 12:49	0	0
556	4/28/2011 12:50	0	0
557	4/28/2011 12:51	0	0
558	4/28/2011 12:52	0	0
559	4/28/2011 12:53	0	0
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561	4/28/2011 12:55	0	0
562	4/28/2011 12:56	0	0
563	4/28/2011 12:57	0	0
564	4/28/2011 12:58	0	0
565	4/28/2011 12:59	0	0
566	4/28/2011 13:00	0	0
567	4/28/2011 13:01	0	0
568	4/28/2011 13:02	0	0
569	4/28/2011 13:03	0	0
570	4/28/2011 13:04	0	0
571	4/28/2011 13:05	0	0
572	4/28/2011 13:06	0	0
573	4/28/2011 13:07	0	0
574	4/28/2011 13:08	0	0
575	4/28/2011 13:09	0	0
576	4/28/2011 13:10	0	0
577	4/28/2011 13:11	0	0
578	4/28/2011 13:12	0	0
579	4/28/2011 13:13	0	0
580	4/28/2011 13:14	0	0
581	4/28/2011 13:15	0	0
582	4/28/2011 13:16	0	0
583	4/28/2011 13:17	0	0
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592	4/28/2011 13:26	0	0
593	4/28/2011 13:27	0	0
594	4/28/2011 13:28	0	0
595	4/28/2011 13:29	0	0
596	4/28/2011 13:30	0	0
597	4/28/2011 13:31	0	0
598	4/28/2011 13:32	0	0

==========Event #28 information (end)==========

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530110314
Firmware Version	2.7
Calibration Date	1/17/2011
Test Name	MANUAL_009
Test Start Time	7:39:46 AM
Test Start Date	4/28/2011
Test Length [D:H:M]	0:09:26
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.025
Mass Minimum [mg/m3]	0.017
Mass Maximum [mg/m3]	0.066
Mass TWA [mg/m3]	0.025
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	566

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.02		
120	0.02		
180	0.019		
240	0.019		
300	0.019		
360	0.018		
420	0.018		
480	0.017		
540	0.018		
600	0.018		
660	0.018		
720	0.018		
780	0.018		
840	0.019		
900	0.02		
960	0.018		
1020	0.019		
1080	0.019		
1140	0.019		
1200	0.019		
1260	0.019		
1320	0.019		
1380	0.018		
1440	0.019		
1500	0.019		
1560	0.019		
1620	0.019		
1680	0.019		
1740	0.02		
1800	0.02		
1860	0.02		
1920	0.02		
1980	0.02		
2040	0.019		
2100	0.021		
2160	0.02		
2220	0.023		
2280	0.022		
2340	0.02		
2400	0.02		
2460	0.02		
2520	0.02		
2580	0.02		
2640	0.02		
2700	0.021		
2760	0.021		
2820	0.022		
2880	0.02		
2940	0.021		

3000	0.021
3060	0.02
3120	0.02
3180	0.02
3240	0.022
3300	0.021
3360	0.021
3420	0.021
3480	0.021
3540	0.021
3600	0.021
3660	0.021
3720	0.022
3780	0.022
3840	0.022
3900	0.022
3960	0.022
4020	0.022
4080	0.023
4140	0.023
4200	0.022
4260	0.023
4320	0.023
4380	0.024
4440	0.024
4500	0.024
4560	0.022
4620	0.022
4680	0.022
4740	0.021
4800	0.024
4860	0.021
4920	0.02
4980	0.021
5040	0.022
5100	0.021
5160	0.022
5220	0.02
5280	0.021
5340	0.018
5400	0.018
5460	0.023
5520	0.019
5580	0.019
5640	0.019
5700	0.019
5760	0.02
5820	0.019
5880	0.019
5940	0.02
6000	0.02
6060	0.019
6120	0.021
6180	0.019
6240	0.019
6300	0.02
6360	0.021
6420	0.021
6480	0.023
6540	0.022
6600	0.02
6660	0.02
6720	0.019
6780	0.019
6840	0.018
6900	0.019
6960	0.02
7020	0.02
7080	0.019

7140	0.022
7200	0.022
7260	0.022
7320	0.021
7380	0.021
7440	0.022
7500	0.023
7560	0.023
7620	0.023
7680	0.022
7740	0.022
7800	0.024
7860	0.022
7920	0.021
7980	0.023
8040	0.022
8100	0.021
8160	0.021
8220	0.021
8280	0.025
8340	0.023
8400	0.022
8460	0.022
8520	0.022
8580	0.022
8640	0.021
8700	0.022
8760	0.02
8820	0.02
8880	0.021
8940	0.021
9000	0.021
9060	0.021
9120	0.02
9180	0.02
9240	0.02
9300	0.021
9360	0.021
9420	0.02
9480	0.02
9540	0.027
9600	0.021
9660	0.066
9720	0.02
9780	0.02
9840	0.021
9900	0.02
9960	0.02
10020	0.02
10080	0.019
10140	0.019
10200	0.02
10260	0.022
10320	0.021
10380	0.025
10440	0.021
10500	0.021
10560	0.021
10620	0.02
10680	0.02
10740	0.021
10800	0.024
10860	0.025
10920	0.024
10980	0.024
11040	0.026
11100	0.033
11160	0.027
11220	0.026

11280	0.023
11340	0.022
11400	0.021
11460	0.02
11520	0.021
11580	0.023
11640	0.022
11700	0.023
11760	0.025
11820	0.021
11880	0.033
11940	0.021
12000	0.02
12060	0.019
12120	0.019
12180	0.021
12240	0.024
12300	0.02
12360	0.022
12420	0.024
12480	0.021
12540	0.02
12600	0.02
12660	0.02
12720	0.02
12780	0.021
12840	0.021
12900	0.021
12960	0.022
13020	0.019
13080	0.02
13140	0.019
13200	0.019
13260	0.02
13320	0.019
13380	0.019
13440	0.019
13500	0.02
13560	0.02
13620	0.02
13680	0.019
13740	0.019
13800	0.031
13860	0.02
13920	0.02
13980	0.021
14040	0.02
14100	0.02
14160	0.022
14220	0.021
14280	0.02
14340	0.02
14400	0.021
14460	0.02
14520	0.022
14580	0.023
14640	0.021
14700	0.027
14760	0.022
14820	0.023
14880	0.023
14940	0.022
15000	0.022
15060	0.022
15120	0.021
15180	0.022
15240	0.022
15300	0.021
15360	0.021

15420	0.022
15480	0.021
15540	0.021
15600	0.021
15660	0.021
15720	0.021
15780	0.02
15840	0.021
15900	0.021
15960	0.02
16020	0.021
16080	0.021
16140	0.02
16200	0.02
16260	0.021
16320	0.02
16380	0.02
16440	0.019
16500	0.021
16560	0.022
16620	0.021
16680	0.022
16740	0.023
16800	0.024
16860	0.023
16920	0.041
16980	0.023
17040	0.024
17100	0.023
17160	0.022
17220	0.025
17280	0.022
17340	0.022
17400	0.023
17460	0.024
17520	0.024
17580	0.025
17640	0.024
17700	0.024
17760	0.026
17820	0.026
17880	0.024
17940	0.023
18000	0.026
18060	0.025
18120	0.026
18180	0.025
18240	0.026
18300	0.027
18360	0.027
18420	0.025
18480	0.025
18540	0.024
18600	0.024
18660	0.026
18720	0.026
18780	0.026
18840	0.026
18900	0.028
18960	0.028
19020	0.028
19080	0.026
19140	0.027
19200	0.027
19260	0.027
19320	0.026
19380	0.025
19440	0.025
19500	0.026

19560	0.026
19620	0.028
19680	0.027
19740	0.027
19800	0.027
19860	0.028
19920	0.029
19980	0.029
20040	0.028
20100	0.028
20160	0.027
20220	0.028
20280	0.03
20340	0.042
20400	0.043
20460	0.04
20520	0.039
20580	0.032
20640	0.04
20700	0.036
20760	0.034
20820	0.033
20880	0.031
20940	0.025
21000	0.029
21060	0.042
21120	0.054
21180	0.029
21240	0.038
21300	0.027
21360	0.028
21420	0.03
21480	0.041
21540	0.032
21600	0.034
21660	0.032
21720	0.029
21780	0.036
21840	0.034
21900	0.031
21960	0.029
22020	0.031
22080	0.028
22140	0.028
22200	0.034
22260	0.033
22320	0.032
22380	0.037
22440	0.033
22500	0.033
22560	0.028
22620	0.031
22680	0.044
22740	0.04
22800	0.027
22860	0.027
22920	0.027
22980	0.03
23040	0.027
23100	0.026
23160	0.031
23220	0.035
23280	0.039
23340	0.03
23400	0.029
23460	0.03
23520	0.035
23580	0.038
23640	0.046

23700	0.042
23760	0.049
23820	0.034
23880	0.033
23940	0.031
24000	0.028
24060	0.032
24120	0.031
24180	0.04
24240	0.051
24300	0.033
24360	0.032
24420	0.033
24480	0.032
24540	0.031
24600	0.03
24660	0.037
24720	0.042
24780	0.045
24840	0.038
24900	0.031
24960	0.038
25020	0.027
25080	0.027
25140	0.025
25200	0.026
25260	0.052
25320	0.031
25380	0.022
25440	0.023
25500	0.025
25560	0.03
25620	0.03
25680	0.027
25740	0.027
25800	0.026
25860	0.024
25920	0.025
25980	0.026
26040	0.024
26100	0.025
26160	0.031
26220	0.04
26280	0.036
26340	0.032
26400	0.034
26460	0.034
26520	0.029
26580	0.025
26640	0.025
26700	0.027
26760	0.027
26820	0.027
26880	0.027
26940	0.028
27000	0.029
27060	0.031
27120	0.028
27180	0.023
27240	0.026
27300	0.028
27360	0.025
27420	0.023
27480	0.023
27540	0.025
27600	0.027
27660	0.027
27720	0.023
27780	0.025

27840	0.033
27900	0.026
27960	0.028
28020	0.031
28080	0.031
28140	0.029
28200	0.027
28260	0.027
28320	0.028
28380	0.028
28440	0.025
28500	0.029
28560	0.03
28620	0.028
28680	0.026
28740	0.026
28800	0.027
28860	0.028
28920	0.034
28980	0.029
29040	0.028
29100	0.026
29160	0.024
29220	0.024
29280	0.022
29340	0.027
29400	0.026
29460	0.026
29520	0.025
29580	0.028
29640	0.026
29700	0.026
29760	0.026
29820	0.027
29880	0.025
29940	0.034
30000	0.031
30060	0.027
30120	0.025
30180	0.026
30240	0.026
30300	0.026
30360	0.026
30420	0.027
30480	0.025
30540	0.026
30600	0.027
30660	0.03
30720	0.028
30780	0.027
30840	0.026
30900	0.042
30960	0.029
31020	0.028
31080	0.029
31140	0.026
31200	0.027
31260	0.026
31320	0.026
31380	0.026
31440	0.025
31500	0.025
31560	0.025
31620	0.025
31680	0.024
31740	0.025
31800	0.025
31860	0.034
31920	0.026

31980	0.027
32040	0.025
32100	0.028
32160	0.025
32220	0.026
32280	0.028
32340	0.03
32400	0.026
32460	0.026
32520	0.026
32580	0.027
32640	0.026
32700	0.027
32760	0.027
32820	0.028
32880	0.027
32940	0.027
33000	0.027
33060	0.026
33120	0.027
33180	0.026
33240	0.025
33300	0.028
33360	0.027
33420	0.028
33480	0.027
33540	0.029
33600	0.028
33660	0.026
33720	0.026
33780	0.027
33840	0.026
33900	0.027
33960	0.026

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530103310
Firmware Version	2.6
Calibration Date	8/12/2010
Test Name	MANUAL_004
Test Start Time	8:18:36 AM
Test Start Date	4/28/2011
Test Length [D:H:M]	0:08:57
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.027
Mass Minimum [mg/m3]	0.015
Mass Maximum [mg/m3]	0.122
Mass TWA [mg/m3]	0.026
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	537

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.017		
120	0.018		
180	0.021		
240	0.025		
300	0.02		
360	0.022		
420	0.022		
480	0.02		
540	0.019		
600	0.022		
660	0.023		
720	0.024		
780	0.022		
840	0.022		
900	0.025		
960	0.025		
1020	0.023		
1080	0.034		
1140	0.023		
1200	0.019		
1260	0.021		
1320	0.02		
1380	0.019		
1440	0.019		
1500	0.023		
1560	0.025		
1620	0.022		
1680	0.042		
1740	0.034		
1800	0.032		
1860	0.036		
1920	0.024		
1980	0.025		
2040	0.034		
2100	0.028		
2160	0.027		
2220	0.028		
2280	0.029		
2340	0.033		
2400	0.035		
2460	0.038		
2520	0.035		
2580	0.031		
2640	0.029		
2700	0.024		
2760	0.041		
2820	0.044		
2880	0.028		
2940	0.031		

3000	0.031
3060	0.025
3120	0.035
3180	0.027
3240	0.032
3300	0.029
3360	0.027
3420	0.027
3480	0.029
3540	0.024
3600	0.02
3660	0.019
3720	0.022
3780	0.017
3840	0.018
3900	0.018
3960	0.017
4020	0.017
4080	0.018
4140	0.018
4200	0.019
4260	0.019
4320	0.018
4380	0.015
4440	0.015
4500	0.016
4560	0.015
4620	0.017
4680	0.018
4740	0.017
4800	0.017
4860	0.019
4920	0.019
4980	0.02
5040	0.019
5100	0.02
5160	0.032
5220	0.023
5280	0.023
5340	0.023
5400	0.021
5460	0.021
5520	0.021
5580	0.021
5640	0.02
5700	0.022
5760	0.022
5820	0.022
5880	0.02
5940	0.022
6000	0.023
6060	0.023
6120	0.02
6180	0.02
6240	0.021
6300	0.02
6360	0.02
6420	0.019
6480	0.02
6540	0.018
6600	0.019
6660	0.019
6720	0.019
6780	0.02
6840	0.019
6900	0.018
6960	0.019
7020	0.02
7080	0.02

7140	0.02
7200	0.019
7260	0.019
7320	0.019
7380	0.02
7440	0.018
7500	0.017
7560	0.019
7620	0.018
7680	0.018
7740	0.018
7800	0.017
7860	0.017
7920	0.018
7980	0.02
8040	0.019
8100	0.025
8160	0.019
8220	0.018
8280	0.02
8340	0.018
8400	0.017
8460	0.018
8520	0.022
8580	0.022
8640	0.022
8700	0.022
8760	0.027
8820	0.023
8880	0.024
8940	0.079
9000	0.022
9060	0.02
9120	0.02
9180	0.019
9240	0.02
9300	0.021
9360	0.021
9420	0.02
9480	0.019
9540	0.022
9600	0.024
9660	0.027
9720	0.024
9780	0.022
9840	0.022
9900	0.03
9960	0.032
10020	0.083
10080	0.037
10140	0.031
10200	0.032
10260	0.028
10320	0.034
10380	0.025
10440	0.035
10500	0.037
10560	0.076
10620	0.122
10680	0.033
10740	0.026
10800	0.022
10860	0.02
10920	0.025
10980	0.035
11040	0.032
11100	0.031
11160	0.026
11220	0.047

11280	0.035
11340	0.051
11400	0.04
11460	0.023
11520	0.019
11580	0.02
11640	0.024
11700	0.023
11760	0.023
11820	0.019
11880	0.027
11940	0.025
12000	0.027
12060	0.021
12120	0.022
12180	0.028
12240	0.026
12300	0.032
12360	0.025
12420	0.032
12480	0.026
12540	0.033
12600	0.034
12660	0.032
12720	0.025
12780	0.022
12840	0.023
12900	0.021
12960	0.033
13020	0.028
13080	0.022
13140	0.023
13200	0.024
13260	0.024
13320	0.022
13380	0.03
13440	0.027
13500	0.025
13560	0.025
13620	0.025
13680	0.03
13740	0.027
13800	0.02
13860	0.022
13920	0.022
13980	0.023
14040	0.025
14100	0.027
14160	0.026
14220	0.024
14280	0.019
14340	0.019
14400	0.02
14460	0.021
14520	0.023
14580	0.02
14640	0.022
14700	0.053
14760	0.029
14820	0.029
14880	0.027
14940	0.038
15000	0.026
15060	0.03
15120	0.023
15180	0.024
15240	0.023
15300	0.025
15360	0.022

15420	0.026
15480	0.025
15540	0.025
15600	0.03
15660	0.02
15720	0.023
15780	0.037
15840	0.023
15900	0.021
15960	0.021
16020	0.022
16080	0.022
16140	0.02
16200	0.022
16260	0.02
16320	0.022
16380	0.021
16440	0.021
16500	0.046
16560	0.026
16620	0.058
16680	0.032
16740	0.032
16800	0.024
16860	0.026
16920	0.025
16980	0.024
17040	0.024
17100	0.023
17160	0.029
17220	0.022
17280	0.024
17340	0.025
17400	0.028
17460	0.025
17520	0.023
17580	0.027
17640	0.027
17700	0.028
17760	0.033
17820	0.026
17880	0.028
17940	0.035
18000	0.032
18060	0.028
18120	0.027
18180	0.03
18240	0.027
18300	0.029
18360	0.032
18420	0.029
18480	0.024
18540	0.03
18600	0.029
18660	0.022
18720	0.024
18780	0.027
18840	0.028
18900	0.027
18960	0.025
19020	0.027
19080	0.027
19140	0.055
19200	0.035
19260	0.041
19320	0.036
19380	0.026
19440	0.025
19500	0.029

19560	0.035
19620	0.027
19680	0.024
19740	0.025
19800	0.022
19860	0.022
19920	0.025
19980	0.024
20040	0.024
20100	0.027
20160	0.028
20220	0.027
20280	0.026
20340	0.026
20400	0.034
20460	0.038
20520	0.032
20580	0.025
20640	0.021
20700	0.024
20760	0.024
20820	0.02
20880	0.022
20940	0.028
21000	0.033
21060	0.03
21120	0.027
21180	0.034
21240	0.034
21300	0.029
21360	0.026
21420	0.027
21480	0.039
21540	0.034
21600	0.026
21660	0.025
21720	0.021
21780	0.026
21840	0.028
21900	0.035
21960	0.043
22020	0.037
22080	0.037
22140	0.031
22200	0.028
22260	0.028
22320	0.03
22380	0.033
22440	0.036
22500	0.036
22560	0.029
22620	0.027
22680	0.021
22740	0.021
22800	0.024
22860	0.029
22920	0.029
22980	0.024
23040	0.023
23100	0.022
23160	0.019
23220	0.022
23280	0.024
23340	0.025
23400	0.028
23460	0.027
23520	0.02
23580	0.02
23640	0.022

23700	0.021
23760	0.022
23820	0.022
23880	0.025
23940	0.03
24000	0.03
24060	0.027
24120	0.028
24180	0.029
24240	0.026
24300	0.023
24360	0.022
24420	0.023
24480	0.023
24540	0.022
24600	0.023
24660	0.021
24720	0.022
24780	0.023
24840	0.022
24900	0.02
24960	0.019
25020	0.023
25080	0.021
25140	0.024
25200	0.018
25260	0.019
25320	0.02
25380	0.022
25440	0.019
25500	0.033
25560	0.027
25620	0.028
25680	0.025
25740	0.029
25800	0.028
25860	0.031
25920	0.031
25980	0.026
26040	0.026
26100	0.034
26160	0.025
26220	0.027
26280	0.034
26340	0.031
26400	0.027
26460	0.028
26520	0.034
26580	0.026
26640	0.033
26700	0.034
26760	0.032
26820	0.025
26880	0.023
26940	0.023
27000	0.021
27060	0.02
27120	0.028
27180	0.031
27240	0.034
27300	0.026
27360	0.026
27420	0.026
27480	0.022
27540	0.022
27600	0.031
27660	0.024
27720	0.02
27780	0.027

27840	0.027
27900	0.023
27960	0.022
28020	0.028
28080	0.029
28140	0.041
28200	0.028
28260	0.028
28320	0.023
28380	0.036
28440	0.028
28500	0.042
28560	0.028
28620	0.094
28680	0.08
28740	0.036
28800	0.024
28860	0.023
28920	0.028
28980	0.022
29040	0.033
29100	0.036
29160	0.028
29220	0.049
29280	0.027
29340	0.023
29400	0.028
29460	0.022
29520	0.022
29580	0.036
29640	0.026
29700	0.031
29760	0.023
29820	0.03
29880	0.028
29940	0.027
30000	0.031
30060	0.029
30120	0.031
30180	0.044
30240	0.025
30300	0.026
30360	0.024
30420	0.026
30480	0.024
30540	0.042
30600	0.051
30660	0.032
30720	0.026
30780	0.029
30840	0.03
30900	0.027
30960	0.025
31020	0.03
31080	0.025
31140	0.023
31200	0.025
31260	0.027
31320	0.024
31380	0.032
31440	0.034
31500	0.028
31560	0.022
31620	0.027
31680	0.024
31740	0.024
31800	0.028
31860	0.022
31920	0.034

31980	0.03
32040	0.034
32100	0.023
32160	0.026
32220	0.027

AECOM

Client: National Grid
Location: Greece
Date: 10/2/11
Field Personnel: J. Ehlen

Project: Metropolitan
Project Number: 60137361
Weather: ~65°F, sunny, light breeze
Ambient Noise: ~80 dB

Community Air Monitoring Plan / Noise Field Log

pg 1 of 2

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
745	0.011	0.0	0.0	0.0	0.018	82.6	moving to SB-19
815	0.008	0.0	0.0	0.0	0.016	90.1	Drilling SB-19
828	0.007	0.0	0.0	0.0	0.010	86.3	"
846	0.004	0.0	0.0	0.0	0.006	87.0	"
902	0.002	0.0	0.0	0.0	0.013	86.1	"
915	0.003	0.0	0.0	0.0	0.010	87.9	"
945	0.002	0.0	0.0	0.0	0.006	84.3	"
1005	0.003	0.0	0.0	0.0	0.007	86.9	"
1027	0.002	0.0	0.0	0.0	0.009	85.7	"
1044	0.001	0.0	0.0	0.0	0.014	83.4	"
1100	0.000	0.0	0.0	0.0	0.016	84.2	"
1117	0.000	0.0	0.0	0.0	0.304	84.3	"
1130	0.003	0.0	0.4	0.0	0.015	83.6	"
1145	0.002	0.0	0.0	0.0	0.017	85.7	"
1215	0.003	0.0	0.0	0.0	0.011	83.3	"
1232	0.002	0.0	0.0	0.0	0.119	87.0	"
1245	0.025	0.0	0.0	0.0	0.010	86.4	"
1300	0.005	0.0	0.0	0.0	0.005	80.5	Drilled to 65 ft bgs.
1315	0.009	0.0	0.0	0.0	0.239	84.8	Drilling SB-19 to 75 ft bgs
1330	0.002	0.0	0.0	0.0	0.008	84.1	"
1345	0.004	0.0	0.0	0.0	0.005	80.6	Drilled to 75 ft bgs
1400	0.002	0.0	0.0	0.0	0.074	83.1	Drilling SB-19 to 85' bgs

no drilling casing delivered.

went to get more drums

AECOM

Client: National Grid
Location: Greco Brothers
Date: 10/2/11
Field Personnel: J. Ehlen

Project: Metropolitan
Project Number: 60137361
Weather: ~70°F, partly cloudy, breezy
Ambient Noise: ~80 dB

Community Air Monitoring Plan / Noise Field Log

pg 2 of 2

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
1415	0.0	0.004	0.0	0.0	0.006	86.7	Drilling SB-19
1500	0.0	0.003	0.0	0.0	0.012	81.0	Unloading well seal materials
1515	0.0	0.009	0.0	0.0	0.014	84.1	grouting SB-19
1530	0.0	0.004	0.0	0.0	0.013	82.7	"
1547	0.0	0.014	0.0	0.0	0.006	82.2	installing mw's
1600	0.0	0.005	0.0	0.0	0.022	83.4	"
1614	0.0	0.003	0.0	0.0	0.008	81.0	"
1630	0.0	0.009	0.0	0.0	0.009	80.7	"
1645	0.0	0.003	0.0	0.0	0.006	84.7	" Starting to drizzle.
1700	0.0	0.005	0.0	0.0	0.012	82.4	"
1715	0.0	0.007	0.0	0.0	0.013	81.3	"
1742	0.0	0.008	0.0	0.0	0.031	83.3	" rain stops
1811	0.0	0.011	0.0	0.0	0.014	78.2	"
1821	finished installing wells stop CAMP.						

> getting well seal materials from staging area

> getting supplies

==========Event #2 information (begin)==========

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[Event #2 name:]--[Event #2]2011-10-02 07:40<-->2011-10-02 18:30

[Event start time:]--2011-10-02 07:40:36[Event end time:]--2011-10-02 18:30:36

==========Event #2 head information==========

Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624

Data Points: 650 Sample Period: 60 s Datalog Mode: Automatic

SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode

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Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)

Measurement Gas : Isobutene

Calibration Time : 2011-10-02 07:18:002011-10-02 07:18:002011-10-02 07:18:00

Drift Value : --- --- ---

Low Alarm Levels : 50.000 50.000 50.000

High Alarm Levels : 100.000 100.000 100.000

Span Value : 100.000 100.000 100.000

Correction Factor : 1.00 1.00 1.00

Over Alarm Levels : 15000.000 15000.000 15000.000

==========Event #2 data informations==========

LINE#	Date/Time	PID-Min(ppm)	PID-Avg(ppm)	PID-Max(ppm)
1	10/2/2011 7:41	0	0.078	0.31
2	10/2/2011 7:42	0	0	0
3	10/2/2011 7:43	0	0	0
4	10/2/2011 7:44	0	0	0
5	10/2/2011 7:45	0	0	0
6	10/2/2011 7:46	0	0	0
7	10/2/2011 7:47	0	0	0
8	10/2/2011 7:48	0	0	0
9	10/2/2011 7:49	0	0	0
10	10/2/2011 7:50	0	0	0
11	10/2/2011 7:51	0	0	0
12	10/2/2011 7:52	0	0	0
13	10/2/2011 7:53	0	0	0
14	10/2/2011 7:54	0	0	0
15	10/2/2011 7:55	0	0	0
16	10/2/2011 7:56	0	0	0
17	10/2/2011 7:57	0	0	0
18	10/2/2011 7:58	0	0	0
19	10/2/2011 7:59	0	0	0
20	10/2/2011 8:00	0	0	0
21	10/2/2011 8:01	0	0	0
22	10/2/2011 8:02	0	0	0
23	10/2/2011 8:03	0	0	0
24	10/2/2011 8:04	0	0	0
25	10/2/2011 8:05	0	0	0
26	10/2/2011 8:06	0	0	0

27	10/2/2011 8:07	0	0	0
28	10/2/2011 8:08	0	0	0
29	10/2/2011 8:09	0	0	0
30	10/2/2011 8:10	0	0	0
31	10/2/2011 8:11	0	0	0
32	10/2/2011 8:12	0	0	0
33	10/2/2011 8:13	0	0	0
34	10/2/2011 8:14	0	0	0
35	10/2/2011 8:15	0	0	0
36	10/2/2011 8:16	0	0	0
37	10/2/2011 8:17	0	0	0
38	10/2/2011 8:18	0	0	0
39	10/2/2011 8:19	0	0	0
40	10/2/2011 8:20	0	0	0
41	10/2/2011 8:21	0	0	0
42	10/2/2011 8:22	0	0	0
43	10/2/2011 8:23	0	0	0
44	10/2/2011 8:24	0	0	0
45	10/2/2011 8:25	0	0	0
46	10/2/2011 8:26	0	0	0
47	10/2/2011 8:27	0	0	0
48	10/2/2011 8:28	0	0	0
49	10/2/2011 8:29	0	0	0
50	10/2/2011 8:30	0	0	0
51	10/2/2011 8:31	0	0	0
52	10/2/2011 8:32	0	0	0
53	10/2/2011 8:33	0	0	0
54	10/2/2011 8:34	0	0	0
55	10/2/2011 8:35	0	0	0
56	10/2/2011 8:36	0	0	0
57	10/2/2011 8:37	0	0	0
58	10/2/2011 8:38	0	0	0
59	10/2/2011 8:39	0	0	0
60	10/2/2011 8:40	0	0	0
61	10/2/2011 8:41	0	0	0
62	10/2/2011 8:42	0	0	0
63	10/2/2011 8:43	0	0	0
64	10/2/2011 8:44	0	0	0
65	10/2/2011 8:45	0	0	0
66	10/2/2011 8:46	0	0	0
67	10/2/2011 8:47	0	0	0
68	10/2/2011 8:48	0	0	0
69	10/2/2011 8:49	0	0	0
70	10/2/2011 8:50	0	0	0
71	10/2/2011 8:51	0	0	0
72	10/2/2011 8:52	0	0	0
73	10/2/2011 8:53	0	0	0

74	10/2/2011 8:54	0	0	0
75	10/2/2011 8:55	0	0	0
76	10/2/2011 8:56	0	0	0
77	10/2/2011 8:57	0	0	0
78	10/2/2011 8:58	0	0	0
79	10/2/2011 8:59	0	0	0
80	10/2/2011 9:00	0	0	0
81	10/2/2011 9:01	0	0	0
82	10/2/2011 9:02	0	0	0
83	10/2/2011 9:03	0	0	0
84	10/2/2011 9:04	0	0	0
85	10/2/2011 9:05	0	0	0
86	10/2/2011 9:06	0	0	0
87	10/2/2011 9:07	0	0	0
88	10/2/2011 9:08	0	0	0
89	10/2/2011 9:09	0	0	0
90	10/2/2011 9:10	0	0	0
91	10/2/2011 9:11	0	0	0
92	10/2/2011 9:12	0	0	0
93	10/2/2011 9:13	0	0	0
94	10/2/2011 9:14	0	0	0
95	10/2/2011 9:15	0	0	0
96	10/2/2011 9:16	0	0	0
97	10/2/2011 9:17	0	0	0
98	10/2/2011 9:18	0	0	0
99	10/2/2011 9:19	0	0	0
100	10/2/2011 9:20	0	0	0
101	10/2/2011 9:21	0	0	0
102	10/2/2011 9:22	0	0	0
103	10/2/2011 9:23	0	0	0
104	10/2/2011 9:24	0	0	0
105	10/2/2011 9:25	0	0	0
106	10/2/2011 9:26	0	0	0
107	10/2/2011 9:27	0	0	0
108	10/2/2011 9:28	0	0	0
109	10/2/2011 9:29	0	0	0
110	10/2/2011 9:30	0	0	0
111	10/2/2011 9:31	0	0	0
112	10/2/2011 9:32	0	0	0
113	10/2/2011 9:33	0	0	0
114	10/2/2011 9:34	0	0	0
115	10/2/2011 9:35	0	0	0
116	10/2/2011 9:36	0	0	0
117	10/2/2011 9:37	0	0	0
118	10/2/2011 9:38	0	0	0
119	10/2/2011 9:39	0	0	0
120	10/2/2011 9:40	0	0	0

121	10/2/2011 9:41	0	0	0
122	10/2/2011 9:42	0	0	0
123	10/2/2011 9:43	0	0	0
124	10/2/2011 9:44	0	0	0
125	10/2/2011 9:45	0	0	0
126	10/2/2011 9:46	0	0	0
127	10/2/2011 9:47	0	0	0
128	10/2/2011 9:48	0	0	0
129	10/2/2011 9:49	0	0	0
130	10/2/2011 9:50	0	0	0
131	10/2/2011 9:51	0	0	0
132	10/2/2011 9:52	0	0	0
133	10/2/2011 9:53	0	0	0
134	10/2/2011 9:54	0	0	0
135	10/2/2011 9:55	0	0	0
136	10/2/2011 9:56	0	0	0
137	10/2/2011 9:57	0	0	0
138	10/2/2011 9:58	0	0	0
139	10/2/2011 9:59	0	0	0
140	10/2/2011 10:00	0	0	0
141	10/2/2011 10:01	0	0	0
142	10/2/2011 10:02	0	0	0
143	10/2/2011 10:03	0	0	0
144	10/2/2011 10:04	0	0	0
145	10/2/2011 10:05	0	0	0
146	10/2/2011 10:06	0	0	0
147	10/2/2011 10:07	0	0	0
148	10/2/2011 10:08	0	0	0
149	10/2/2011 10:09	0	0	0
150	10/2/2011 10:10	0	0	0
151	10/2/2011 10:11	0	0	0
152	10/2/2011 10:12	0	0	0
153	10/2/2011 10:13	0	0	0
154	10/2/2011 10:14	0	0	0
155	10/2/2011 10:15	0	0	0
156	10/2/2011 10:16	0	0	0
157	10/2/2011 10:17	0	0	0
158	10/2/2011 10:18	0	0	0
159	10/2/2011 10:19	0	0	0
160	10/2/2011 10:20	0	0	0
161	10/2/2011 10:21	0	0	0
162	10/2/2011 10:22	0	0	0
163	10/2/2011 10:23	0	0	0
164	10/2/2011 10:24	0	0	0
165	10/2/2011 10:25	0	0	0
166	10/2/2011 10:26	0	0	0
167	10/2/2011 10:27	0	0	0

168	10/2/2011 10:28	0	0	0
169	10/2/2011 10:29	0	0	0
170	10/2/2011 10:30	0	0	0
171	10/2/2011 10:31	0	0	0
172	10/2/2011 10:32	0	0	0
173	10/2/2011 10:33	0	0	0
174	10/2/2011 10:34	0	0	0
175	10/2/2011 10:35	0	0	0
176	10/2/2011 10:36	0	0	0
177	10/2/2011 10:37	0	0	0
178	10/2/2011 10:38	0	0	0
179	10/2/2011 10:39	0	0	0
180	10/2/2011 10:40	0	0	0
181	10/2/2011 10:41	0	0	0
182	10/2/2011 10:42	0	0	0
183	10/2/2011 10:43	0	0	0
184	10/2/2011 10:44	0	0	0
185	10/2/2011 10:45	0	0	0
186	10/2/2011 10:46	0	0	0
187	10/2/2011 10:47	0	0	0
188	10/2/2011 10:48	0	0	0
189	10/2/2011 10:49	0	0	0
190	10/2/2011 10:50	0	0	0
191	10/2/2011 10:51	0	0	0
192	10/2/2011 10:52	0	0	0
193	10/2/2011 10:53	0	0	0
194	10/2/2011 10:54	0	0	0
195	10/2/2011 10:55	0	0	0
196	10/2/2011 10:56	0	0	0
197	10/2/2011 10:57	0	0	0
198	10/2/2011 10:58	0	0	0
199	10/2/2011 10:59	0	0	0
200	10/2/2011 11:00	0	0	0
201	10/2/2011 11:01	0	0	0
202	10/2/2011 11:02	0	0	0
203	10/2/2011 11:03	0	0	0
204	10/2/2011 11:04	0	0	0
205	10/2/2011 11:05	0	0	0
206	10/2/2011 11:06	0	0	0
207	10/2/2011 11:07	0	0	0
208	10/2/2011 11:08	0	0	0
209	10/2/2011 11:09	0	0	0
210	10/2/2011 11:10	0	0	0
211	10/2/2011 11:11	0	0	0
212	10/2/2011 11:12	0	0	0
213	10/2/2011 11:13	0	0	0
214	10/2/2011 11:14	0	0	0

215	10/2/2011 11:15	0	0	0
216	10/2/2011 11:16	0	0	0
217	10/2/2011 11:17	0	0	0
218	10/2/2011 11:18	0	0	0
219	10/2/2011 11:19	0	0	0
220	10/2/2011 11:20	0	0	0
221	10/2/2011 11:21	0	0	0
222	10/2/2011 11:22	0	0	0
223	10/2/2011 11:23	0	0	0
224	10/2/2011 11:24	0	0	0
225	10/2/2011 11:25	0	0	0
226	10/2/2011 11:26	0	0	0
227	10/2/2011 11:27	0	0	0
228	10/2/2011 11:28	0	0	0
229	10/2/2011 11:29	0	0	0
230	10/2/2011 11:30	0	0	0
231	10/2/2011 11:31	0	0	0
232	10/2/2011 11:32	0	0	0
233	10/2/2011 11:33	0	0	0
234	10/2/2011 11:34	0	0	0
235	10/2/2011 11:35	0	0	0
236	10/2/2011 11:36	0	0	0
237	10/2/2011 11:37	0	0	0
238	10/2/2011 11:38	0	0	0
239	10/2/2011 11:39	0	0	0
240	10/2/2011 11:40	0	0	0
241	10/2/2011 11:41	0	0	0
242	10/2/2011 11:42	0	0	0
243	10/2/2011 11:43	0	0	0
244	10/2/2011 11:44	0	0	0
245	10/2/2011 11:45	0	0	0
246	10/2/2011 11:46	0	0	0
247	10/2/2011 11:47	0	0	0
248	10/2/2011 11:48	0	0	0
249	10/2/2011 11:49	0	0	0
250	10/2/2011 11:50	0	0	0
251	10/2/2011 11:51	0	0	0
252	10/2/2011 11:52	0	0	0
253	10/2/2011 11:53	0	0	0
254	10/2/2011 11:54	0	0	0
255	10/2/2011 11:55	0	0	0
256	10/2/2011 11:56	0	0	0
257	10/2/2011 11:57	0	0	0
258	10/2/2011 11:58	0	0	0
259	10/2/2011 11:59	0	0	0
260	10/2/2011 12:00	0	0	0
261	10/2/2011 12:01	0	0	0

262	10/2/2011 12:02	0	0	0
263	10/2/2011 12:03	0	0	0
264	10/2/2011 12:04	0	0	0
265	10/2/2011 12:05	0	0	0
266	10/2/2011 12:06	0	0	0
267	10/2/2011 12:07	0	0	0
268	10/2/2011 12:08	0	0	0
269	10/2/2011 12:09	0	0	0
270	10/2/2011 12:10	0	0	0
271	10/2/2011 12:11	0	0	0
272	10/2/2011 12:12	0	0	0
273	10/2/2011 12:13	0	0	0
274	10/2/2011 12:14	0	0	0
275	10/2/2011 12:15	0	0	0
276	10/2/2011 12:16	0	0	0
277	10/2/2011 12:17	0	0	0
278	10/2/2011 12:18	0	0	0
279	10/2/2011 12:19	0	0	0
280	10/2/2011 12:20	0	0	0
281	10/2/2011 12:21	0	0	0
282	10/2/2011 12:22	0	0	0
283	10/2/2011 12:23	0	0	0
284	10/2/2011 12:24	0	0	0
285	10/2/2011 12:25	0	0	0
286	10/2/2011 12:26	0	0	0
287	10/2/2011 12:27	0	0	0
288	10/2/2011 12:28	0	0	0
289	10/2/2011 12:29	0	0	0
290	10/2/2011 12:30	0	0	0
291	10/2/2011 12:31	0	0	0
292	10/2/2011 12:32	0	0	0
293	10/2/2011 12:33	0	0	0
294	10/2/2011 12:34	0	0	0
295	10/2/2011 12:35	0	0	0
296	10/2/2011 12:36	0	0	0
297	10/2/2011 12:37	0	0	0
298	10/2/2011 12:38	0	0	0
299	10/2/2011 12:39	0	0	0
300	10/2/2011 12:40	0	0	0
301	10/2/2011 12:41	0	0	0
302	10/2/2011 12:42	0	0	0
303	10/2/2011 12:43	0	0	0
304	10/2/2011 12:44	0	0	0
305	10/2/2011 12:45	0	0	0
306	10/2/2011 12:46	0	0	0
307	10/2/2011 12:47	0	0	0
308	10/2/2011 12:48	0	0	0

309	10/2/2011 12:49	0	0	0
310	10/2/2011 12:50	0	0	0
311	10/2/2011 12:51	0	0	0
312	10/2/2011 12:52	0	0	0
313	10/2/2011 12:53	0	0	0
314	10/2/2011 12:54	0	0	0
315	10/2/2011 12:55	0	0	0
316	10/2/2011 12:56	0	0	0
317	10/2/2011 12:57	0	0	0
318	10/2/2011 12:58	0	0	0
319	10/2/2011 12:59	0	0	0
320	10/2/2011 13:00	0	0	0
321	10/2/2011 13:01	0	0	0
322	10/2/2011 13:02	0	0	0
323	10/2/2011 13:03	0	0	0
324	10/2/2011 13:04	0	0	0
325	10/2/2011 13:05	0	0	0
326	10/2/2011 13:06	0	0	0
327	10/2/2011 13:07	0	0	0
328	10/2/2011 13:08	0	0	0
329	10/2/2011 13:09	0	0	0
330	10/2/2011 13:10	0	0	0
331	10/2/2011 13:11	0	0	0
332	10/2/2011 13:12	0	0	0
333	10/2/2011 13:13	0	0	0
334	10/2/2011 13:14	0	0	0
335	10/2/2011 13:15	0	0	0
336	10/2/2011 13:16	0	0	0
337	10/2/2011 13:17	0	0	0
338	10/2/2011 13:18	0	0	0
339	10/2/2011 13:19	0	0	0
340	10/2/2011 13:20	0	0	0
341	10/2/2011 13:21	0	0	0
342	10/2/2011 13:22	0	0	0
343	10/2/2011 13:23	0	0	0
344	10/2/2011 13:24	0	0	0
345	10/2/2011 13:25	0	0	0
346	10/2/2011 13:26	0	0	0
347	10/2/2011 13:27	0	0	0
348	10/2/2011 13:28	0	0	0
349	10/2/2011 13:29	0	0	0
350	10/2/2011 13:30	0	0	0
351	10/2/2011 13:31	0	0	0
352	10/2/2011 13:32	0	0	0
353	10/2/2011 13:33	0	0	0
354	10/2/2011 13:34	0	0	0
355	10/2/2011 13:35	0	0	0

356	10/2/2011 13:36	0	0	0
357	10/2/2011 13:37	0	0	0
358	10/2/2011 13:38	0	0	0
359	10/2/2011 13:39	0	0	0
360	10/2/2011 13:40	0	0	0
361	10/2/2011 13:41	0	0	0
362	10/2/2011 13:42	0	0	0
363	10/2/2011 13:43	0	0	0
364	10/2/2011 13:44	0	0	0
365	10/2/2011 13:45	0	0	0
366	10/2/2011 13:46	0	0	0
367	10/2/2011 13:47	0	0	0
368	10/2/2011 13:48	0	0	0
369	10/2/2011 13:49	0	0	0
370	10/2/2011 13:50	0	0	0
371	10/2/2011 13:51	0	0	0
372	10/2/2011 13:52	0	0	0
373	10/2/2011 13:53	0	0	0
374	10/2/2011 13:54	0	0	0
375	10/2/2011 13:55	0	0	0
376	10/2/2011 13:56	0	0	0
377	10/2/2011 13:57	0	0	0
378	10/2/2011 13:58	0	0	0
379	10/2/2011 13:59	0	0	0
380	10/2/2011 14:00	0	0	0
381	10/2/2011 14:01	0	0	0
382	10/2/2011 14:02	0	0	0
383	10/2/2011 14:03	0	0	0
384	10/2/2011 14:04	0	0	0
385	10/2/2011 14:05	0	0	0
386	10/2/2011 14:06	0	0	0
387	10/2/2011 14:07	0	0	0
388	10/2/2011 14:08	0	0	0
389	10/2/2011 14:09	0	0	0
390	10/2/2011 14:10	0	0	0
391	10/2/2011 14:11	0	0	0
392	10/2/2011 14:12	0	0	0
393	10/2/2011 14:13	0	0	0
394	10/2/2011 14:14	0	0	0
395	10/2/2011 14:15	0	0	0
396	10/2/2011 14:16	0	0	0
397	10/2/2011 14:17	0	0	0
398	10/2/2011 14:18	0	0	0
399	10/2/2011 14:19	0	0	0
400	10/2/2011 14:20	0	0	0
401	10/2/2011 14:21	0	0	0
402	10/2/2011 14:22	0	0	0

403	10/2/2011 14:23	0	0	0
404	10/2/2011 14:24	0	0	0
405	10/2/2011 14:25	0	0	0
406	10/2/2011 14:26	0	0	0
407	10/2/2011 14:27	0	0	0
408	10/2/2011 14:28	0	0	0
409	10/2/2011 14:29	0	0	0
410	10/2/2011 14:30	0	0	0
411	10/2/2011 14:31	0	0	0
412	10/2/2011 14:32	0	0	0
413	10/2/2011 14:33	0	0	0
414	10/2/2011 14:34	0	0	0
415	10/2/2011 14:35	0	0	0
416	10/2/2011 14:36	0	0	0
417	10/2/2011 14:37	0	0	0
418	10/2/2011 14:38	0	0	0
419	10/2/2011 14:39	0	0	0
420	10/2/2011 14:40	0	0	0
421	10/2/2011 14:41	0	0	0
422	10/2/2011 14:42	0	0	0
423	10/2/2011 14:43	0	0	0
424	10/2/2011 14:44	0	0	0
425	10/2/2011 14:45	0	0	0
426	10/2/2011 14:46	0	0	0
427	10/2/2011 14:47	0	0	0
428	10/2/2011 14:48	0	0	0
429	10/2/2011 14:49	0	0	0
430	10/2/2011 14:50	0	0	0
431	10/2/2011 14:51	0	0	0
432	10/2/2011 14:52	0	0	0
433	10/2/2011 14:53	0	0	0
434	10/2/2011 14:54	0	0	0
435	10/2/2011 14:55	0	0	0
436	10/2/2011 14:56	0	0	0
437	10/2/2011 14:57	0	0	0
438	10/2/2011 14:58	0	0	0
439	10/2/2011 14:59	0	0	0
440	10/2/2011 15:00	0	0	0
441	10/2/2011 15:01	0	0	0
442	10/2/2011 15:02	0	0	0
443	10/2/2011 15:03	0	0	0
444	10/2/2011 15:04	0	0	0
445	10/2/2011 15:05	0	0	0
446	10/2/2011 15:06	0	0	0
447	10/2/2011 15:07	0	0	0
448	10/2/2011 15:08	0	0	0
449	10/2/2011 15:09	0	0	0

450	10/2/2011 15:10	0	0	0
451	10/2/2011 15:11	0	0	0
452	10/2/2011 15:12	0	0	0
453	10/2/2011 15:13	0	0	0
454	10/2/2011 15:14	0	0	0
455	10/2/2011 15:15	0	0	0
456	10/2/2011 15:16	0	0	0
457	10/2/2011 15:17	0	0	0
458	10/2/2011 15:18	0	0	0
459	10/2/2011 15:19	0	0	0
460	10/2/2011 15:20	0	0	0
461	10/2/2011 15:21	0	0	0
462	10/2/2011 15:22	0	0	0
463	10/2/2011 15:23	0	0	0
464	10/2/2011 15:24	0	0	0
465	10/2/2011 15:25	0	0	0
466	10/2/2011 15:26	0	0	0
467	10/2/2011 15:27	0	0	0
468	10/2/2011 15:28	0	0	0
469	10/2/2011 15:29	0	0	0
470	10/2/2011 15:30	0	0	0
471	10/2/2011 15:31	0	0	0
472	10/2/2011 15:32	0	0	0
473	10/2/2011 15:33	0	0	0
474	10/2/2011 15:34	0	0	0
475	10/2/2011 15:35	0	0	0
476	10/2/2011 15:36	0	0	0
477	10/2/2011 15:37	0	0	0
478	10/2/2011 15:38	0	0	0
479	10/2/2011 15:39	0	0	0
480	10/2/2011 15:40	0	0	0
481	10/2/2011 15:41	0	0	0
482	10/2/2011 15:42	0	0	0
483	10/2/2011 15:43	0	0	0
484	10/2/2011 15:44	0	0	0
485	10/2/2011 15:45	0	0	0
486	10/2/2011 15:46	0	0	0
487	10/2/2011 15:47	0	0	0
488	10/2/2011 15:48	0	0	0
489	10/2/2011 15:49	0	0	0
490	10/2/2011 15:50	0	0	0
491	10/2/2011 15:51	0	0	0
492	10/2/2011 15:52	0	0	0
493	10/2/2011 15:53	0	0	0
494	10/2/2011 15:54	0	0	0
495	10/2/2011 15:55	0	0	0
496	10/2/2011 15:56	0	0	0

497	10/2/2011 15:57	0	0	0
498	10/2/2011 15:58	0	0	0
499	10/2/2011 15:59	0	0	0
500	10/2/2011 16:00	0	0	0
501	10/2/2011 16:01	0	0	0
502	10/2/2011 16:02	0	0	0
503	10/2/2011 16:03	0	0	0
504	10/2/2011 16:04	0	0	0
505	10/2/2011 16:05	0	0	0
506	10/2/2011 16:06	0	0	0
507	10/2/2011 16:07	0	0	0
508	10/2/2011 16:08	0	0	0
509	10/2/2011 16:09	0	0	0
510	10/2/2011 16:10	0	0	0
511	10/2/2011 16:11	0	0	0
512	10/2/2011 16:12	0	0	0
513	10/2/2011 16:13	0	0	0
514	10/2/2011 16:14	0	0	0
515	10/2/2011 16:15	0	0	0
516	10/2/2011 16:16	0	0	0
517	10/2/2011 16:17	0	0	0
518	10/2/2011 16:18	0	0	0
519	10/2/2011 16:19	0	0	0
520	10/2/2011 16:20	0	0	0
521	10/2/2011 16:21	0	0	0
522	10/2/2011 16:22	0	0	0
523	10/2/2011 16:23	0	0	0
524	10/2/2011 16:24	0	0	0
525	10/2/2011 16:25	0	0	0
526	10/2/2011 16:26	0	0	0
527	10/2/2011 16:27	0	0	0
528	10/2/2011 16:28	0	0	0
529	10/2/2011 16:29	0	0	0
530	10/2/2011 16:30	0	0	0
531	10/2/2011 16:31	0	0	0
532	10/2/2011 16:32	0	0	0
533	10/2/2011 16:33	0	0	0
534	10/2/2011 16:34	0	0	0
535	10/2/2011 16:35	0	0	0
536	10/2/2011 16:36	0	0	0
537	10/2/2011 16:37	0	0	0
538	10/2/2011 16:38	0	0	0
539	10/2/2011 16:39	0	0	0
540	10/2/2011 16:40	0	0	0
541	10/2/2011 16:41	0	0	0
542	10/2/2011 16:42	0	0	0
543	10/2/2011 16:43	0	0	0

544	10/2/2011 16:44	0	0	0
545	10/2/2011 16:45	0	0	0
546	10/2/2011 16:46	0	0	0
547	10/2/2011 16:47	0	0	0
548	10/2/2011 16:48	0	0	0
549	10/2/2011 16:49	0	0	0
550	10/2/2011 16:50	0	0	0
551	10/2/2011 16:51	0	0	0
552	10/2/2011 16:52	0	0	0
553	10/2/2011 16:53	0	0	0
554	10/2/2011 16:54	0	0	0
555	10/2/2011 16:55	0	0	0
556	10/2/2011 16:56	0	0	0
557	10/2/2011 16:57	0	0	0
558	10/2/2011 16:58	0	0	0
559	10/2/2011 16:59	0	0	0
560	10/2/2011 17:00	0	0	0
561	10/2/2011 17:01	0	0	0
562	10/2/2011 17:02	0	0	0
563	10/2/2011 17:03	0	0	0
564	10/2/2011 17:04	0	0	0
565	10/2/2011 17:05	0	0	0
566	10/2/2011 17:06	0	0	0
567	10/2/2011 17:07	0	0	0
568	10/2/2011 17:08	0	0	0
569	10/2/2011 17:09	0	0	0
570	10/2/2011 17:10	0	0	0
571	10/2/2011 17:11	0	0	0
572	10/2/2011 17:12	0	0	0
573	10/2/2011 17:13	0	0	0
574	10/2/2011 17:14	0	0	0
575	10/2/2011 17:15	0	0	0
576	10/2/2011 17:16	0	0	0
577	10/2/2011 17:17	0	0	0
578	10/2/2011 17:18	0	0	0
579	10/2/2011 17:19	0	0	0
580	10/2/2011 17:20	0	0	0
581	10/2/2011 17:21	0	0	0
582	10/2/2011 17:22	0	0	0
583	10/2/2011 17:23	0	0	0
584	10/2/2011 17:24	0	0	0
585	10/2/2011 17:25	0	0	0
586	10/2/2011 17:26	0	0	0
587	10/2/2011 17:27	0	0	0
588	10/2/2011 17:28	0	0	0
589	10/2/2011 17:29	0	0	0
590	10/2/2011 17:30	0	0	0

591	10/2/2011 17:31	0	0	0
592	10/2/2011 17:32	0	0	0
593	10/2/2011 17:33	0	0	0
594	10/2/2011 17:34	0	0	0
595	10/2/2011 17:35	0	0	0
596	10/2/2011 17:36	0	0	0
597	10/2/2011 17:37	0	0	0
598	10/2/2011 17:38	0	0	0
599	10/2/2011 17:39	0	0	0
600	10/2/2011 17:40	0	0	0
601	10/2/2011 17:41	0	0	0
602	10/2/2011 17:42	0	0	0
603	10/2/2011 17:43	0	0	0
604	10/2/2011 17:44	0	0	0
605	10/2/2011 17:45	0	0	0
606	10/2/2011 17:46	0	0	0
607	10/2/2011 17:47	0	0	0
608	10/2/2011 17:48	0	0	0
609	10/2/2011 17:49	0	0	0
610	10/2/2011 17:50	0	0	0
611	10/2/2011 17:51	0	0	0
612	10/2/2011 17:52	0	0	0
613	10/2/2011 17:53	0	0	0
614	10/2/2011 17:54	0	0	0
615	10/2/2011 17:55	0	0	0
616	10/2/2011 17:56	0	0	0
617	10/2/2011 17:57	0	0	0
618	10/2/2011 17:58	0	0	0
619	10/2/2011 17:59	0	0	0
620	10/2/2011 18:00	0	0	0
621	10/2/2011 18:01	0	0	0
622	10/2/2011 18:02	0	0	0
623	10/2/2011 18:03	0	0	0
624	10/2/2011 18:04	0	0	0
625	10/2/2011 18:05	0	0	0
626	10/2/2011 18:06	0	0	0
627	10/2/2011 18:07	0	0	0
628	10/2/2011 18:08	0	0	0
629	10/2/2011 18:09	0	0	0
630	10/2/2011 18:10	0	0	0
631	10/2/2011 18:11	0	0	0
632	10/2/2011 18:12	0	0	0
633	10/2/2011 18:13	0	0	0
634	10/2/2011 18:14	0	0	0
635	10/2/2011 18:15	0	0	0
636	10/2/2011 18:16	0	0	0
637	10/2/2011 18:17	0	0	0

638	10/2/2011 18:18	0	0	0
639	10/2/2011 18:19	0	0	0
640	10/2/2011 18:20	0	0	0
641	10/2/2011 18:21	0	0	0
642	10/2/2011 18:22	0	0	0
643	10/2/2011 18:23	0	0	0
644	10/2/2011 18:24	0	0	0
645	10/2/2011 18:25	0	0	0
646	10/2/2011 18:26	0	0	0
647	10/2/2011 18:27	0	0	0
648	10/2/2011 18:28	0	0	0
649	10/2/2011 18:29	0	0	0
650	10/2/2011 18:30	0	0	0

==========Event #2 information (end)==========

==========Event #2 information (begin)==========

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[Event #2 name:]--[Event #2]2011-10-02 07:54<-->2011-10-02 18:42

[Event start time:]--2011-10-02 07:54:23[Event end time:]--2011-10-02 18:42:23

==========Event #2 head information==========

Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367

Data Points: 648 Sample Period: 60 s Datalog Mode: Automatic

SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode

==========

Sensor Information : PID(ppb)

Measurement Gas : Isobutene

Calibration Time : 2011-10-02 07:28:00

Drift Value : ---

Low Alarm Levels : 25847

High Alarm Levels : 51694

Span Value : 100000

Correction Factor : 1.00

Over Alarm Levels : 15000000

==========Event #2 data informations==========

LINE#	Date/Time	PID(ppm)	PID(ppb)
1	10/2/2011 7:55	0	0
2	10/2/2011 7:56	0	0
3	10/2/2011 7:57	0	0
4	10/2/2011 7:58	0	0
5	10/2/2011 7:59	0	0
6	10/2/2011 8:00	0	0
7	10/2/2011 8:01	0	0
8	10/2/2011 8:02	0	0
9	10/2/2011 8:03	0	0
10	10/2/2011 8:04	0	0
11	10/2/2011 8:05	0	0
12	10/2/2011 8:06	0	0
13	10/2/2011 8:07	0	0
14	10/2/2011 8:08	0	0
15	10/2/2011 8:09	0	0
16	10/2/2011 8:10	0	0
17	10/2/2011 8:11	0	0
18	10/2/2011 8:12	0	0
19	10/2/2011 8:13	0	0
20	10/2/2011 8:14	0	0
21	10/2/2011 8:15	0	0
22	10/2/2011 8:16	0	0
23	10/2/2011 8:17	0	0
24	10/2/2011 8:18	0	0
25	10/2/2011 8:19	0	0
26	10/2/2011 8:20	0	0

27	10/2/2011 8:21	0	0
28	10/2/2011 8:22	0	0
29	10/2/2011 8:23	0	0
30	10/2/2011 8:24	0	0
31	10/2/2011 8:25	0	0
32	10/2/2011 8:26	0	0
33	10/2/2011 8:27	0	0
34	10/2/2011 8:28	0	0
35	10/2/2011 8:29	0	0
36	10/2/2011 8:30	0	0
37	10/2/2011 8:31	0	0
38	10/2/2011 8:32	0	0
39	10/2/2011 8:33	0	0
40	10/2/2011 8:34	0	0
41	10/2/2011 8:35	0	0
42	10/2/2011 8:36	0	0
43	10/2/2011 8:37	0	0
44	10/2/2011 8:38	0	0
45	10/2/2011 8:39	0	0
46	10/2/2011 8:40	0	0
47	10/2/2011 8:41	0	0
48	10/2/2011 8:42	0	0
49	10/2/2011 8:43	0	0
50	10/2/2011 8:44	0	0
51	10/2/2011 8:45	0	0
52	10/2/2011 8:46	0	0
53	10/2/2011 8:47	0	0
54	10/2/2011 8:48	0	0
55	10/2/2011 8:49	0	0
56	10/2/2011 8:50	0	0
57	10/2/2011 8:51	0	0
58	10/2/2011 8:52	0	0
59	10/2/2011 8:53	0	0
60	10/2/2011 8:54	0	0
61	10/2/2011 8:55	0	0
62	10/2/2011 8:56	0	0
63	10/2/2011 8:57	0	0
64	10/2/2011 8:58	0	0
65	10/2/2011 8:59	0	0
66	10/2/2011 9:00	0	0
67	10/2/2011 9:01	0	0
68	10/2/2011 9:02	0	0
69	10/2/2011 9:03	0	0
70	10/2/2011 9:04	0	0
71	10/2/2011 9:05	0	0
72	10/2/2011 9:06	0	0
73	10/2/2011 9:07	0	0

74	10/2/2011 9:08	0	0
75	10/2/2011 9:09	0	0
76	10/2/2011 9:10	0	0
77	10/2/2011 9:11	0	0
78	10/2/2011 9:12	0	0
79	10/2/2011 9:13	0	0
80	10/2/2011 9:14	0	0
81	10/2/2011 9:15	0	0
82	10/2/2011 9:16	0	0
83	10/2/2011 9:17	0	0
84	10/2/2011 9:18	0	0
85	10/2/2011 9:19	0	0
86	10/2/2011 9:20	0	0
87	10/2/2011 9:21	0	0
88	10/2/2011 9:22	0	0
89	10/2/2011 9:23	0	0
90	10/2/2011 9:24	0	0
91	10/2/2011 9:25	0	0
92	10/2/2011 9:26	0	0
93	10/2/2011 9:27	0	0
94	10/2/2011 9:28	0	0
95	10/2/2011 9:29	0	0
96	10/2/2011 9:30	0	0
97	10/2/2011 9:31	0	0
98	10/2/2011 9:32	0	0
99	10/2/2011 9:33	0	0
100	10/2/2011 9:34	0	0
101	10/2/2011 9:35	0	0
102	10/2/2011 9:36	0	0
103	10/2/2011 9:37	0	0
104	10/2/2011 9:38	0	0
105	10/2/2011 9:39	0	0
106	10/2/2011 9:40	0	0
107	10/2/2011 9:41	0	0
108	10/2/2011 9:42	0	0
109	10/2/2011 9:43	0	0
110	10/2/2011 9:44	0	0
111	10/2/2011 9:45	0	0
112	10/2/2011 9:46	0	0
113	10/2/2011 9:47	0	0
114	10/2/2011 9:48	0	0
115	10/2/2011 9:49	0	0
116	10/2/2011 9:50	0	0
117	10/2/2011 9:51	0	0
118	10/2/2011 9:52	0	0
119	10/2/2011 9:53	0	0
120	10/2/2011 9:54	0	0

121	10/2/2011 9:55	0	0
122	10/2/2011 9:56	0	0
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124	10/2/2011 9:58	0	0
125	10/2/2011 9:59	0	0
126	10/2/2011 10:00	0	0
127	10/2/2011 10:01	0	0
128	10/2/2011 10:02	0	0
129	10/2/2011 10:03	0	0
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143	10/2/2011 10:17	0	0
144	10/2/2011 10:18	0	0
145	10/2/2011 10:19	0	0
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155	10/2/2011 10:29	0	0
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163	10/2/2011 10:37	0	0
164	10/2/2011 10:38	0	0
165	10/2/2011 10:39	0	0
166	10/2/2011 10:40	0	0
167	10/2/2011 10:41	0	0

168	10/2/2011 10:42	0	0
169	10/2/2011 10:43	0	0
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171	10/2/2011 10:45	0	0
172	10/2/2011 10:46	0	0
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183	10/2/2011 10:57	0	0
184	10/2/2011 10:58	0	0
185	10/2/2011 10:59	0	0
186	10/2/2011 11:00	0	0
187	10/2/2011 11:01	0	0
188	10/2/2011 11:02	0	0
189	10/2/2011 11:03	0	0
190	10/2/2011 11:04	0	0
191	10/2/2011 11:05	0	0
192	10/2/2011 11:06	0	0
193	10/2/2011 11:07	0	0
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196	10/2/2011 11:10	0	0
197	10/2/2011 11:11	0	0
198	10/2/2011 11:12	0	0
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200	10/2/2011 11:14	0	0
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202	10/2/2011 11:16	0	0
203	10/2/2011 11:17	0	0
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212	10/2/2011 11:26	0	0
213	10/2/2011 11:27	0	0
214	10/2/2011 11:28	0	0

215	10/2/2011 11:29	0	0
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218	10/2/2011 11:32	0	0
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220	10/2/2011 11:34	0	0
221	10/2/2011 11:35	0	0
222	10/2/2011 11:36	0	0
223	10/2/2011 11:37	0	0
224	10/2/2011 11:38	0	0
225	10/2/2011 11:39	0	0
226	10/2/2011 11:40	0	0
227	10/2/2011 11:41	0	0
228	10/2/2011 11:42	0	0
229	10/2/2011 11:43	0	0
230	10/2/2011 11:44	0	0
231	10/2/2011 11:45	0	0
232	10/2/2011 11:46	0	0
233	10/2/2011 11:47	0	0
234	10/2/2011 11:48	0	0
235	10/2/2011 11:49	0	0
236	10/2/2011 11:50	0	0
237	10/2/2011 11:51	0	0
238	10/2/2011 11:52	0	0
239	10/2/2011 11:53	0	0
240	10/2/2011 11:54	0	0
241	10/2/2011 11:55	0	0
242	10/2/2011 11:56	0	0
243	10/2/2011 11:57	0	0
244	10/2/2011 11:58	0	0
245	10/2/2011 11:59	0	0
246	10/2/2011 12:00	0	0
247	10/2/2011 12:01	0	0
248	10/2/2011 12:02	0	0
249	10/2/2011 12:03	0	0
250	10/2/2011 12:04	0	0
251	10/2/2011 12:05	0	0
252	10/2/2011 12:06	0	0
253	10/2/2011 12:07	0	0
254	10/2/2011 12:08	0	0
255	10/2/2011 12:09	0	0
256	10/2/2011 12:10	0	0
257	10/2/2011 12:11	0	0
258	10/2/2011 12:12	0	0
259	10/2/2011 12:13	0	0
260	10/2/2011 12:14	0	0
261	10/2/2011 12:15	0	0

262	10/2/2011 12:16	0	0
263	10/2/2011 12:17	0	0
264	10/2/2011 12:18	0	0
265	10/2/2011 12:19	0	0
266	10/2/2011 12:20	0	0
267	10/2/2011 12:21	0	0
268	10/2/2011 12:22	0	0
269	10/2/2011 12:23	0	0
270	10/2/2011 12:24	0	0
271	10/2/2011 12:25	0	0
272	10/2/2011 12:26	0	0
273	10/2/2011 12:27	0	0
274	10/2/2011 12:28	0	0
275	10/2/2011 12:29	0	0
276	10/2/2011 12:30	0	0
277	10/2/2011 12:31	0	0
278	10/2/2011 12:32	0	0
279	10/2/2011 12:33	0	0
280	10/2/2011 12:34	0	0
281	10/2/2011 12:35	0	0
282	10/2/2011 12:36	0	0
283	10/2/2011 12:37	0	0
284	10/2/2011 12:38	0	0
285	10/2/2011 12:39	0	0
286	10/2/2011 12:40	0	0
287	10/2/2011 12:41	0	0
288	10/2/2011 12:42	0	0
289	10/2/2011 12:43	0	0
290	10/2/2011 12:44	0	0
291	10/2/2011 12:45	0	0
292	10/2/2011 12:46	0	0
293	10/2/2011 12:47	0	0
294	10/2/2011 12:48	0	0
295	10/2/2011 12:49	0	0
296	10/2/2011 12:50	0	0
297	10/2/2011 12:51	0	0
298	10/2/2011 12:52	0	0
299	10/2/2011 12:53	0	0
300	10/2/2011 12:54	0	0
301	10/2/2011 12:55	0	0
302	10/2/2011 12:56	0	0
303	10/2/2011 12:57	0	0
304	10/2/2011 12:58	0	0
305	10/2/2011 12:59	0	0
306	10/2/2011 13:00	0	0
307	10/2/2011 13:01	0	0
308	10/2/2011 13:02	0	0

309	10/2/2011 13:03	0	0
310	10/2/2011 13:04	0	0
311	10/2/2011 13:05	0	0
312	10/2/2011 13:06	0	0
313	10/2/2011 13:07	0	0
314	10/2/2011 13:08	0	0
315	10/2/2011 13:09	0	0
316	10/2/2011 13:10	0	0
317	10/2/2011 13:11	0	0
318	10/2/2011 13:12	0	0
319	10/2/2011 13:13	0	0
320	10/2/2011 13:14	0	0
321	10/2/2011 13:15	0	0
322	10/2/2011 13:16	0	0
323	10/2/2011 13:17	0	0
324	10/2/2011 13:18	0	0
325	10/2/2011 13:19	0	0
326	10/2/2011 13:20	0	0
327	10/2/2011 13:21	0	0
328	10/2/2011 13:22	0	0
329	10/2/2011 13:23	0	0
330	10/2/2011 13:24	0	0
331	10/2/2011 13:25	0	0
332	10/2/2011 13:26	0	0
333	10/2/2011 13:27	0	0
334	10/2/2011 13:28	0	0
335	10/2/2011 13:29	0	0
336	10/2/2011 13:30	0	0
337	10/2/2011 13:31	0	0
338	10/2/2011 13:32	0	0
339	10/2/2011 13:33	0	0
340	10/2/2011 13:34	0	0
341	10/2/2011 13:35	0	0
342	10/2/2011 13:36	0	0
343	10/2/2011 13:37	0	0
344	10/2/2011 13:38	0	0
345	10/2/2011 13:39	0	0
346	10/2/2011 13:40	0	0
347	10/2/2011 13:41	0	0
348	10/2/2011 13:42	0	0
349	10/2/2011 13:43	0	0
350	10/2/2011 13:44	0	0
351	10/2/2011 13:45	0	0
352	10/2/2011 13:46	0	0
353	10/2/2011 13:47	0	0
354	10/2/2011 13:48	0	0
355	10/2/2011 13:49	0	0

356	10/2/2011 13:50	0	0
357	10/2/2011 13:51	0	0
358	10/2/2011 13:52	0	0
359	10/2/2011 13:53	0	0
360	10/2/2011 13:54	0	0
361	10/2/2011 13:55	0	0
362	10/2/2011 13:56	0	0
363	10/2/2011 13:57	0	0
364	10/2/2011 13:58	0	0
365	10/2/2011 13:59	0	0
366	10/2/2011 14:00	0	0
367	10/2/2011 14:01	0	0
368	10/2/2011 14:02	0	0
369	10/2/2011 14:03	0	0
370	10/2/2011 14:04	0	0
371	10/2/2011 14:05	0	0
372	10/2/2011 14:06	0	0
373	10/2/2011 14:07	0	0
374	10/2/2011 14:08	0	0
375	10/2/2011 14:09	0	0
376	10/2/2011 14:10	0	0
377	10/2/2011 14:11	0	0
378	10/2/2011 14:12	0	0
379	10/2/2011 14:13	0	0
380	10/2/2011 14:14	0	0
381	10/2/2011 14:15	0	0
382	10/2/2011 14:16	0	0
383	10/2/2011 14:17	0	0
384	10/2/2011 14:18	0	0
385	10/2/2011 14:19	0	0
386	10/2/2011 14:20	0	0
387	10/2/2011 14:21	0	0
388	10/2/2011 14:22	0	0
389	10/2/2011 14:23	0	0
390	10/2/2011 14:24	0	0
391	10/2/2011 14:25	0	0
392	10/2/2011 14:26	0	0
393	10/2/2011 14:27	0	0
394	10/2/2011 14:28	0	0
395	10/2/2011 14:29	0	0
396	10/2/2011 14:30	0	0
397	10/2/2011 14:31	0	0
398	10/2/2011 14:32	0	0
399	10/2/2011 14:33	0	0
400	10/2/2011 14:34	0	0
401	10/2/2011 14:35	0	0
402	10/2/2011 14:36	0	0

403	10/2/2011 14:37	0	0
404	10/2/2011 14:38	0	0
405	10/2/2011 14:39	0	0
406	10/2/2011 14:40	0	0
407	10/2/2011 14:41	0	0
408	10/2/2011 14:42	0	0
409	10/2/2011 14:43	0	0
410	10/2/2011 14:44	0	0
411	10/2/2011 14:45	0	0
412	10/2/2011 14:46	0	0
413	10/2/2011 14:47	0	0
414	10/2/2011 14:48	0	0
415	10/2/2011 14:49	0	0
416	10/2/2011 14:50	0	0
417	10/2/2011 14:51	0	0
418	10/2/2011 14:52	0	0
419	10/2/2011 14:53	0	0
420	10/2/2011 14:54	0	0
421	10/2/2011 14:55	0	0
422	10/2/2011 14:56	0	0
423	10/2/2011 14:57	0	0
424	10/2/2011 14:58	0	0
425	10/2/2011 14:59	0	0
426	10/2/2011 15:00	0	0
427	10/2/2011 15:01	0	0
428	10/2/2011 15:02	0	0
429	10/2/2011 15:03	0	0
430	10/2/2011 15:04	0	0
431	10/2/2011 15:05	0	0
432	10/2/2011 15:06	0	0
433	10/2/2011 15:07	0	0
434	10/2/2011 15:08	0	0
435	10/2/2011 15:09	0	0
436	10/2/2011 15:10	0	0
437	10/2/2011 15:11	0	0
438	10/2/2011 15:12	0	0
439	10/2/2011 15:13	0	0
440	10/2/2011 15:14	0	0
441	10/2/2011 15:15	0	0
442	10/2/2011 15:16	0	0
443	10/2/2011 15:17	0	0
444	10/2/2011 15:18	0	0
445	10/2/2011 15:19	0	0
446	10/2/2011 15:20	0	0
447	10/2/2011 15:21	0	0
448	10/2/2011 15:22	0	0
449	10/2/2011 15:23	0	0

450	10/2/2011 15:24	0	0
451	10/2/2011 15:25	0	0
452	10/2/2011 15:26	0	0
453	10/2/2011 15:27	0	0
454	10/2/2011 15:28	0	0
455	10/2/2011 15:29	0	0
456	10/2/2011 15:30	0	0
457	10/2/2011 15:31	0	0
458	10/2/2011 15:32	0	0
459	10/2/2011 15:33	0	0
460	10/2/2011 15:34	0	0
461	10/2/2011 15:35	0	0
462	10/2/2011 15:36	0	0
463	10/2/2011 15:37	0	0
464	10/2/2011 15:38	0	0
465	10/2/2011 15:39	0	0
466	10/2/2011 15:40	0	0
467	10/2/2011 15:41	0	0
468	10/2/2011 15:42	0	0
469	10/2/2011 15:43	0	0
470	10/2/2011 15:44	0	0
471	10/2/2011 15:45	0	0
472	10/2/2011 15:46	0	0
473	10/2/2011 15:47	0	0
474	10/2/2011 15:48	0	0
475	10/2/2011 15:49	0	0
476	10/2/2011 15:50	0	0
477	10/2/2011 15:51	0	0
478	10/2/2011 15:52	0	0
479	10/2/2011 15:53	0	0
480	10/2/2011 15:54	0	0
481	10/2/2011 15:55	0	0
482	10/2/2011 15:56	0	0
483	10/2/2011 15:57	0	0
484	10/2/2011 15:58	0	0
485	10/2/2011 15:59	0	0
486	10/2/2011 16:00	0	0
487	10/2/2011 16:01	0	0
488	10/2/2011 16:02	0	0
489	10/2/2011 16:03	0	0
490	10/2/2011 16:04	0	0
491	10/2/2011 16:05	0	0
492	10/2/2011 16:06	0	0
493	10/2/2011 16:07	0	0
494	10/2/2011 16:08	0	0
495	10/2/2011 16:09	0	0
496	10/2/2011 16:10	0	0

497	10/2/2011 16:11	0	0
498	10/2/2011 16:12	0	0
499	10/2/2011 16:13	0	0
500	10/2/2011 16:14	0	0
501	10/2/2011 16:15	0	0
502	10/2/2011 16:16	0	0
503	10/2/2011 16:17	0	0
504	10/2/2011 16:18	0	0
505	10/2/2011 16:19	0	0
506	10/2/2011 16:20	0	0
507	10/2/2011 16:21	0	0
508	10/2/2011 16:22	0	0
509	10/2/2011 16:23	0	0
510	10/2/2011 16:24	0	0
511	10/2/2011 16:25	0	0
512	10/2/2011 16:26	0	0
513	10/2/2011 16:27	0	0
514	10/2/2011 16:28	0	0
515	10/2/2011 16:29	0	0
516	10/2/2011 16:30	0.007	7
517	10/2/2011 16:31	0	0
518	10/2/2011 16:32	0	0
519	10/2/2011 16:33	0	0
520	10/2/2011 16:34	0	0
521	10/2/2011 16:35	0	0
522	10/2/2011 16:36	0	0
523	10/2/2011 16:37	0	0
524	10/2/2011 16:38	0	0
525	10/2/2011 16:39	0	0
526	10/2/2011 16:40	0	0
527	10/2/2011 16:41	0	0
528	10/2/2011 16:42	0	0
529	10/2/2011 16:43	0	0
530	10/2/2011 16:44	0	0
531	10/2/2011 16:45	0	0
532	10/2/2011 16:46	0	0
533	10/2/2011 16:47	0	0
534	10/2/2011 16:48	0	0
535	10/2/2011 16:49	0	0
536	10/2/2011 16:50	0	0
537	10/2/2011 16:51	0	0
538	10/2/2011 16:52	0	0
539	10/2/2011 16:53	0	0
540	10/2/2011 16:54	0	0
541	10/2/2011 16:55	0	0
542	10/2/2011 16:56	0	0
543	10/2/2011 16:57	0	0

544	10/2/2011 16:58	0	0
545	10/2/2011 16:59	0	0
546	10/2/2011 17:00	0	0
547	10/2/2011 17:01	0	0
548	10/2/2011 17:02	0	0
549	10/2/2011 17:03	0	0
550	10/2/2011 17:04	0	0
551	10/2/2011 17:05	0	0
552	10/2/2011 17:06	0	0
553	10/2/2011 17:07	0	0
554	10/2/2011 17:08	0	0
555	10/2/2011 17:09	0	0
556	10/2/2011 17:10	0	0
557	10/2/2011 17:11	0	0
558	10/2/2011 17:12	0	0
559	10/2/2011 17:13	0	0
560	10/2/2011 17:14	0	0
561	10/2/2011 17:15	0	0
562	10/2/2011 17:16	0	0
563	10/2/2011 17:17	0	0
564	10/2/2011 17:18	0	0
565	10/2/2011 17:19	0	0
566	10/2/2011 17:20	0	0
567	10/2/2011 17:21	0	0
568	10/2/2011 17:22	0	0
569	10/2/2011 17:23	0	0
570	10/2/2011 17:24	0	0
571	10/2/2011 17:25	0	0
572	10/2/2011 17:26	0	0
573	10/2/2011 17:27	0	0
574	10/2/2011 17:28	0	0
575	10/2/2011 17:29	0	0
576	10/2/2011 17:30	0	0
577	10/2/2011 17:31	0	0
578	10/2/2011 17:32	0	0
579	10/2/2011 17:33	0.014	14
580	10/2/2011 17:34	0	0
581	10/2/2011 17:35	0	0
582	10/2/2011 17:36	0	0
583	10/2/2011 17:37	0	0
584	10/2/2011 17:38	0	0
585	10/2/2011 17:39	0	0
586	10/2/2011 17:40	0	0
587	10/2/2011 17:41	0	0
588	10/2/2011 17:42	0	0
589	10/2/2011 17:43	0	0
590	10/2/2011 17:44	0	0

591	10/2/2011 17:45	0	0
592	10/2/2011 17:46	0	0
593	10/2/2011 17:47	0	0
594	10/2/2011 17:48	0	0
595	10/2/2011 17:49	0	0
596	10/2/2011 17:50	0	0
597	10/2/2011 17:51	0	0
598	10/2/2011 17:52	0	0
599	10/2/2011 17:53	0	0
600	10/2/2011 17:54	0	0
601	10/2/2011 17:55	0	0
602	10/2/2011 17:56	0	0
603	10/2/2011 17:57	0	0
604	10/2/2011 17:58	0	0
605	10/2/2011 17:59	0	0
606	10/2/2011 18:00	0	0
607	10/2/2011 18:01	0	0
608	10/2/2011 18:02	0	0
609	10/2/2011 18:03	0	0
610	10/2/2011 18:04	0	0
611	10/2/2011 18:05	0	0
612	10/2/2011 18:06	0	0
613	10/2/2011 18:07	0	0
614	10/2/2011 18:08	0	0
615	10/2/2011 18:09	0	0
616	10/2/2011 18:10	0	0
617	10/2/2011 18:11	0	0
618	10/2/2011 18:12	0	0
619	10/2/2011 18:13	0	0
620	10/2/2011 18:14	0	0
621	10/2/2011 18:15	0	0
622	10/2/2011 18:16	0	0
623	10/2/2011 18:17	0	0
624	10/2/2011 18:18	0	0
625	10/2/2011 18:19	0	0
626	10/2/2011 18:20	0	0
627	10/2/2011 18:21	0	0
628	10/2/2011 18:22	0	0
629	10/2/2011 18:23	0	0
630	10/2/2011 18:24	0	0
631	10/2/2011 18:25	0	0
632	10/2/2011 18:26	0	0
633	10/2/2011 18:27	0	0
634	10/2/2011 18:28	0	0
635	10/2/2011 18:29	0	0
636	10/2/2011 18:30	0	0
637	10/2/2011 18:31	0	0

638	10/2/2011 18:32	0	0
639	10/2/2011 18:33	0	0
640	10/2/2011 18:34	0	0
641	10/2/2011 18:35	0	0
642	10/2/2011 18:36	0	0
643	10/2/2011 18:37	0	0
644	10/2/2011 18:38	0	0
645	10/2/2011 18:39	0	0
646	10/2/2011 18:40	0	0
647	10/2/2011 18:41	0	0
648	10/2/2011 18:42	0	0

==========Event #2 information (end)==========

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533101806
Firmware Version	2.8
Calibration Date	5/19/2011
Test Name	MANUAL_001
Test Start Time	7:31:20 AM
Test Start Date	10/2/2011
Test Length [D:H:M]	0:10:50
Test Interval [M:S]	1:00
PM1 Average [mg/m3]	0.006
PM1 Minimum [mg/m3]	0
PM1 Maximum [mg/m3]	0.112
PM1 TWA [mg/m3]	0.005
PM2.5 Average [mg/m3]	0.006
PM2.5 Minimum [mg/m3]	0
PM2.5 Maximum [mg/m3]	0.113
PM2.5 TWA [mg/m3]	0.005
PM4 Average [mg/m3]	0.006
PM4 Minimum [mg/m3]	0
PM4 Maximum [mg/m3]	0.113
PM4 TWA [mg/m3]	0.005
PM10 Average [mg/m3]	0.007
PM10 Minimum [mg/m3]	0
PM10 Maximum [mg/m3]	0.156
PM10 TWA [mg/m3]	0.006
TOTAL Average [mg/m3]	0.007
TOTAL Minimum [mg/m3]	0
TOTAL Maximum [mg/m3]	0.161
TOTAL TWA [mg/m3]	0.007
Photometric User Cal	1
Size Correction User Cal	1
Flow User Cal	1
Errors	
Number of Samples	650

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	TOTAL [mg/m3]	Alarms	Errors
60	0.027	0.027	0.028	0.033	0.036		
120	0.011	0.011	0.012	0.012	0.012		
180	0.011	0.011	0.011	0.011	0.011		
240	0.012	0.012	0.012	0.012	0.012		
300	0.012	0.013	0.013	0.013	0.013		
360	0.014	0.014	0.014	0.014	0.014		
420	0.012	0.012	0.012	0.013	0.013		
480	0.011	0.011	0.011	0.011	0.011		
540	0.01	0.01	0.01	0.011	0.011		

600	0.01	0.01	0.01	0.01	0.01
660	0.012	0.012	0.012	0.013	0.014
720	0.01	0.01	0.01	0.01	0.01
780	0.011	0.011	0.011	0.011	0.011
840	0.01	0.01	0.01	0.01	0.01
900	0.011	0.011	0.011	0.011	0.011
960	0.009	0.009	0.009	0.009	0.009
1020	0.01	0.01	0.01	0.01	0.01
1080	0.008	0.008	0.008	0.008	0.008
1140	0.008	0.008	0.008	0.009	0.009
1200	0.008	0.008	0.008	0.008	0.008
1260	0.007	0.007	0.007	0.007	0.007
1320	0.006	0.006	0.006	0.007	0.007
1380	0.008	0.008	0.008	0.008	0.008
1440	0.007	0.007	0.007	0.008	0.008
1500	0.008	0.008	0.008	0.008	0.009
1560	0.009	0.009	0.009	0.009	0.009
1620	0.006	0.006	0.006	0.007	0.007
1680	0.01	0.01	0.011	0.011	0.011
1740	0.006	0.006	0.006	0.007	0.007
1800	0.006	0.006	0.007	0.007	0.007
1860	0.006	0.006	0.006	0.007	0.007
1920	0.022	0.022	0.023	0.023	0.023
1980	0.034	0.034	0.034	0.035	0.035
2040	0.016	0.016	0.016	0.016	0.016
2100	0.006	0.006	0.006	0.006	0.006
2160	0.02	0.02	0.02	0.02	0.02
2220	0.012	0.012	0.012	0.013	0.013
2280	0.008	0.008	0.008	0.008	0.008
2340	0.109	0.109	0.109	0.109	0.109
2400	0.034	0.034	0.034	0.035	0.035
2460	0.015	0.015	0.015	0.015	0.015
2520	0.009	0.009	0.009	0.011	0.011
2580	0.006	0.007	0.007	0.007	0.007
2640	0.006	0.006	0.006	0.006	0.006
2700	0.007	0.007	0.007	0.007	0.008
2760	0.007	0.007	0.007	0.007	0.007
2820	0.006	0.006	0.006	0.006	0.006
2880	0.007	0.007	0.007	0.007	0.007
2940	0.008	0.008	0.008	0.008	0.008
3000	0.009	0.01	0.01	0.012	0.012
3060	0.007	0.007	0.007	0.008	0.008
3120	0.006	0.006	0.006	0.007	0.007
3180	0.006	0.006	0.006	0.006	0.006
3240	0.006	0.006	0.007	0.007	0.007
3300	0.007	0.007	0.008	0.008	0.009
3360	0.006	0.006	0.006	0.007	0.007

3420	0.006	0.006	0.006	0.006	0.006
3480	0.006	0.006	0.006	0.007	0.007
3540	0.006	0.006	0.006	0.006	0.006
3600	0.005	0.005	0.005	0.005	0.005
3660	0.005	0.005	0.005	0.005	0.005
3720	0.005	0.005	0.005	0.005	0.005
3780	0.005	0.005	0.005	0.005	0.005
3840	0.005	0.005	0.005	0.006	0.006
3900	0.004	0.004	0.004	0.005	0.005
3960	0.004	0.005	0.005	0.005	0.005
4020	0.006	0.006	0.006	0.007	0.007
4080	0.005	0.005	0.005	0.005	0.005
4140	0.01	0.01	0.01	0.011	0.011
4200	0.007	0.007	0.007	0.007	0.008
4260	0.004	0.004	0.004	0.005	0.005
4320	0.004	0.004	0.004	0.005	0.005
4380	0.004	0.004	0.004	0.004	0.004
4440	0.004	0.004	0.004	0.004	0.004
4500	0.004	0.004	0.004	0.004	0.004
4560	0.003	0.003	0.003	0.003	0.003
4620	0.003	0.003	0.003	0.003	0.003
4680	0.003	0.003	0.003	0.003	0.004
4740	0.004	0.004	0.004	0.005	0.005
4800	0.005	0.005	0.005	0.005	0.005
4860	0.003	0.003	0.003	0.003	0.003
4920	0.002	0.002	0.002	0.003	0.003
4980	0.004	0.004	0.004	0.005	0.005
5040	0.003	0.003	0.003	0.003	0.003
5100	0.003	0.003	0.003	0.003	0.003
5160	0.003	0.003	0.003	0.003	0.003
5220	0.003	0.003	0.003	0.003	0.003
5280	0.002	0.002	0.002	0.002	0.002
5340	0.005	0.005	0.006	0.008	0.011
5400	0.002	0.002	0.002	0.002	0.002
5460	0.002	0.002	0.002	0.002	0.002
5520	0.003	0.003	0.003	0.003	0.003
5580	0.003	0.003	0.003	0.004	0.004
5640	0.004	0.004	0.004	0.004	0.004
5700	0.005	0.005	0.006	0.006	0.006
5760	0.002	0.002	0.002	0.003	0.003
5820	0.003	0.003	0.003	0.003	0.003
5880	0.003	0.003	0.003	0.003	0.003
5940	0.003	0.003	0.003	0.003	0.003
6000	0.004	0.004	0.004	0.004	0.004
6060	0.003	0.003	0.003	0.003	0.003
6120	0.004	0.004	0.004	0.004	0.004
6180	0.004	0.004	0.004	0.004	0.004

6240	0.002	0.002	0.003	0.003	0.003
6300	0.002	0.002	0.002	0.002	0.002
6360	0.002	0.003	0.003	0.003	0.003
6420	0.002	0.002	0.002	0.003	0.003
6480	0.003	0.003	0.003	0.003	0.003
6540	0.003	0.003	0.003	0.003	0.003
6600	0.002	0.002	0.002	0.003	0.003
6660	0.003	0.003	0.003	0.003	0.004
6720	0.01	0.01	0.01	0.01	0.01
6780	0.004	0.004	0.004	0.004	0.004
6840	0.003	0.003	0.003	0.003	0.003
6900	0.002	0.002	0.002	0.002	0.002
6960	0.002	0.002	0.002	0.002	0.002
7020	0.001	0.002	0.002	0.002	0.002
7080	0.002	0.002	0.002	0.002	0.002
7140	0.002	0.002	0.002	0.002	0.002
7200	0.002	0.002	0.002	0.002	0.002
7260	0.003	0.003	0.003	0.003	0.003
7320	0.002	0.002	0.002	0.002	0.002
7380	0.001	0.001	0.001	0.002	0.002
7440	0.001	0.001	0.001	0.001	0.001
7500	0.002	0.002	0.002	0.002	0.002
7560	0.002	0.002	0.002	0.002	0.002
7620	0.002	0.002	0.002	0.002	0.002
7680	0.002	0.002	0.002	0.002	0.002
7740	0.002	0.002	0.002	0.002	0.002
7800	0.003	0.003	0.003	0.003	0.004
7860	0.002	0.002	0.002	0.002	0.002
7920	0.002	0.002	0.002	0.002	0.002
7980	0.002	0.002	0.002	0.002	0.002
8040	0.002	0.002	0.002	0.002	0.002
8100	0.003	0.004	0.004	0.004	0.004
8160	0.002	0.002	0.002	0.002	0.002
8220	0.002	0.002	0.002	0.002	0.002
8280	0.001	0.001	0.001	0.002	0.002
8340	0.003	0.003	0.003	0.003	0.003
8400	0.003	0.003	0.003	0.003	0.003
8460	0.002	0.003	0.003	0.003	0.004
8520	0.002	0.002	0.002	0.003	0.003
8580	0.001	0.001	0.001	0.001	0.002
8640	0.001	0.001	0.001	0.001	0.001
8700	0.001	0.001	0.002	0.002	0.002
8760	0.001	0.001	0.001	0.002	0.002
8820	0.001	0.001	0.001	0.002	0.002
8880	0.002	0.002	0.002	0.002	0.002
8940	0.003	0.003	0.003	0.003	0.003
9000	0.001	0.001	0.001	0.001	0.001

9060	0.001	0.001	0.001	0.001	0.001
9120	0.002	0.002	0.002	0.003	0.003
9180	0.003	0.003	0.003	0.004	0.005
9240	0.002	0.002	0.002	0.002	0.002
9300	0.002	0.002	0.002	0.002	0.002
9360	0.002	0.002	0.002	0.003	0.003
9420	0.001	0.001	0.001	0.002	0.002
9480	0.001	0.001	0.001	0.001	0.001
9540	0.002	0.002	0.002	0.002	0.002
9600	0.002	0.002	0.002	0.002	0.002
9660	0.002	0.002	0.002	0.002	0.002
9720	0.002	0.003	0.003	0.003	0.003
9780	0.002	0.002	0.002	0.002	0.002
9840	0.002	0.002	0.002	0.002	0.002
9900	0.002	0.002	0.002	0.002	0.002
9960	0.001	0.001	0.001	0.001	0.001
10020	0.002	0.002	0.003	0.003	0.003
10080	0.003	0.004	0.004	0.004	0.004
10140	0.001	0.001	0.001	0.001	0.001
10200	0.002	0.002	0.002	0.003	0.003
10260	0.002	0.002	0.002	0.002	0.002
10320	0.001	0.001	0.001	0.001	0.001
10380	0.001	0.001	0.001	0.001	0.001
10440	0.001	0.001	0.001	0.001	0.001
10500	0.001	0.001	0.001	0.002	0.002
10560	0.001	0.001	0.001	0.001	0.001
10620	0.002	0.002	0.002	0.002	0.002
10680	0.001	0.001	0.001	0.002	0.002
10740	0.001	0.001	0.001	0.001	0.001
10800	0	0	0	0	0
10860	0	0.001	0.001	0.001	0.001
10920	0.001	0.001	0.001	0.001	0.001
10980	0.001	0.001	0.001	0.002	0.002
11040	0.002	0.002	0.002	0.003	0.003
11100	0	0	0	0	0
11160	0.001	0.001	0.001	0.002	0.002
11220	0.001	0.001	0.002	0.002	0.002
11280	0.001	0.001	0.001	0.001	0.002
11340	0.001	0.001	0.001	0.001	0.001
11400	0.001	0.001	0.001	0.001	0.001
11460	0.001	0.001	0.001	0.001	0.002
11520	0.006	0.006	0.007	0.008	0.009
11580	0.001	0.001	0.001	0.001	0.001
11640	0	0	0.001	0.001	0.001
11700	0.001	0.001	0.001	0.001	0.001
11760	0	0	0	0	0
11820	0.001	0.001	0.001	0.001	0.001

11880	0.001	0.001	0.001	0.001	0.001
11940	0	0	0	0	0
12000	0	0	0	0	0
12060	0	0	0.001	0.001	0.001
12120	0.001	0.001	0.001	0.002	0.002
12180	0.005	0.005	0.005	0.006	0.006
12240	0.001	0.001	0.001	0.001	0.001
12300	0	0	0	0.001	0.001
12360	0	0	0	0.001	0.001
12420	0	0	0	0.001	0.001
12480	0.002	0.002	0.002	0.003	0.003
12540	0.001	0.001	0.001	0.001	0.001
12600	0	0.001	0.001	0.001	0.001
12660	0.001	0.001	0.001	0.002	0.002
12720	0.001	0.001	0.001	0.001	0.001
12780	0.002	0.002	0.002	0.003	0.003
12840	0.001	0.001	0.001	0.001	0.002
12900	0	0	0	0	0
12960	0	0	0	0	0.001
13020	0	0	0.001	0.001	0.001
13080	0.001	0.001	0.001	0.001	0.001
13140	0.003	0.003	0.003	0.004	0.004
13200	0.003	0.004	0.004	0.005	0.005
13260	0.003	0.003	0.003	0.004	0.004
13320	0.001	0.001	0.001	0.002	0.002
13380	0	0	0	0.001	0.001
13440	0.001	0.001	0.001	0.001	0.001
13500	0.001	0.002	0.002	0.002	0.002
13560	0.002	0.002	0.002	0.002	0.002
13620	0.002	0.002	0.002	0.003	0.003
13680	0.001	0.001	0.002	0.002	0.002
13740	0.002	0.002	0.002	0.002	0.002
13800	0.003	0.003	0.003	0.003	0.003
13860	0.001	0.001	0.002	0.002	0.002
13920	0.002	0.002	0.002	0.003	0.003
13980	0	0	0	0	0.001
14040	0.001	0.001	0.001	0.002	0.002
14100	0.002	0.003	0.003	0.006	0.006
14160	0.002	0.002	0.002	0.003	0.003
14220	0.044	0.044	0.044	0.045	0.045
14280	0.001	0.002	0.002	0.002	0.002
14340	0.001	0.001	0.001	0.001	0.001
14400	0.002	0.002	0.002	0.003	0.004
14460	0.001	0.001	0.001	0.002	0.002
14520	0.001	0.001	0.001	0.002	0.002
14580	0.002	0.002	0.002	0.002	0.002
14640	0.001	0.001	0.001	0.001	0.001

14700	0.001	0.001	0.001	0.001	0.001
14760	0.001	0.001	0.001	0.001	0.001
14820	0.002	0.003	0.003	0.003	0.003
14880	0.002	0.002	0.002	0.002	0.002
14940	0.002	0.002	0.003	0.003	0.004
15000	0.002	0.002	0.003	0.003	0.003
15060	0.002	0.002	0.002	0.003	0.003
15120	0.002	0.002	0.002	0.003	0.003
15180	0.002	0.002	0.002	0.002	0.003
15240	0.001	0.001	0.001	0.001	0.001
15300	0.002	0.002	0.002	0.003	0.003
15360	0	0	0.001	0.001	0.001
15420	0.001	0.002	0.002	0.002	0.002
15480	0.001	0.001	0.001	0.002	0.002
15540	0.001	0.001	0.001	0.001	0.001
15600	0.001	0.001	0.001	0.001	0.002
15660	0.001	0.001	0.001	0.001	0.001
15720	0.001	0.001	0.001	0.001	0.001
15780	0.004	0.004	0.005	0.007	0.008
15840	0.014	0.015	0.018	0.03	0.033
15900	0.001	0.001	0.001	0.002	0.002
15960	0.001	0.001	0.001	0.002	0.003
16020	0.001	0.001	0.001	0.001	0.002
16080	0.003	0.003	0.004	0.005	0.005
16140	0.003	0.003	0.003	0.005	0.005
16200	0.006	0.007	0.007	0.012	0.012
16260	0.001	0.001	0.001	0.002	0.002
16320	0.001	0.001	0.002	0.002	0.002
16380	0.001	0.001	0.001	0.001	0.002
16440	0.001	0.001	0.001	0.001	0.001
16500	0.001	0.001	0.001	0.001	0.001
16560	0.001	0.001	0.001	0.001	0.001
16620	0.001	0.001	0.001	0.001	0.002
16680	0.001	0.001	0.001	0.001	0.001
16740	0.002	0.002	0.002	0.003	0.003
16800	0.001	0.001	0.001	0.001	0.001
16860	0.001	0.001	0.001	0.001	0.001
16920	0	0.001	0.001	0.001	0.001
16980	0.001	0.001	0.002	0.002	0.002
17040	0.003	0.003	0.003	0.004	0.005
17100	0.002	0.003	0.003	0.004	0.004
17160	0.001	0.001	0.001	0.002	0.002
17220	0.001	0.001	0.001	0.002	0.002
17280	0.001	0.001	0.001	0.001	0.001
17340	0.001	0.001	0.001	0.001	0.001
17400	0.001	0.001	0.001	0.001	0.001
17460	0.003	0.003	0.003	0.004	0.004

17520	0.002	0.002	0.002	0.003	0.003
17580	0.002	0.002	0.002	0.004	0.005
17640	0.001	0.001	0.001	0.001	0.001
17700	0	0	0.001	0.001	0.001
17760	0.007	0.007	0.008	0.013	0.015
17820	0.001	0.001	0.001	0.001	0.001
17880	0.001	0.001	0.001	0.001	0.001
17940	0.001	0.001	0.001	0.002	0.002
18000	0.015	0.015	0.015	0.015	0.015
18060	0.002	0.002	0.002	0.002	0.002
18120	0.001	0.001	0.001	0.001	0.001
18180	0.003	0.003	0.003	0.005	0.005
18240	0.002	0.002	0.002	0.003	0.003
18300	0.001	0.001	0.001	0.002	0.002
18360	0.002	0.002	0.002	0.002	0.003
18420	0.005	0.005	0.006	0.01	0.01
18480	0.004	0.004	0.005	0.007	0.008
18540	0.002	0.002	0.002	0.003	0.003
18600	0.011	0.012	0.014	0.024	0.026
18660	0.003	0.004	0.004	0.005	0.005
18720	0.001	0.001	0.001	0.001	0.001
18780	0.002	0.002	0.002	0.003	0.004
18840	0.003	0.004	0.004	0.005	0.005
18900	0.001	0.001	0.001	0.001	0.001
18960	0.001	0.001	0.001	0.002	0.002
19020	0.019	0.019	0.021	0.034	0.038
19080	0.003	0.004	0.004	0.006	0.007
19140	0.003	0.004	0.004	0.004	0.005
19200	0.004	0.004	0.004	0.004	0.004
19260	0.001	0.001	0.001	0.001	0.002
19320	0.001	0.001	0.001	0.002	0.002
19380	0.001	0.001	0.001	0.001	0.002
19440	0.001	0.001	0.002	0.002	0.002
19500	0.003	0.003	0.003	0.005	0.005
19560	0.004	0.004	0.004	0.006	0.007
19620	0.005	0.005	0.006	0.008	0.008
19680	0.001	0.001	0.001	0.002	0.002
19740	0.001	0.001	0.001	0.002	0.002
19800	0.002	0.002	0.002	0.002	0.003
19860	0.003	0.003	0.003	0.003	0.003
19920	0.004	0.004	0.004	0.004	0.004
19980	0.001	0.001	0.001	0.002	0.002
20040	0.001	0.002	0.002	0.002	0.002
20100	0.002	0.002	0.002	0.002	0.002
20160	0.002	0.002	0.002	0.002	0.002
20220	0.002	0.002	0.003	0.003	0.003
20280	0.002	0.003	0.003	0.004	0.005

20340	0.001	0.001	0.002	0.002	0.002
20400	0.001	0.001	0.001	0.002	0.002
20460	0.018	0.019	0.022	0.036	0.039
20520	0.003	0.003	0.003	0.003	0.003
20580	0.007	0.007	0.008	0.009	0.01
20640	0.004	0.004	0.004	0.005	0.006
20700	0.001	0.002	0.002	0.002	0.002
20760	0.006	0.006	0.007	0.009	0.01
20820	0.008	0.008	0.009	0.011	0.012
20880	0.015	0.016	0.018	0.026	0.029
20940	0.01	0.011	0.012	0.016	0.018
21000	0.005	0.005	0.005	0.006	0.007
21060	0.023	0.024	0.026	0.035	0.037
21120	0.015	0.015	0.017	0.022	0.024
21180	0.005	0.005	0.006	0.009	0.009
21240	0.003	0.003	0.004	0.005	0.005
21300	0.003	0.003	0.003	0.004	0.005
21360	0.001	0.001	0.002	0.002	0.002
21420	0.002	0.002	0.002	0.002	0.002
21480	0.003	0.003	0.003	0.004	0.005
21540	0.002	0.002	0.002	0.002	0.002
21600	0.003	0.003	0.003	0.004	0.004
21660	0.003	0.003	0.004	0.005	0.006
21720	0.006	0.007	0.007	0.01	0.011
21780	0.022	0.022	0.023	0.023	0.024
21840	0.014	0.014	0.014	0.015	0.015
21900	0.012	0.012	0.013	0.014	0.014
21960	0.022	0.022	0.022	0.024	0.024
22020	0.018	0.018	0.018	0.018	0.018
22080	0.015	0.015	0.015	0.016	0.016
22140	0.012	0.012	0.012	0.014	0.014
22200	0.006	0.006	0.006	0.007	0.007
22260	0.003	0.003	0.003	0.003	0.004
22320	0.003	0.003	0.003	0.004	0.004
22380	0.002	0.003	0.003	0.004	0.005
22440	0.006	0.007	0.007	0.01	0.011
22500	0.02	0.021	0.024	0.036	0.039
22560	0.006	0.006	0.006	0.007	0.007
22620	0.006	0.006	0.006	0.007	0.008
22680	0.002	0.002	0.002	0.002	0.002
22740	0.002	0.002	0.002	0.003	0.003
22800	0.003	0.003	0.003	0.003	0.003
22860	0.006	0.006	0.007	0.01	0.012
22920	0.004	0.004	0.004	0.006	0.006
22980	0.003	0.003	0.004	0.005	0.006
23040	0.008	0.008	0.009	0.013	0.015
23100	0.004	0.005	0.005	0.008	0.008

23160	0.007	0.007	0.008	0.013	0.015
23220	0.002	0.002	0.002	0.002	0.002
23280	0.002	0.002	0.002	0.002	0.002
23340	0.009	0.009	0.01	0.01	0.01
23400	0.004	0.004	0.004	0.005	0.005
23460	0.004	0.004	0.004	0.005	0.005
23520	0.003	0.003	0.003	0.004	0.004
23580	0.003	0.003	0.003	0.004	0.004
23640	0.07	0.073	0.083	0.121	0.13
23700	0.021	0.023	0.027	0.049	0.054
23760	0.012	0.012	0.014	0.02	0.023
23820	0.002	0.002	0.002	0.002	0.002
23880	0.007	0.007	0.008	0.012	0.013
23940	0.003	0.003	0.003	0.003	0.003
24000	0.002	0.002	0.002	0.003	0.003
24060	0.002	0.002	0.002	0.004	0.004
24120	0.001	0.002	0.002	0.002	0.002
24180	0.004	0.004	0.005	0.007	0.007
24240	0.001	0.001	0.002	0.002	0.002
24300	0.002	0.002	0.003	0.003	0.003
24360	0.002	0.002	0.003	0.003	0.003
24420	0.002	0.002	0.002	0.002	0.003
24480	0.002	0.002	0.002	0.002	0.002
24540	0.008	0.008	0.009	0.014	0.015
24600	0.002	0.002	0.002	0.003	0.003
24660	0.003	0.003	0.003	0.003	0.003
24720	0.001	0.001	0.002	0.002	0.002
24780	0.002	0.002	0.002	0.002	0.002
24840	0.002	0.002	0.002	0.002	0.002
24900	0.002	0.002	0.002	0.002	0.003
24960	0.002	0.002	0.002	0.002	0.002
25020	0.002	0.002	0.002	0.003	0.003
25080	0.008	0.008	0.009	0.011	0.011
25140	0.002	0.002	0.002	0.003	0.003
25200	0.002	0.002	0.002	0.003	0.003
25260	0.002	0.002	0.002	0.002	0.002
25320	0.039	0.04	0.046	0.073	0.077
25380	0.002	0.002	0.002	0.003	0.003
25440	0.004	0.004	0.004	0.005	0.005
25500	0.04	0.042	0.048	0.074	0.081
25560	0.009	0.009	0.01	0.014	0.015
25620	0.004	0.004	0.005	0.005	0.005
25680	0.004	0.004	0.004	0.004	0.004
25740	0.005	0.005	0.005	0.005	0.006
25800	0.003	0.003	0.003	0.003	0.003
25860	0.003	0.003	0.003	0.003	0.004
25920	0.004	0.004	0.004	0.005	0.006

25980	0.002	0.002	0.002	0.002	0.002
26040	0.002	0.002	0.003	0.003	0.003
26100	0.002	0.003	0.003	0.004	0.004
26160	0.002	0.002	0.002	0.002	0.002
26220	0.003	0.003	0.003	0.004	0.004
26280	0.005	0.005	0.005	0.006	0.007
26340	0.004	0.004	0.004	0.006	0.007
26400	0.002	0.002	0.002	0.002	0.002
26460	0.005	0.005	0.006	0.008	0.009
26520	0.003	0.004	0.004	0.005	0.005
26580	0.008	0.009	0.009	0.014	0.015
26640	0.004	0.004	0.004	0.005	0.006
26700	0.009	0.01	0.011	0.015	0.016
26760	0.009	0.009	0.011	0.016	0.017
26820	0.003	0.003	0.004	0.006	0.006
26880	0.002	0.002	0.002	0.003	0.003
26940	0.003	0.003	0.003	0.003	0.003
27000	0.002	0.002	0.003	0.003	0.003
27060	0.003	0.003	0.003	0.003	0.003
27120	0.003	0.003	0.003	0.003	0.004
27180	0.005	0.005	0.005	0.006	0.006
27240	0.003	0.003	0.003	0.003	0.003
27300	0.088	0.094	0.111	0.156	0.161
27360	0.013	0.013	0.015	0.019	0.02
27420	0.004	0.004	0.005	0.005	0.006
27480	0.009	0.01	0.011	0.016	0.017
27540	0.003	0.003	0.003	0.004	0.004
27600	0.003	0.003	0.003	0.003	0.004
27660	0.002	0.002	0.002	0.003	0.003
27720	0.004	0.004	0.004	0.005	0.005
27780	0.036	0.038	0.043	0.069	0.08
27840	0.002	0.002	0.002	0.002	0.002
27900	0.003	0.003	0.003	0.004	0.004
27960	0.002	0.002	0.002	0.003	0.003
28020	0.002	0.002	0.002	0.003	0.003
28080	0.015	0.015	0.016	0.022	0.024
28140	0.003	0.003	0.003	0.004	0.004
28200	0.005	0.005	0.005	0.006	0.006
28260	0.004	0.004	0.004	0.004	0.004
28320	0.004	0.004	0.004	0.005	0.005
28380	0.003	0.003	0.004	0.004	0.004
28440	0.004	0.004	0.005	0.006	0.006
28500	0.003	0.003	0.003	0.004	0.004
28560	0.003	0.003	0.003	0.003	0.003
28620	0.004	0.005	0.005	0.006	0.006
28680	0.003	0.003	0.003	0.003	0.003
28740	0.003	0.003	0.003	0.003	0.003

28800	0.004	0.004	0.004	0.005	0.005
28860	0.004	0.004	0.004	0.005	0.005
28920	0.005	0.005	0.005	0.007	0.007
28980	0.003	0.003	0.003	0.004	0.004
29040	0.003	0.003	0.003	0.003	0.003
29100	0.002	0.002	0.003	0.003	0.003
29160	0.003	0.003	0.003	0.004	0.004
29220	0.003	0.003	0.003	0.003	0.003
29280	0.003	0.003	0.003	0.003	0.003
29340	0.003	0.003	0.003	0.004	0.004
29400	0.006	0.006	0.007	0.009	0.009
29460	0.006	0.007	0.007	0.008	0.009
29520	0.006	0.006	0.006	0.009	0.009
29580	0.007	0.007	0.007	0.009	0.01
29640	0.003	0.003	0.003	0.004	0.004
29700	0.036	0.038	0.042	0.064	0.071
29760	0.008	0.008	0.009	0.013	0.014
29820	0.003	0.003	0.003	0.003	0.003
29880	0.003	0.003	0.003	0.003	0.004
29940	0.003	0.003	0.003	0.003	0.003
30000	0.003	0.003	0.003	0.004	0.004
30060	0.004	0.004	0.004	0.004	0.004
30120	0.006	0.006	0.006	0.007	0.007
30180	0.003	0.003	0.003	0.003	0.003
30240	0.003	0.003	0.003	0.003	0.003
30300	0.005	0.005	0.005	0.006	0.006
30360	0.013	0.013	0.014	0.016	0.017
30420	0.004	0.004	0.005	0.005	0.005
30480	0.009	0.009	0.01	0.011	0.013
30540	0.013	0.013	0.014	0.018	0.018
30600	0.015	0.015	0.015	0.016	0.016
30660	0.011	0.011	0.011	0.012	0.012
30720	0.005	0.005	0.006	0.006	0.006
30780	0.007	0.007	0.007	0.008	0.008
30840	0.004	0.004	0.004	0.004	0.004
30900	0.004	0.004	0.004	0.004	0.004
30960	0.003	0.003	0.003	0.003	0.003
31020	0.021	0.021	0.022	0.023	0.024
31080	0.015	0.015	0.015	0.016	0.016
31140	0.017	0.018	0.018	0.018	0.018
31200	0.003	0.003	0.003	0.003	0.003
31260	0.01	0.01	0.011	0.015	0.016
31320	0.005	0.005	0.005	0.005	0.005
31380	0.005	0.005	0.005	0.007	0.007
31440	0.007	0.007	0.008	0.01	0.011
31500	0.004	0.004	0.004	0.005	0.005
31560	0.007	0.007	0.007	0.011	0.012

31620	0.014	0.014	0.016	0.023	0.025
31680	0.06	0.062	0.07	0.104	0.115
31740	0.023	0.024	0.027	0.042	0.044
31800	0.003	0.003	0.003	0.003	0.004
31860	0.008	0.008	0.009	0.012	0.012
31920	0.012	0.012	0.013	0.016	0.018
31980	0.008	0.008	0.009	0.012	0.013
32040	0.003	0.003	0.003	0.003	0.003
32100	0.004	0.004	0.004	0.005	0.005
32160	0.003	0.003	0.004	0.004	0.004
32220	0.006	0.006	0.006	0.008	0.01
32280	0.003	0.003	0.003	0.003	0.003
32340	0.004	0.004	0.004	0.004	0.004
32400	0.003	0.003	0.003	0.004	0.004
32460	0.005	0.006	0.006	0.007	0.007
32520	0.005	0.005	0.005	0.006	0.007
32580	0.003	0.003	0.004	0.004	0.004
32640	0.006	0.006	0.006	0.008	0.008
32700	0.003	0.003	0.003	0.003	0.003
32760	0.003	0.003	0.003	0.004	0.004
32820	0.003	0.003	0.003	0.003	0.003
32880	0.004	0.004	0.004	0.004	0.004
32940	0.004	0.004	0.004	0.004	0.004
33000	0.003	0.003	0.003	0.004	0.004
33060	0.004	0.005	0.005	0.005	0.005
33120	0.003	0.003	0.003	0.003	0.003
33180	0.003	0.003	0.003	0.003	0.003
33240	0.003	0.003	0.003	0.003	0.003
33300	0.004	0.004	0.004	0.004	0.004
33360	0.004	0.004	0.004	0.004	0.004
33420	0.004	0.004	0.004	0.004	0.004
33480	0.004	0.004	0.004	0.004	0.004
33540	0.004	0.004	0.004	0.004	0.004
33600	0.003	0.003	0.003	0.003	0.003
33660	0.004	0.004	0.004	0.005	0.005
33720	0.004	0.004	0.004	0.004	0.004
33780	0.004	0.004	0.004	0.004	0.004
33840	0.004	0.004	0.004	0.004	0.004
33900	0.004	0.004	0.004	0.005	0.005
33960	0.031	0.031	0.032	0.037	0.039
34020	0.006	0.006	0.006	0.006	0.007
34080	0.004	0.004	0.004	0.004	0.004
34140	0.004	0.004	0.004	0.004	0.004
34200	0.004	0.004	0.004	0.004	0.004
34260	0.004	0.004	0.005	0.005	0.005
34320	0.005	0.005	0.005	0.006	0.006
34380	0.004	0.004	0.004	0.005	0.005

34440	0.004	0.004	0.004	0.004	0.005
34500	0.005	0.005	0.006	0.007	0.008
34560	0.005	0.005	0.005	0.006	0.006
34620	0.005	0.005	0.005	0.006	0.006
34680	0.005	0.005	0.005	0.005	0.006
34740	0.01	0.01	0.01	0.014	0.017
34800	0.008	0.008	0.008	0.008	0.008
34860	0.009	0.009	0.009	0.01	0.01
34920	0.008	0.008	0.008	0.009	0.009
34980	0.006	0.006	0.007	0.007	0.007
35040	0.006	0.006	0.006	0.007	0.007
35100	0.006	0.007	0.007	0.009	0.009
35160	0.005	0.005	0.005	0.005	0.005
35220	0.112	0.113	0.113	0.114	0.114
35280	0.007	0.007	0.007	0.007	0.007
35340	0.005	0.006	0.006	0.006	0.006
35400	0.006	0.006	0.006	0.006	0.006
35460	0.005	0.005	0.005	0.005	0.005
35520	0.005	0.005	0.005	0.005	0.005
35580	0.006	0.006	0.006	0.006	0.006
35640	0.005	0.006	0.006	0.006	0.006
35700	0.006	0.006	0.006	0.007	0.007
35760	0.006	0.006	0.006	0.006	0.006
35820	0.005	0.005	0.005	0.006	0.006
35880	0.005	0.005	0.006	0.006	0.006
35940	0.006	0.006	0.006	0.006	0.006
36000	0.005	0.006	0.006	0.006	0.006
36060	0.006	0.006	0.006	0.006	0.006
36120	0.006	0.006	0.006	0.006	0.006
36180	0.007	0.007	0.008	0.008	0.008
36240	0.007	0.007	0.007	0.007	0.007
36300	0.007	0.007	0.007	0.007	0.007
36360	0.006	0.007	0.007	0.007	0.007
36420	0.013	0.014	0.015	0.017	0.017
36480	0.01	0.01	0.011	0.012	0.012
36540	0.007	0.007	0.008	0.008	0.008
36600	0.007	0.007	0.008	0.008	0.008
36660	0.006	0.006	0.006	0.007	0.007
36720	0.007	0.008	0.008	0.008	0.008
36780	0.007	0.008	0.008	0.009	0.009
36840	0.007	0.007	0.007	0.008	0.008
36900	0.005	0.005	0.005	0.005	0.005
36960	0.007	0.007	0.007	0.007	0.007
37020	0.052	0.052	0.053	0.053	0.053
37080	0.006	0.006	0.006	0.007	0.007
37140	0.005	0.005	0.006	0.006	0.006
37200	0.005	0.005	0.006	0.006	0.006

37260	0.006	0.006	0.006	0.006	0.006
37320	0.007	0.007	0.007	0.007	0.007
37380	0.006	0.006	0.006	0.006	0.006
37440	0.005	0.005	0.005	0.005	0.005
37500	0.006	0.006	0.006	0.006	0.006
37560	0.005	0.005	0.005	0.006	0.006
37620	0.006	0.006	0.007	0.007	0.007
37680	0.007	0.007	0.008	0.009	0.009
37740	0.006	0.006	0.006	0.006	0.006
37800	0.005	0.006	0.006	0.006	0.006
37860	0.013	0.014	0.014	0.014	0.014
37920	0.008	0.008	0.008	0.008	0.008
37980	0.005	0.005	0.006	0.006	0.006
38040	0.006	0.006	0.006	0.006	0.006
38100	0.007	0.007	0.007	0.007	0.007
38160	0.006	0.006	0.006	0.006	0.006
38220	0.007	0.007	0.007	0.007	0.007
38280	0.006	0.006	0.006	0.006	0.006
38340	0.007	0.007	0.007	0.008	0.008
38400	0.006	0.007	0.007	0.007	0.007
38460	0.011	0.011	0.011	0.012	0.012
38520	0.01	0.01	0.01	0.01	0.01
38580	0.007	0.007	0.007	0.007	0.007
38640	0.007	0.007	0.007	0.007	0.007
38700	0.006	0.006	0.006	0.006	0.006
38760	0.006	0.006	0.006	0.007	0.007
38820	0.006	0.006	0.006	0.006	0.006
38880	0.006	0.006	0.006	0.006	0.006
38940	0.006	0.006	0.007	0.007	0.007
39000	0.014	0.014	0.014	0.014	0.014

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533112903
Firmware Version	2.8
Calibration Date	7/18/2011
Test Name	MANUAL_001
Test Start Time	7:34:23
Test Start Date	10/2/2011
Test Length [D:H:M]	0:10:48
Test Interval [M:S]	1:00
PM1 Average [mg/m3]	0.014
PM1 Minimum [mg/m3]	0.002
PM1 Maximum [mg/m3]	1.02
PM1 TWA [mg/m3]	0.015
PM2.5 Average [mg/m3]	0.014
PM2.5 Minimum [mg/m3]	0.002
PM2.5 Maximum [mg/m3]	1.02
PM2.5 TWA [mg/m3]	0.015
PM4 Average [mg/m3]	0.015
PM4 Minimum [mg/m3]	0.002
PM4 Maximum [mg/m3]	1.03
PM4 TWA [mg/m3]	0.016
PM10 Average [mg/m3]	0.016
PM10 Minimum [mg/m3]	0.003
PM10 Maximum [mg/m3]	1.03
PM10 TWA [mg/m3]	0.017
TOTAL Average [mg/m3]	0.017
TOTAL Minimum [mg/m3]	0.003
TOTAL Maximum [mg/m3]	1.03
TOTAL TWA [mg/m3]	0.018
Photometric User Cal	1
Size Correction User Cal	1
Flow User Cal	1
Errors	
Number of Samples	648

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	TOTAL [mg/m3]	Alarms	Errors
60	0.07	0.071	0.073	0.116	0.156		
120	0.015	0.015	0.016	0.017	0.017		
180	0.015	0.015	0.015	0.015	0.015		
240	0.012	0.013	0.013	0.013	0.013		
300	0.011	0.011	0.011	0.011	0.012		
360	0.028	0.028	0.029	0.037	0.056		
420	0.038	0.039	0.042	0.077	0.115		
480	0.011	0.011	0.011	0.012	0.012		
540	0.011	0.011	0.012	0.012	0.012		

600	0.013	0.013	0.013	0.017	0.018
660	0.109	0.11	0.111	0.131	0.152
720	0.023	0.024	0.024	0.024	0.024
780	0.019	0.019	0.019	0.02	0.02
840	0.009	0.009	0.009	0.009	0.009
900	0.017	0.017	0.017	0.017	0.017
960	0.014	0.015	0.015	0.015	0.016
1020	0.009	0.009	0.009	0.009	0.009
1080	0.008	0.009	0.009	0.009	0.009
1140	0.088	0.089	0.091	0.112	0.125
1200	0.022	0.022	0.023	0.028	0.029
1260	0.009	0.009	0.009	0.011	0.011
1320	0.05	0.05	0.051	0.053	0.053
1380	0.01	0.011	0.011	0.012	0.012
1440	0.008	0.008	0.008	0.008	0.008
1500	0.01	0.01	0.011	0.011	0.011
1560	0.008	0.008	0.008	0.009	0.009
1620	0.009	0.009	0.009	0.009	0.01
1680	0.009	0.009	0.009	0.01	0.01
1740	0.02	0.02	0.02	0.021	0.021
1800	0.024	0.024	0.024	0.025	0.026
1860	0.047	0.048	0.048	0.048	0.048
1920	0.082	0.084	0.084	0.085	0.085
1980	0.014	0.014	0.014	0.014	0.014
2040	0.021	0.021	0.021	0.022	0.022
2100	0.032	0.032	0.033	0.033	0.034
2160	0.023	0.024	0.024	0.024	0.024
2220	0.013	0.013	0.013	0.014	0.014
2280	0.006	0.006	0.006	0.006	0.006
2340	0.007	0.008	0.008	0.008	0.008
2400	0.032	0.032	0.032	0.037	0.041
2460	0.006	0.006	0.006	0.007	0.007
2520	0.007	0.008	0.008	0.008	0.008
2580	0.009	0.009	0.009	0.009	0.009
2640	0.007	0.007	0.007	0.007	0.007
2700	0.008	0.008	0.008	0.009	0.009
2760	0.007	0.007	0.007	0.008	0.008
2820	0.008	0.008	0.008	0.008	0.008
2880	0.007	0.007	0.007	0.007	0.007
2940	0.007	0.007	0.007	0.008	0.008
3000	0.007	0.007	0.008	0.008	0.008
3060	0.008	0.008	0.008	0.008	0.008
3120	0.042	0.042	0.043	0.05	0.058
3180	0.007	0.007	0.008	0.013	0.018
3240	0.006	0.007	0.007	0.007	0.007
3300	0.006	0.006	0.006	0.006	0.006
3360	0.006	0.006	0.006	0.006	0.006

3420	0.005	0.005	0.006	0.006	0.006
3480	0.005	0.005	0.005	0.005	0.005
3540	0.008	0.009	0.009	0.01	0.012
3600	0.006	0.006	0.006	0.006	0.006
3660	0.007	0.007	0.008	0.009	0.009
3720	0.005	0.005	0.005	0.006	0.007
3780	0.004	0.004	0.004	0.004	0.004
3840	0.004	0.004	0.005	0.005	0.005
3900	0.005	0.005	0.005	0.006	0.006
3960	0.008	0.009	0.009	0.009	0.009
4020	0.006	0.006	0.006	0.006	0.006
4080	0.005	0.005	0.005	0.005	0.005
4140	0.005	0.005	0.005	0.006	0.006
4200	0.021	0.021	0.022	0.032	0.04
4260	0.007	0.007	0.007	0.008	0.008
4320	0.005	0.005	0.005	0.005	0.005
4380	0.005	0.005	0.005	0.006	0.006
4440	0.004	0.005	0.005	0.006	0.006
4500	0.004	0.004	0.004	0.004	0.005
4560	0.004	0.004	0.004	0.004	0.004
4620	0.004	0.004	0.005	0.005	0.006
4680	0.003	0.003	0.003	0.003	0.003
4740	0.005	0.005	0.006	0.006	0.007
4800	0.004	0.004	0.005	0.005	0.005
4860	0.004	0.004	0.005	0.005	0.006
4920	0.007	0.007	0.008	0.008	0.008
4980	0.005	0.005	0.005	0.006	0.006
5040	0.004	0.004	0.004	0.005	0.005
5100	0.005	0.005	0.005	0.006	0.008
5160	0.008	0.008	0.009	0.012	0.015
5220	0.015	0.015	0.016	0.027	0.043
5280	0.004	0.004	0.004	0.004	0.004
5340	0.004	0.004	0.005	0.005	0.005
5400	0.005	0.005	0.005	0.006	0.006
5460	0.004	0.004	0.004	0.004	0.004
5520	0.004	0.004	0.004	0.004	0.004
5580	0.004	0.004	0.004	0.004	0.004
5640	0.003	0.003	0.003	0.004	0.004
5700	0.003	0.003	0.003	0.004	0.004
5760	0.004	0.004	0.004	0.004	0.004
5820	0.004	0.004	0.004	0.004	0.004
5880	0.006	0.006	0.006	0.006	0.006
5940	0.272	0.273	0.28	0.361	0.443
6000	0.008	0.008	0.008	0.008	0.008
6060	0.004	0.004	0.005	0.005	0.005
6120	0.005	0.005	0.005	0.006	0.006
6180	0.004	0.004	0.004	0.004	0.004

6240	0.005	0.005	0.005	0.005	0.005
6300	0.004	0.004	0.004	0.004	0.004
6360	0.004	0.004	0.004	0.004	0.004
6420	0.003	0.004	0.004	0.004	0.004
6480	0.057	0.057	0.058	0.065	0.072
6540	0.02	0.02	0.02	0.02	0.02
6600	0.004	0.004	0.004	0.004	0.004
6660	0.003	0.003	0.003	0.004	0.004
6720	0.003	0.003	0.003	0.003	0.003
6780	0.003	0.003	0.003	0.003	0.003
6840	0.003	0.003	0.003	0.003	0.003
6900	0.003	0.003	0.003	0.004	0.004
6960	0.004	0.004	0.004	0.004	0.004
7020	0.004	0.004	0.004	0.005	0.005
7080	0.005	0.005	0.005	0.005	0.006
7140	0.004	0.004	0.004	0.004	0.004
7200	0.004	0.004	0.004	0.005	0.005
7260	0.003	0.003	0.003	0.003	0.003
7320	0.004	0.004	0.004	0.004	0.004
7380	0.004	0.004	0.004	0.005	0.005
7440	0.003	0.003	0.003	0.004	0.004
7500	0.01	0.01	0.01	0.011	0.011
7560	0.019	0.019	0.02	0.02	0.02
7620	0.011	0.011	0.012	0.012	0.012
7680	0.003	0.003	0.003	0.003	0.003
7740	0.005	0.005	0.005	0.006	0.006
7800	0.023	0.024	0.025	0.037	0.048
7860	0.004	0.004	0.004	0.005	0.005
7920	0.004	0.004	0.004	0.004	0.004
7980	0.003	0.003	0.003	0.003	0.003
8040	0.003	0.004	0.004	0.004	0.004
8100	0.004	0.004	0.004	0.004	0.004
8160	0.005	0.005	0.005	0.005	0.005
8220	0.004	0.004	0.004	0.004	0.004
8280	0.004	0.004	0.004	0.004	0.004
8340	0.003	0.003	0.003	0.003	0.003
8400	0.004	0.004	0.004	0.004	0.004
8460	0.004	0.004	0.005	0.005	0.005
8520	0.005	0.005	0.005	0.005	0.005
8580	0.004	0.004	0.004	0.004	0.005
8640	0.004	0.004	0.004	0.004	0.004
8700	0.005	0.005	0.005	0.005	0.005
8760	0.005	0.005	0.005	0.005	0.005
8820	0.005	0.005	0.005	0.005	0.006
8880	0.005	0.005	0.005	0.006	0.006
8940	0.004	0.004	0.005	0.005	0.005
9000	0.023	0.023	0.025	0.044	0.062

9060	0.003	0.003	0.003	0.004	0.004
9120	0.004	0.004	0.004	0.004	0.004
9180	0.003	0.003	0.004	0.004	0.004
9240	0.003	0.003	0.003	0.003	0.003
9300	0.004	0.004	0.004	0.004	0.004
9360	0.004	0.004	0.004	0.004	0.004
9420	0.004	0.004	0.004	0.004	0.004
9480	0.005	0.005	0.005	0.005	0.005
9540	0.005	0.005	0.005	0.005	0.005
9600	0.004	0.004	0.004	0.004	0.004
9660	0.005	0.005	0.005	0.006	0.006
9720	0.005	0.005	0.005	0.005	0.005
9780	0.004	0.005	0.005	0.005	0.005
9840	0.006	0.006	0.006	0.007	0.007
9900	0.004	0.004	0.004	0.004	0.004
9960	0.005	0.005	0.006	0.006	0.007
10020	0.004	0.004	0.004	0.005	0.005
10080	0.003	0.003	0.003	0.004	0.004
10140	0.003	0.003	0.003	0.003	0.003
10200	0.004	0.004	0.004	0.004	0.004
10260	0.005	0.005	0.005	0.005	0.005
10320	0.007	0.007	0.008	0.008	0.009
10380	0.09	0.091	0.091	0.1	0.111
10440	0.01	0.01	0.01	0.01	0.011
10500	0.009	0.009	0.009	0.01	0.01
10560	0.003	0.003	0.003	0.004	0.004
10620	0.003	0.003	0.003	0.003	0.003
10680	0.004	0.004	0.004	0.004	0.004
10740	0.019	0.019	0.019	0.019	0.019
10800	0.006	0.006	0.006	0.007	0.007
10860	0.006	0.006	0.006	0.006	0.006
10920	0.004	0.004	0.004	0.005	0.005
10980	0.006	0.006	0.006	0.006	0.007
11040	0.004	0.004	0.004	0.005	0.005
11100	0.004	0.004	0.004	0.004	0.004
11160	0.004	0.004	0.004	0.005	0.005
11220	0.004	0.004	0.004	0.005	0.005
11280	0.003	0.003	0.003	0.004	0.004
11340	0.015	0.015	0.016	0.018	0.018
11400	0.015	0.015	0.016	0.024	0.033
11460	0.003	0.003	0.003	0.003	0.003
11520	0.002	0.002	0.002	0.003	0.003
11580	0.003	0.003	0.003	0.003	0.003
11640	0.006	0.006	0.006	0.007	0.007
11700	0.006	0.006	0.006	0.007	0.007
11760	0.002	0.002	0.003	0.003	0.003
11820	0.002	0.002	0.003	0.003	0.003

11880	0.004	0.004	0.004	0.005	0.005
11940	0.011	0.011	0.011	0.012	0.012
12000	0.012	0.013	0.013	0.014	0.014
12060	0.004	0.004	0.004	0.005	0.005
12120	0.004	0.005	0.005	0.006	0.007
12180	0.027	0.027	0.027	0.034	0.042
12240	0.003	0.003	0.003	0.003	0.003
12300	0.004	0.004	0.004	0.004	0.004
12360	0.004	0.004	0.004	0.004	0.004
12420	0.005	0.005	0.005	0.005	0.005
12480	0.004	0.004	0.004	0.004	0.005
12540	0.005	0.005	0.005	0.006	0.006
12600	0.005	0.005	0.006	0.006	0.006
12660	0.004	0.004	0.004	0.005	0.005
12720	0.003	0.003	0.003	0.003	0.003
12780	0.006	0.006	0.006	0.006	0.006
12840	0.005	0.005	0.005	0.006	0.006
12900	0.006	0.006	0.006	0.006	0.007
12960	0.008	0.008	0.008	0.009	0.009
13020	0.008	0.008	0.009	0.01	0.01
13080	0.01	0.01	0.011	0.012	0.012
13140	0.004	0.004	0.004	0.004	0.005
13200	0.003	0.003	0.003	0.004	0.004
13260	0.232	0.232	0.232	0.233	0.233
13320	0.074	0.074	0.076	0.09	0.106
13380	0.004	0.004	0.004	0.005	0.005
13440	0.007	0.007	0.007	0.007	0.008
13500	0.004	0.004	0.004	0.005	0.005
13560	0.005	0.005	0.006	0.006	0.006
13620	0.005	0.005	0.006	0.006	0.006
13680	0.008	0.008	0.008	0.008	0.008
13740	0.005	0.005	0.005	0.006	0.006
13800	0.003	0.003	0.003	0.004	0.004
13860	0.005	0.005	0.006	0.007	0.007
13920	0.005	0.005	0.005	0.006	0.006
13980	0.041	0.042	0.042	0.046	0.048
14040	0.024	0.025	0.028	0.036	0.037
14100	0.006	0.007	0.007	0.008	0.008
14160	0.004	0.004	0.005	0.005	0.005
14220	0.007	0.008	0.008	0.008	0.008
14280	0.042	0.042	0.042	0.042	0.044
14340	0.009	0.01	0.01	0.014	0.016
14400	0.005	0.005	0.006	0.006	0.006
14460	0.005	0.005	0.006	0.006	0.006
14520	0.004	0.004	0.004	0.005	0.005
14580	0.007	0.008	0.008	0.009	0.01
14640	0.008	0.008	0.009	0.009	0.009

14700	0.005	0.005	0.005	0.005	0.005
14760	0.006	0.006	0.006	0.007	0.008
14820	0.005	0.006	0.006	0.007	0.007
14880	0.006	0.006	0.006	0.007	0.007
14940	0.254	0.255	0.255	0.261	0.269
15000	1.02	1.02	1.03	1.03	1.03
15060	0.333	0.333	0.334	0.345	0.354
15120	0.005	0.005	0.006	0.006	0.006
15180	0.006	0.006	0.006	0.007	0.007
15240	0.006	0.006	0.006	0.007	0.007
15300	0.01	0.01	0.011	0.011	0.011
15360	0.009	0.009	0.009	0.01	0.01
15420	0.008	0.008	0.008	0.009	0.009
15480	0.006	0.006	0.006	0.006	0.006
15540	0.005	0.005	0.005	0.005	0.005
15600	0.006	0.007	0.007	0.01	0.012
15660	0.003	0.003	0.003	0.004	0.004
15720	0.003	0.003	0.003	0.004	0.004
15780	0.003	0.003	0.004	0.004	0.004
15840	0.003	0.003	0.003	0.003	0.003
15900	0.003	0.003	0.003	0.003	0.003
15960	0.003	0.003	0.004	0.004	0.005
16020	0.003	0.003	0.004	0.005	0.005
16080	0.003	0.003	0.004	0.004	0.004
16140	0.003	0.003	0.003	0.004	0.004
16200	0.003	0.003	0.003	0.003	0.003
16260	0.003	0.003	0.003	0.003	0.003
16320	0.003	0.003	0.003	0.003	0.003
16380	0.003	0.003	0.003	0.003	0.003
16440	0.003	0.003	0.003	0.004	0.004
16500	0.003	0.003	0.003	0.003	0.003
16560	0.003	0.003	0.003	0.003	0.003
16620	0.003	0.003	0.003	0.003	0.003
16680	0.008	0.008	0.008	0.01	0.011
16740	0.012	0.012	0.013	0.016	0.02
16800	0.005	0.005	0.006	0.007	0.007
16860	0.006	0.006	0.006	0.007	0.007
16920	0.004	0.004	0.004	0.004	0.004
16980	0.003	0.003	0.004	0.004	0.004
17040	0.003	0.003	0.003	0.004	0.004
17100	0.003	0.003	0.003	0.003	0.003
17160	0.004	0.004	0.004	0.005	0.005
17220	0.004	0.005	0.005	0.005	0.006
17280	0.009	0.009	0.009	0.009	0.01
17340	0.004	0.004	0.005	0.005	0.005
17400	0.005	0.005	0.005	0.006	0.006
17460	0.003	0.003	0.003	0.003	0.003

17520	0.005	0.005	0.005	0.006	0.006
17580	0.005	0.005	0.005	0.007	0.007
17640	0.003	0.003	0.003	0.003	0.003
17700	0.004	0.004	0.004	0.004	0.004
17760	0.081	0.081	0.081	0.082	0.083
17820	0.075	0.075	0.077	0.083	0.087
17880	0.014	0.014	0.015	0.017	0.018
17940	0.037	0.038	0.042	0.06	0.063
18000	0.005	0.006	0.006	0.007	0.007
18060	0.007	0.007	0.008	0.011	0.012
18120	0.016	0.016	0.016	0.016	0.016
18180	0.007	0.007	0.008	0.009	0.009
18240	0.008	0.008	0.008	0.009	0.01
18300	0.007	0.007	0.007	0.009	0.009
18360	0.008	0.008	0.009	0.013	0.014
18420	0.007	0.007	0.008	0.009	0.009
18480	0.01	0.011	0.011	0.019	0.022
18540	0.007	0.007	0.007	0.008	0.009
18600	0.006	0.006	0.007	0.008	0.008
18660	0.007	0.007	0.007	0.008	0.008
18720	0.005	0.005	0.005	0.005	0.005
18780	0.005	0.005	0.005	0.006	0.006
18840	0.004	0.004	0.004	0.006	0.007
18900	0.004	0.004	0.004	0.005	0.005
18960	0.006	0.006	0.007	0.007	0.008
19020	0.004	0.004	0.004	0.005	0.005
19080	0.003	0.003	0.003	0.004	0.004
19140	0.003	0.003	0.003	0.004	0.004
19200	0.003	0.004	0.004	0.004	0.004
19260	0.003	0.003	0.003	0.004	0.004
19320	0.003	0.004	0.004	0.004	0.004
19380	0.003	0.004	0.004	0.004	0.004
19440	0.203	0.203	0.203	0.205	0.206
19500	0.003	0.003	0.004	0.004	0.004
19560	0.003	0.003	0.003	0.004	0.004
19620	0.004	0.004	0.004	0.005	0.005
19680	0.006	0.006	0.006	0.006	0.006
19740	0.005	0.005	0.005	0.006	0.006
19800	0.004	0.005	0.005	0.005	0.005
19860	0.007	0.007	0.007	0.009	0.009
19920	0.009	0.009	0.009	0.01	0.01
19980	0.007	0.007	0.008	0.008	0.008
20040	0.006	0.006	0.006	0.007	0.007
20100	0.006	0.006	0.006	0.007	0.007
20160	0.006	0.006	0.007	0.007	0.007
20220	0.006	0.007	0.007	0.009	0.01
20280	0.23	0.23	0.231	0.231	0.232

20340	0.078	0.079	0.079	0.083	0.087
20400	0.015	0.015	0.015	0.016	0.016
20460	0.005	0.005	0.005	0.006	0.006
20520	0.029	0.029	0.03	0.032	0.032
20580	0.015	0.015	0.015	0.018	0.018
20640	0.018	0.018	0.019	0.021	0.021
20700	0.013	0.014	0.014	0.016	0.016
20760	0.01	0.011	0.011	0.012	0.012
20820	0.015	0.015	0.015	0.017	0.017
20880	0.011	0.011	0.012	0.014	0.015
20940	0.006	0.006	0.007	0.008	0.008
21000	0.006	0.006	0.006	0.007	0.007
21060	0.006	0.006	0.007	0.007	0.008
21120	0.005	0.005	0.005	0.005	0.005
21180	0.006	0.006	0.006	0.007	0.007
21240	0.006	0.006	0.006	0.006	0.006
21300	0.01	0.01	0.01	0.01	0.01
21360	0.005	0.005	0.005	0.006	0.006
21420	0.007	0.007	0.007	0.008	0.008
21480	0.007	0.007	0.007	0.009	0.009
21540	0.008	0.008	0.008	0.008	0.009
21600	0.018	0.019	0.019	0.019	0.019
21660	0.015	0.016	0.016	0.017	0.018
21720	0.015	0.015	0.015	0.016	0.016
21780	0.024	0.024	0.024	0.025	0.025
21840	0.02	0.02	0.02	0.021	0.021
21900	0.016	0.016	0.016	0.017	0.017
21960	0.011	0.012	0.012	0.012	0.013
22020	0.007	0.007	0.007	0.007	0.007
22080	0.005	0.005	0.005	0.005	0.005
22140	0.005	0.005	0.005	0.005	0.005
22200	0.312	0.312	0.312	0.312	0.312
22260	0.071	0.071	0.071	0.073	0.073
22320	0.006	0.006	0.006	0.007	0.007
22380	0.007	0.007	0.008	0.008	0.008
22440	0.005	0.005	0.005	0.006	0.006
22500	0.005	0.005	0.005	0.006	0.006
22560	0.005	0.005	0.006	0.007	0.007
22620	0.004	0.005	0.005	0.006	0.007
22680	0.004	0.004	0.004	0.005	0.005
22740	0.004	0.004	0.004	0.004	0.004
22800	0.005	0.005	0.006	0.006	0.006
22860	0.009	0.009	0.01	0.015	0.016
22920	0.006	0.006	0.006	0.006	0.006
22980	0.073	0.073	0.073	0.074	0.074
23040	0.008	0.008	0.008	0.008	0.008
23100	0.03	0.03	0.031	0.036	0.041

23160	0.015	0.015	0.016	0.017	0.017
23220	0.022	0.023	0.024	0.03	0.031
23280	0.007	0.007	0.007	0.008	0.008
23340	0.007	0.008	0.008	0.01	0.01
23400	0.006	0.006	0.006	0.007	0.008
23460	0.01	0.01	0.012	0.016	0.016
23520	0.008	0.008	0.008	0.009	0.009
23580	0.008	0.008	0.008	0.009	0.01
23640	0.009	0.009	0.009	0.009	0.009
23700	0.008	0.008	0.008	0.008	0.008
23760	0.005	0.005	0.006	0.006	0.006
23820	0.006	0.006	0.006	0.007	0.007
23880	0.004	0.005	0.005	0.006	0.006
23940	0.031	0.031	0.032	0.035	0.038
24000	0.005	0.005	0.005	0.006	0.006
24060	0.004	0.005	0.005	0.005	0.005
24120	0.005	0.005	0.005	0.006	0.006
24180	0.004	0.004	0.004	0.005	0.005
24240	0.005	0.005	0.005	0.006	0.007
24300	0.006	0.006	0.007	0.008	0.008
24360	0.004	0.004	0.005	0.007	0.007
24420	0.004	0.004	0.004	0.005	0.005
24480	0.004	0.004	0.004	0.004	0.004
24540	0.004	0.004	0.004	0.004	0.005
24600	0.004	0.004	0.004	0.005	0.005
24660	0.004	0.004	0.004	0.005	0.005
24720	0.004	0.004	0.005	0.005	0.005
24780	0.004	0.004	0.005	0.005	0.005
24840	0.005	0.005	0.005	0.006	0.006
24900	0.005	0.005	0.005	0.006	0.006
24960	0.005	0.005	0.005	0.005	0.005
25020	0.005	0.005	0.006	0.006	0.006
25080	0.004	0.004	0.005	0.005	0.005
25140	0.007	0.008	0.009	0.013	0.015
25200	0.004	0.004	0.005	0.005	0.005
25260	0.006	0.006	0.007	0.01	0.01
25320	0.006	0.006	0.007	0.008	0.008
25380	0.008	0.008	0.008	0.008	0.008
25440	0.007	0.007	0.007	0.008	0.008
25500	0.006	0.006	0.006	0.006	0.006
25560	0.006	0.006	0.007	0.007	0.007
25620	0.005	0.005	0.006	0.006	0.006
25680	0.005	0.005	0.005	0.006	0.006
25740	0.004	0.004	0.004	0.005	0.005
25800	0.004	0.004	0.004	0.004	0.004
25860	0.003	0.004	0.004	0.004	0.004
25920	0.003	0.003	0.003	0.003	0.003

25980	0.003	0.003	0.003	0.004	0.004
26040	0.003	0.003	0.003	0.003	0.003
26100	0.003	0.003	0.003	0.003	0.003
26160	0.003	0.003	0.004	0.004	0.004
26220	0.003	0.003	0.004	0.004	0.004
26280	0.003	0.003	0.004	0.004	0.004
26340	0.004	0.004	0.004	0.005	0.005
26400	0.004	0.004	0.004	0.004	0.004
26460	0.005	0.005	0.005	0.007	0.008
26520	0.005	0.005	0.005	0.007	0.007
26580	0.008	0.009	0.01	0.017	0.019
26640	0.007	0.007	0.008	0.011	0.012
26700	0.006	0.007	0.007	0.011	0.013
26760	0.005	0.005	0.006	0.006	0.007
26820	0.005	0.005	0.005	0.006	0.006
26880	0.005	0.005	0.006	0.006	0.006
26940	0.006	0.006	0.006	0.007	0.007
27000	0.007	0.007	0.007	0.008	0.008
27060	0.006	0.006	0.006	0.007	0.007
27120	0.053	0.061	0.075	0.1	0.102
27180	0.01	0.01	0.011	0.015	0.015
27240	0.009	0.009	0.01	0.013	0.015
27300	0.005	0.005	0.005	0.006	0.006
27360	0.007	0.007	0.008	0.01	0.011
27420	0.006	0.006	0.007	0.009	0.009
27480	0.033	0.033	0.035	0.047	0.057
27540	0.006	0.006	0.007	0.01	0.01
27600	0.004	0.004	0.005	0.006	0.006
27660	0.006	0.006	0.007	0.01	0.011
27720	0.004	0.005	0.005	0.005	0.005
27780	0.004	0.004	0.004	0.005	0.005
27840	0.008	0.008	0.009	0.012	0.013
27900	0.01	0.01	0.011	0.012	0.013
27960	0.004	0.005	0.005	0.006	0.006
28020	0.004	0.004	0.004	0.005	0.005
28080	0.004	0.005	0.005	0.005	0.005
28140	0.005	0.005	0.006	0.007	0.007
28200	0.004	0.004	0.004	0.005	0.005
28260	0.004	0.004	0.004	0.004	0.005
28320	0.004	0.004	0.004	0.004	0.004
28380	0.005	0.005	0.005	0.006	0.006
28440	0.005	0.005	0.005	0.006	0.006
28500	0.034	0.035	0.036	0.049	0.064
28560	0.005	0.005	0.005	0.007	0.007
28620	0.004	0.004	0.004	0.004	0.004
28680	0.006	0.006	0.006	0.006	0.006
28740	0.007	0.007	0.007	0.008	0.008

28800	0.007	0.007	0.007	0.008	0.008
28860	0.004	0.005	0.005	0.005	0.005
28920	0.005	0.005	0.005	0.006	0.006
28980	0.005	0.005	0.005	0.005	0.005
29040	0.004	0.004	0.004	0.005	0.005
29100	0.004	0.005	0.005	0.005	0.005
29160	0.006	0.006	0.006	0.006	0.006
29220	0.005	0.006	0.006	0.008	0.008
29280	0.007	0.007	0.008	0.012	0.014
29340	0.005	0.005	0.006	0.007	0.007
29400	0.005	0.005	0.006	0.006	0.006
29460	0.212	0.213	0.216	0.253	0.292
29520	0.006	0.006	0.007	0.008	0.009
29580	0.005	0.005	0.005	0.005	0.005
29640	0.005	0.005	0.005	0.005	0.005
29700	0.007	0.008	0.008	0.011	0.012
29760	0.007	0.007	0.008	0.011	0.012
29820	0.019	0.021	0.025	0.046	0.053
29880	0.009	0.01	0.011	0.016	0.016
29940	0.007	0.007	0.007	0.009	0.01
30000	0.006	0.006	0.007	0.009	0.009
30060	0.005	0.006	0.006	0.007	0.008
30120	0.028	0.029	0.029	0.033	0.034
30180	0.015	0.015	0.016	0.017	0.017
30240	0.012	0.013	0.013	0.014	0.014
30300	0.019	0.019	0.02	0.022	0.022
30360	0.034	0.035	0.036	0.041	0.047
30420	0.019	0.019	0.02	0.02	0.02
30480	0.018	0.019	0.019	0.019	0.019
30540	0.014	0.015	0.015	0.015	0.015
30600	0.066	0.068	0.075	0.098	0.1
30660	0.006	0.006	0.006	0.007	0.007
30720	0.006	0.006	0.006	0.006	0.006
30780	0.022	0.024	0.026	0.036	0.039
30840	0.01	0.01	0.01	0.012	0.012
30900	0.008	0.008	0.008	0.008	0.009
30960	0.078	0.078	0.08	0.083	0.084
31020	0.005	0.005	0.005	0.006	0.006
31080	0.01	0.011	0.011	0.017	0.019
31140	0.04	0.04	0.042	0.05	0.052
31200	0.005	0.006	0.006	0.006	0.006
31260	0.006	0.006	0.006	0.007	0.007
31320	0.005	0.006	0.006	0.006	0.006
31380	0.006	0.006	0.006	0.007	0.007
31440	0.008	0.008	0.009	0.012	0.013
31500	0.01	0.011	0.011	0.013	0.014
31560	0.008	0.008	0.008	0.01	0.011

31620	0.007	0.007	0.007	0.008	0.008
31680	0.016	0.016	0.017	0.02	0.02
31740	0.008	0.008	0.009	0.011	0.011
31800	0.006	0.006	0.006	0.007	0.008
31860	0.006	0.006	0.006	0.006	0.006
31920	0.007	0.007	0.008	0.008	0.008
31980	0.006	0.006	0.006	0.006	0.006
32040	0.007	0.007	0.008	0.008	0.008
32100	0.006	0.007	0.007	0.007	0.008
32160	0.005	0.005	0.005	0.005	0.005
32220	0.01	0.011	0.013	0.02	0.02
32280	0.009	0.009	0.011	0.015	0.016
32340	0.006	0.006	0.006	0.007	0.007
32400	0.006	0.006	0.006	0.008	0.008
32460	0.005	0.005	0.005	0.006	0.006
32520	0.005	0.005	0.005	0.005	0.005
32580	0.005	0.005	0.005	0.005	0.005
32640	0.005	0.005	0.005	0.005	0.005
32700	0.005	0.006	0.006	0.007	0.007
32760	0.004	0.004	0.005	0.005	0.005
32820	0.004	0.004	0.005	0.006	0.006
32880	0.007	0.007	0.008	0.013	0.017
32940	0.004	0.004	0.004	0.005	0.005
33000	0.005	0.005	0.005	0.006	0.007
33060	0.004	0.004	0.004	0.005	0.005
33120	0.005	0.005	0.005	0.005	0.005
33180	0.005	0.005	0.005	0.005	0.005
33240	0.005	0.005	0.005	0.005	0.005
33300	0.005	0.005	0.006	0.006	0.006
33360	0.005	0.005	0.006	0.006	0.006
33420	0.005	0.005	0.005	0.006	0.006
33480	0.006	0.006	0.006	0.006	0.006
33540	0.007	0.007	0.007	0.008	0.008
33600	0.007	0.007	0.007	0.008	0.008
33660	0.006	0.006	0.006	0.007	0.007
33720	0.006	0.006	0.006	0.007	0.007
33780	0.008	0.009	0.009	0.013	0.017
33840	0.007	0.007	0.008	0.01	0.01
33900	0.006	0.007	0.007	0.008	0.008
33960	0.006	0.006	0.006	0.006	0.006
34020	0.006	0.006	0.007	0.007	0.007
34080	0.006	0.006	0.006	0.007	0.007
34140	0.006	0.006	0.006	0.007	0.007
34200	0.006	0.006	0.006	0.007	0.007
34260	0.006	0.006	0.006	0.008	0.008
34320	0.007	0.008	0.008	0.01	0.01
34380	0.007	0.007	0.007	0.008	0.008

34440	0.006	0.006	0.007	0.007	0.007
34500	0.008	0.008	0.009	0.009	0.009
34560	0.01	0.01	0.01	0.011	0.011
34620	0.01	0.01	0.01	0.011	0.011
34680	0.009	0.009	0.01	0.01	0.011
34740	0.01	0.01	0.01	0.011	0.011
34800	0.008	0.008	0.009	0.009	0.009
34860	0.01	0.01	0.01	0.011	0.011
34920	0.011	0.011	0.012	0.016	0.021
34980	0.006	0.007	0.007	0.008	0.008
35040	0.021	0.021	0.022	0.022	0.022
35100	0.011	0.011	0.011	0.011	0.011
35160	0.006	0.006	0.006	0.006	0.006
35220	0.006	0.007	0.007	0.007	0.007
35280	0.006	0.006	0.006	0.006	0.006
35340	0.006	0.006	0.006	0.006	0.006
35400	0.006	0.006	0.006	0.007	0.007
35460	0.007	0.007	0.007	0.007	0.007
35520	0.007	0.007	0.007	0.008	0.008
35580	0.007	0.007	0.008	0.008	0.008
35640	0.007	0.008	0.008	0.008	0.008
35700	0.007	0.008	0.008	0.008	0.008
35760	0.007	0.008	0.008	0.008	0.008
35820	0.008	0.008	0.008	0.009	0.009
35880	0.008	0.008	0.009	0.009	0.009
35940	0.008	0.009	0.009	0.009	0.009
36000	0.009	0.009	0.009	0.009	0.009
36060	0.009	0.009	0.009	0.009	0.009
36120	0.008	0.008	0.008	0.008	0.008
36180	0.008	0.009	0.009	0.01	0.01
36240	0.02	0.021	0.022	0.023	0.023
36300	0.011	0.012	0.013	0.014	0.014
36360	0.009	0.01	0.01	0.011	0.011
36420	0.014	0.015	0.017	0.021	0.021
36480	0.016	0.018	0.021	0.028	0.029
36540	0.012	0.013	0.015	0.022	0.023
36600	0.009	0.009	0.01	0.011	0.011
36660	0.006	0.006	0.007	0.007	0.007
36720	0.007	0.008	0.008	0.009	0.009
36780	0.043	0.044	0.044	0.045	0.045
36840	0.008	0.009	0.009	0.009	0.009
36900	0.006	0.006	0.006	0.006	0.006
36960	0.006	0.007	0.007	0.007	0.008
37020	0.006	0.006	0.007	0.007	0.007
37080	0.006	0.007	0.007	0.007	0.007
37140	0.006	0.006	0.006	0.006	0.006
37200	0.005	0.005	0.006	0.006	0.006

37260	0.005	0.006	0.006	0.006	0.006
37320	0.006	0.006	0.006	0.006	0.006
37380	0.006	0.006	0.006	0.006	0.006
37440	0.007	0.007	0.007	0.007	0.007
37500	0.007	0.007	0.007	0.007	0.007
37560	0.006	0.007	0.007	0.007	0.007
37620	0.011	0.011	0.011	0.011	0.011
37680	0.015	0.016	0.016	0.017	0.017
37740	0.04	0.04	0.04	0.04	0.04
37800	0.007	0.007	0.007	0.007	0.007
37860	0.007	0.008	0.008	0.008	0.008
37920	0.007	0.007	0.008	0.008	0.008
37980	0.007	0.008	0.008	0.008	0.008
38040	0.008	0.008	0.008	0.008	0.008
38100	0.008	0.008	0.008	0.008	0.008
38160	0.008	0.008	0.008	0.009	0.009
38220	0.029	0.03	0.031	0.032	0.032
38280	0.011	0.012	0.012	0.013	0.013
38340	0.011	0.011	0.011	0.013	0.014
38400	0.008	0.009	0.009	0.01	0.01
38460	0.007	0.007	0.008	0.008	0.008
38520	0.01	0.01	0.01	0.011	0.011
38580	0.008	0.009	0.009	0.01	0.01
38640	0.009	0.009	0.01	0.01	0.01
38700	0.012	0.012	0.013	0.014	0.015
38760	0.021	0.021	0.021	0.022	0.022
38820	0.008	0.008	0.008	0.009	0.009
38880	0.007	0.008	0.008	0.009	0.009

AECOM

Client:
Location: Metro-Greco
Date: 10/16/11
Field Personnel: Brian Serrecchia

Project:
Project Number:
Weather: 60s, sunny
Ambient Noise: 77-87

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
0830	0.0	0.012	0.0	0.0	0.027	83.4	Pre-clearing / jack hammer
0845	0.0	0.012	0.0	0.0	0.289	86.6	Setting up rig on location
0900	0.0	0.010	0.0	0.0	0.017	86.3	Begin drilling
0915	0.0	0.011	0.0	0.0	0.015	86.1	Drilling
0930	0.0	0.012	0.0	0.0	0.013	84.8	Drilling
0945	0.0	0.011	0.0	0.0	0.026	84.6	Drilling
1000	0.0	0.010	0.0	0.0	0.021	82.1	Drilling
1015	0.0	0.010	0.0	0.0	0.020	86.1	Drilling
1050	0.0	0.016	0.0	0.0	0.023	86.1	Drilling
1045	0.0	0.010	0.0	0.0	0.015	86.5	Drilling
1100	0.0	0.010	0.0	0.0	0.059	84.7	Drilling
1115	0.0	0.016	0.0	0.0	0.051	84.1	Drilling
1130	0.0	0.009	0.0	0.0	0.081	85.1	Drilling
1145	0.0	0.009	0.0	0.0	0.061	86.1	Drilling
1200	0.0	0.007	0.0	0.0	0.011	84.1	Drilling
1215	0.0	0.008	0.0	0.0	0.067	83.7	Drilling
1230	0.0	0.030	0.0	0.0	0.051	84.1	Drilling / Greco activities
1245	0.0	0.114	0.0	0.0	0.013	84.3	Greco activities
1315	0.0	0.008	0.0	0.0	0.011	84.1	Drilling
1345	0.0	0.032	0.0	0.0	0.075	83.7	Greco activities
1415	0.0	0.037	0.0	0.0	0.116	84.1	Drilling / Greco activities
1430	0.0	0.007	0.0	0.0	0.059	84.7	Well Installation
1445	0.0	0.008	0.0	0.0	0.012	84.2	"
1500	0.0	0.013	0.0	0.0	0.013	81.6	"
1515	0.0	0.009	0.0	0.0	0.027	85.3	"
1530	0.0	0.009	0.0	0.0	0.013	85.1	"
1545	0.0	0.009	0.0	0.0	0.009	84.5	"

=========Event #40 information (begin)=========

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[Event #40 name:]--[Event #40]2011-10-16 07:22<-->2011-10-16 07:57

[Event start time:]--2011-10-16 07:22:24[Event end time:]--2011-10-16 07:57:24

==========Event #40 head information==========

Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624

Data Points: 35 Sample Period: 60 s Datalog Mode: Automatic

SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode

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Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)

Measurement Gas : Isobutene

Calibration Time : 2011-10-16 07:22:002011-10-16 07:22:002011-10-16 07:22:00

Drift Value : --- --- ---

Low Alarm Levels : 50.000 50.000 50.000

High Alarm Levels : 100.000 100.000 100.000

Span Value : 100.000 100.000 100.000

Correction Factor : 1.00 1.00 1.00

Over Alarm Levels : 15000.000 15000.000 15000.000

==========Event #40 data informations==========

LINE#	Date/Time	PID-Min(pp	PID-Avg(pp	PID-Max(ppm)
1	10/16/2011 7:23	0	0.029	1.464
2	10/16/2011 7:24	0	0	0
3	10/16/2011 7:25	0	0	0
4	10/16/2011 7:26	0	0	0
5	10/16/2011 7:27	0	0	0
6	10/16/2011 7:28	0	0	0
7	10/16/2011 7:29	0	0	0
8	10/16/2011 7:30	0	0	0
9	10/16/2011 7:31	0	0	0
10	10/16/2011 7:32	0	0	0
11	10/16/2011 7:33	0	0	0
12	10/16/2011 7:34	0	0	0
13	10/16/2011 7:35	0	0	0
14	10/16/2011 7:36	0	0	0
15	10/16/2011 7:37	0	0	0
16	10/16/2011 7:38	0	0	0
17	10/16/2011 7:39	0	0	0
18	10/16/2011 7:40	0	0	0
19	10/16/2011 7:41	0	0	0
20	10/16/2011 7:42	0	0	0
21	10/16/2011 7:43	0	0	0
22	10/16/2011 7:44	0	0	0
23	10/16/2011 7:45	0	0	0
24	10/16/2011 7:46	0	0	0
25	10/16/2011 7:47	0	0	0
26	10/16/2011 7:48	0	0	0

27	10/16/2011 7:49	0	0	0
28	10/16/2011 7:50	0	0	0
29	10/16/2011 7:51	0	0	0
30	10/16/2011 7:52	0	0	0
31	10/16/2011 7:53	0	0	0
32	10/16/2011 7:54	0	0	0
33	10/16/2011 7:55	0	0	0
34	10/16/2011 7:56	0	0	0
35	10/16/2011 7:57	0	0	0

==========Event #40 information (end)==========

=========Event #42 information (begin)=========

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[Event #42 name:]--[Event #42]2011-10-16 08:02<-->2011-10-16 15:59

[Event start time:]--2011-10-16 08:02:14[Event end time:]--2011-10-16 15:59:14

==========Event #42 head information==========

Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624

Data Points: 477 Sample Period: 60 s Datalog Mode: Automatic

SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode

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Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)

Measurement Gas : Isobutene

Calibration Time : 2011-10-16 08:02:002011-10-16 08:02:002011-10-16 08:02:00

Drift Value : --- --- ---

Low Alarm Levels : 50.000 50.000 50.000

High Alarm Levels : 100.000 100.000 100.000

Span Value : 100.000 100.000 100.000

Correction Factor : 1.00 1.00 1.00

Over Alarm Levels : 15000.000 15000.000 15000.000

==========Event #42 data informations==========

LINE#	Date/Time	PID-Min(pp	PID-Avg(pp	PID-Max(ppm)
1	10/16/2011 8:03	0	0.012	0.705
2	10/16/2011 8:04	0	0	0
3	10/16/2011 8:05	0	0	0
4	10/16/2011 8:06	0	0	0
5	10/16/2011 8:07	0	0	0
6	10/16/2011 8:08	0	0	0
7	10/16/2011 8:09	0	0	0
8	10/16/2011 8:10	0	0	0
9	10/16/2011 8:11	0	0	0
10	10/16/2011 8:12	0	0	0
11	10/16/2011 8:13	0	0	0
12	10/16/2011 8:14	0	0	0
13	10/16/2011 8:15	0	0	0
14	10/16/2011 8:16	0	0	0

15	10/16/2011 8:17	0	0	0
16	10/16/2011 8:18	0	0	0
17	10/16/2011 8:19	0	0	0
18	10/16/2011 8:20	0	0	0
19	10/16/2011 8:21	0	0	0
20	10/16/2011 8:22	0	0	0
21	10/16/2011 8:23	0	0	0
22	10/16/2011 8:24	0	0	0
23	10/16/2011 8:25	0	0	0
24	10/16/2011 8:26	0	0	0
25	10/16/2011 8:27	0	0	0
26	10/16/2011 8:28	0	0	0
27	10/16/2011 8:29	0	0	0
28	10/16/2011 8:30	0	0	0
29	10/16/2011 8:31	0	0	0
30	10/16/2011 8:32	0	0	0
31	10/16/2011 8:33	0	0	0
32	10/16/2011 8:34	0	0	0
33	10/16/2011 8:35	0	0	0
34	10/16/2011 8:36	0	0	0
35	10/16/2011 8:37	0	0	0
36	10/16/2011 8:38	0	0	0
37	10/16/2011 8:39	0	0	0
38	10/16/2011 8:40	0	0	0
39	10/16/2011 8:41	0	0	0
40	10/16/2011 8:42	0	0	0
41	10/16/2011 8:43	0	0	0
42	10/16/2011 8:44	0	0	0
43	10/16/2011 8:45	0	0	0
44	10/16/2011 8:46	0	0	0
45	10/16/2011 8:47	0	0	0
46	10/16/2011 8:48	0	0	0
47	10/16/2011 8:49	0	0	0
48	10/16/2011 8:50	0	0	0
49	10/16/2011 8:51	0	0	0
50	10/16/2011 8:52	0	0	0
51	10/16/2011 8:53	0	0	0
52	10/16/2011 8:54	0	0	0
53	10/16/2011 8:55	0	0	0
54	10/16/2011 8:56	0	0	0
55	10/16/2011 8:57	0	0	0
56	10/16/2011 8:58	0	0	0
57	10/16/2011 8:59	0	0	0
58	10/16/2011 9:00	0	0	0
59	10/16/2011 9:01	0	0	0
60	10/16/2011 9:02	0	0	0
61	10/16/2011 9:03	0	0	0

62	10/16/2011 9:04	0	0	0
63	10/16/2011 9:05	0	0	0
64	10/16/2011 9:06	0	0	0
65	10/16/2011 9:07	0	0	0
66	10/16/2011 9:08	0	0	0
67	10/16/2011 9:09	0	0	0
68	10/16/2011 9:10	0	0	0
69	10/16/2011 9:11	0	0	0
70	10/16/2011 9:12	0	0	0
71	10/16/2011 9:13	0	0	0
72	10/16/2011 9:14	0	0	0
73	10/16/2011 9:15	0	0	0
74	10/16/2011 9:16	0	0	0
75	10/16/2011 9:17	0	0	0
76	10/16/2011 9:18	0	0	0
77	10/16/2011 9:19	0	0	0
78	10/16/2011 9:20	0	0	0
79	10/16/2011 9:21	0	0	0
80	10/16/2011 9:22	0	0	0
81	10/16/2011 9:23	0	0	0
82	10/16/2011 9:24	0	0	0
83	10/16/2011 9:25	0	0	0
84	10/16/2011 9:26	0	0	0
85	10/16/2011 9:27	0	0	0
86	10/16/2011 9:28	0	0	0
87	10/16/2011 9:29	0	0	0
88	10/16/2011 9:30	0	0	0
89	10/16/2011 9:31	0	0	0
90	10/16/2011 9:32	0	0	0
91	10/16/2011 9:33	0	0	0
92	10/16/2011 9:34	0	0	0
93	10/16/2011 9:35	0	0	0
94	10/16/2011 9:36	0	0	0
95	10/16/2011 9:37	0	0	0
96	10/16/2011 9:38	0	0	0
97	10/16/2011 9:39	0	0	0
98	10/16/2011 9:40	0	0	0
99	10/16/2011 9:41	0	0	0
100	10/16/2011 9:42	0	0	0
101	10/16/2011 9:43	0	0	0
102	10/16/2011 9:44	0	0	0
103	10/16/2011 9:45	0	0	0
104	10/16/2011 9:46	0	0	0
105	10/16/2011 9:47	0	0	0
106	10/16/2011 9:48	0	0	0
107	10/16/2011 9:49	0	0	0
108	10/16/2011 9:50	0	0	0

109	10/16/2011 9:51	0	0	0
110	10/16/2011 9:52	0	0	0
111	10/16/2011 9:53	0	0	0
112	10/16/2011 9:54	0	0	0
113	10/16/2011 9:55	0	0	0
114	10/16/2011 9:56	0	0	0
115	10/16/2011 9:57	0	0	0
116	10/16/2011 9:58	0	0	0
117	10/16/2011 9:59	0	0	0
118	10/16/2011 10:00	0	0	0
119	10/16/2011 10:01	0	0	0
120	10/16/2011 10:02	0	0	0
121	10/16/2011 10:03	0	0	0
122	10/16/2011 10:04	0	0	0
123	10/16/2011 10:05	0	0	0
124	10/16/2011 10:06	0	0	0
125	10/16/2011 10:07	0	0	0
126	10/16/2011 10:08	0	0	0
127	10/16/2011 10:09	0	0	0
128	10/16/2011 10:10	0	0	0
129	10/16/2011 10:11	0	0	0
130	10/16/2011 10:12	0	0	0
131	10/16/2011 10:13	0	0	0
132	10/16/2011 10:14	0	0	0
133	10/16/2011 10:15	0	0	0
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136	10/16/2011 10:18	0	0	0
137	10/16/2011 10:19	0	0	0
138	10/16/2011 10:20	0	0	0
139	10/16/2011 10:21	0	0	0
140	10/16/2011 10:22	0	0	0
141	10/16/2011 10:23	0	0	0
142	10/16/2011 10:24	0	0	0
143	10/16/2011 10:25	0	0	0
144	10/16/2011 10:26	0	0	0
145	10/16/2011 10:27	0	0	0
146	10/16/2011 10:28	0	0	0
147	10/16/2011 10:29	0	0	0
148	10/16/2011 10:30	0	0	0
149	10/16/2011 10:31	0	0	0
150	10/16/2011 10:32	0	0	0
151	10/16/2011 10:33	0	0	0
152	10/16/2011 10:34	0	0	0
153	10/16/2011 10:35	0	0	0
154	10/16/2011 10:36	0	0	0
155	10/16/2011 10:37	0	0	0

156	10/16/2011 10:38	0	0	0
157	10/16/2011 10:39	0	0	0
158	10/16/2011 10:40	0	0	0
159	10/16/2011 10:41	0	0	0
160	10/16/2011 10:42	0	0	0
161	10/16/2011 10:43	0	0	0
162	10/16/2011 10:44	0	0	0
163	10/16/2011 10:45	0	0	0
164	10/16/2011 10:46	0	0	0
165	10/16/2011 10:47	0	0	0
166	10/16/2011 10:48	0	0	0
167	10/16/2011 10:49	0	0	0
168	10/16/2011 10:50	0	0	0
169	10/16/2011 10:51	0	0	0
170	10/16/2011 10:52	0	0	0
171	10/16/2011 10:53	0	0	0
172	10/16/2011 10:54	0	0	0
173	10/16/2011 10:55	0	0	0
174	10/16/2011 10:56	0	0	0
175	10/16/2011 10:57	0	0	0
176	10/16/2011 10:58	0	0	0
177	10/16/2011 10:59	0	0	0
178	10/16/2011 11:00	0	0	0
179	10/16/2011 11:01	0	0	0
180	10/16/2011 11:02	0	0	0
181	10/16/2011 11:03	0	0	0
182	10/16/2011 11:04	0	0	0
183	10/16/2011 11:05	0	0	0
184	10/16/2011 11:06	0	0	0
185	10/16/2011 11:07	0	0	0
186	10/16/2011 11:08	0	0	0
187	10/16/2011 11:09	0	0	0
188	10/16/2011 11:10	0	0	0
189	10/16/2011 11:11	0	0	0
190	10/16/2011 11:12	0	0	0
191	10/16/2011 11:13	0	0	0
192	10/16/2011 11:14	0	0	0
193	10/16/2011 11:15	0	0	0
194	10/16/2011 11:16	0	0	0
195	10/16/2011 11:17	0	0	0
196	10/16/2011 11:18	0	0	0
197	10/16/2011 11:19	0	0	0
198	10/16/2011 11:20	0	0	0
199	10/16/2011 11:21	0	0	0
200	10/16/2011 11:22	0	0	0
201	10/16/2011 11:23	0	0	0
202	10/16/2011 11:24	0	0	0

203	10/16/2011 11:25	0	0	0
204	10/16/2011 11:26	0	0	0
205	10/16/2011 11:27	0	0	0
206	10/16/2011 11:28	0	0	0
207	10/16/2011 11:29	0	0	0
208	10/16/2011 11:30	0	0	0
209	10/16/2011 11:31	0	0	0
210	10/16/2011 11:32	0	0	0
211	10/16/2011 11:33	0	0	0
212	10/16/2011 11:34	0	0	0
213	10/16/2011 11:35	0	0	0
214	10/16/2011 11:36	0	0	0
215	10/16/2011 11:37	0	0	0
216	10/16/2011 11:38	0	0	0
217	10/16/2011 11:39	0	0	0
218	10/16/2011 11:40	0	0	0
219	10/16/2011 11:41	0	0	0
220	10/16/2011 11:42	0	0	0
221	10/16/2011 11:43	0	0	0
222	10/16/2011 11:44	0	0	0
223	10/16/2011 11:45	0	0	0
224	10/16/2011 11:46	0	0	0
225	10/16/2011 11:47	0	0	0
226	10/16/2011 11:48	0	0	0
227	10/16/2011 11:49	0	0	0
228	10/16/2011 11:50	0	0	0
229	10/16/2011 11:51	0	0	0
230	10/16/2011 11:52	0	0	0
231	10/16/2011 11:53	0	0	0
232	10/16/2011 11:54	0	0	0
233	10/16/2011 11:55	0	0	0
234	10/16/2011 11:56	0	0	0
235	10/16/2011 11:57	0	0	0
236	10/16/2011 11:58	0	0	0
237	10/16/2011 11:59	0	0	0
238	10/16/2011 12:00	0	0	0
239	10/16/2011 12:01	0	0	0
240	10/16/2011 12:02	0	0	0
241	10/16/2011 12:03	0	0	0
242	10/16/2011 12:04	0	0	0
243	10/16/2011 12:05	0	0	0
244	10/16/2011 12:06	0	0	0
245	10/16/2011 12:07	0	0	0
246	10/16/2011 12:08	0	0	0
247	10/16/2011 12:09	0	0	0
248	10/16/2011 12:10	0	0	0
249	10/16/2011 12:11	0	0	0

250	10/16/2011 12:12	0	0	0
251	10/16/2011 12:13	0	0	0
252	10/16/2011 12:14	0	0	0
253	10/16/2011 12:15	0	0	0
254	10/16/2011 12:16	0	0	0
255	10/16/2011 12:17	0	0	0
256	10/16/2011 12:18	0	0	0
257	10/16/2011 12:19	0	0	0
258	10/16/2011 12:20	0	0	0
259	10/16/2011 12:21	0	0	0
260	10/16/2011 12:22	0	0	0
261	10/16/2011 12:23	0	0	0
262	10/16/2011 12:24	0	0	0
263	10/16/2011 12:25	0	0	0
264	10/16/2011 12:26	0	0	0
265	10/16/2011 12:27	0	0	0
266	10/16/2011 12:28	0	0	0
267	10/16/2011 12:29	0	0	0
268	10/16/2011 12:30	0	0	0
269	10/16/2011 12:31	0	0	0
270	10/16/2011 12:32	0	0	0
271	10/16/2011 12:33	0	0	0
272	10/16/2011 12:34	0	0	0
273	10/16/2011 12:35	0	0	0
274	10/16/2011 12:36	0	0	0
275	10/16/2011 12:37	0	0	0
276	10/16/2011 12:38	0	0	0
277	10/16/2011 12:39	0	0	0
278	10/16/2011 12:40	0	0	0
279	10/16/2011 12:41	0	0	0
280	10/16/2011 12:42	0	0	0
281	10/16/2011 12:43	0	0	0
282	10/16/2011 12:44	0	0	0
283	10/16/2011 12:45	0	0	0
284	10/16/2011 12:46	0	0	0
285	10/16/2011 12:47	0	0	0
286	10/16/2011 12:48	0	0	0
287	10/16/2011 12:49	0	0	0
288	10/16/2011 12:50	0	0	0
289	10/16/2011 12:51	0	0	0
290	10/16/2011 12:52	0	0	0
291	10/16/2011 12:53	0	0	0
292	10/16/2011 12:54	0	0	0
293	10/16/2011 12:55	0	0	0
294	10/16/2011 12:56	0	0	0
295	10/16/2011 12:57	0	0	0
296	10/16/2011 12:58	0	0	0

297	10/16/2011 12:59	0	0	0
298	10/16/2011 13:00	0	0	0
299	10/16/2011 13:01	0	0	0
300	10/16/2011 13:02	0	0	0
301	10/16/2011 13:03	0	0	0
302	10/16/2011 13:04	0	0	0
303	10/16/2011 13:05	0	0	0
304	10/16/2011 13:06	0	0	0
305	10/16/2011 13:07	0	0	0
306	10/16/2011 13:08	0	0	0
307	10/16/2011 13:09	0	0	0
308	10/16/2011 13:10	0	0	0
309	10/16/2011 13:11	0	0	0
310	10/16/2011 13:12	0	0	0
311	10/16/2011 13:13	0	0	0
312	10/16/2011 13:14	0	0	0
313	10/16/2011 13:15	0	0	0
314	10/16/2011 13:16	0	0	0
315	10/16/2011 13:17	0	0	0
316	10/16/2011 13:18	0	0	0
317	10/16/2011 13:19	0	0	0
318	10/16/2011 13:20	0	0	0
319	10/16/2011 13:21	0	0	0
320	10/16/2011 13:22	0	0	0
321	10/16/2011 13:23	0	0	0
322	10/16/2011 13:24	0	0	0
323	10/16/2011 13:25	0	0	0
324	10/16/2011 13:26	0	0	0
325	10/16/2011 13:27	0	0	0
326	10/16/2011 13:28	0	0	0
327	10/16/2011 13:29	0	0	0
328	10/16/2011 13:30	0	0	0
329	10/16/2011 13:31	0	0	0
330	10/16/2011 13:32	0	0	0
331	10/16/2011 13:33	0	0	0
332	10/16/2011 13:34	0	0	0
333	10/16/2011 13:35	0	0	0
334	10/16/2011 13:36	0	0	0
335	10/16/2011 13:37	0	0	0
336	10/16/2011 13:38	0	0	0
337	10/16/2011 13:39	0	0	0
338	10/16/2011 13:40	0	0	0
339	10/16/2011 13:41	0	0	0
340	10/16/2011 13:42	0	0	0
341	10/16/2011 13:43	0	0	0
342	10/16/2011 13:44	0	0	0
343	10/16/2011 13:45	0	0	0

344	10/16/2011 13:46	0	0	0
345	10/16/2011 13:47	0	0	0
346	10/16/2011 13:48	0	0	0
347	10/16/2011 13:49	0	0	0
348	10/16/2011 13:50	0	0	0
349	10/16/2011 13:51	0	0	0
350	10/16/2011 13:52	0	0	0
351	10/16/2011 13:53	0	0	0
352	10/16/2011 13:54	0	0	0
353	10/16/2011 13:55	0	0	0
354	10/16/2011 13:56	0	0	0
355	10/16/2011 13:57	0	0	0
356	10/16/2011 13:58	0	0	0
357	10/16/2011 13:59	0	0	0
358	10/16/2011 14:00	0	0	0
359	10/16/2011 14:01	0	0	0
360	10/16/2011 14:02	0	0	0
361	10/16/2011 14:03	0	0	0
362	10/16/2011 14:04	0	0	0
363	10/16/2011 14:05	0	0	0
364	10/16/2011 14:06	0	0	0
365	10/16/2011 14:07	0	0	0
366	10/16/2011 14:08	0	0	0
367	10/16/2011 14:09	0	0	0
368	10/16/2011 14:10	0	0	0
369	10/16/2011 14:11	0	0	0
370	10/16/2011 14:12	0	0	0
371	10/16/2011 14:13	0	0	0
372	10/16/2011 14:14	0	0	0
373	10/16/2011 14:15	0	0	0
374	10/16/2011 14:16	0	0	0
375	10/16/2011 14:17	0	0	0
376	10/16/2011 14:18	0	0	0
377	10/16/2011 14:19	0	0	0
378	10/16/2011 14:20	0	0	0
379	10/16/2011 14:21	0	0	0
380	10/16/2011 14:22	0	0	0
381	10/16/2011 14:23	0	0	0
382	10/16/2011 14:24	0	0	0
383	10/16/2011 14:25	0	0	0
384	10/16/2011 14:26	0	0	0
385	10/16/2011 14:27	0	0	0
386	10/16/2011 14:28	0	0	0
387	10/16/2011 14:29	0	0	0
388	10/16/2011 14:30	0	0	0
389	10/16/2011 14:31	0	0	0
390	10/16/2011 14:32	0	0	0

391	10/16/2011 14:33	0	0	0
392	10/16/2011 14:34	0	0	0
393	10/16/2011 14:35	0	0	0
394	10/16/2011 14:36	0	0	0
395	10/16/2011 14:37	0	0	0
396	10/16/2011 14:38	0	0	0
397	10/16/2011 14:39	0	0	0
398	10/16/2011 14:40	0	0	0
399	10/16/2011 14:41	0	0	0
400	10/16/2011 14:42	0	0	0
401	10/16/2011 14:43	0	0	0
402	10/16/2011 14:44	0	0	0
403	10/16/2011 14:45	0	0	0
404	10/16/2011 14:46	0	0	0
405	10/16/2011 14:47	0	0	0
406	10/16/2011 14:48	0	0	0
407	10/16/2011 14:49	0	0	0
408	10/16/2011 14:50	0	0	0
409	10/16/2011 14:51	0	0	0
410	10/16/2011 14:52	0	0	0
411	10/16/2011 14:53	0	0	0
412	10/16/2011 14:54	0	0	0
413	10/16/2011 14:55	0	0	0
414	10/16/2011 14:56	0	0	0
415	10/16/2011 14:57	0	0	0
416	10/16/2011 14:58	0	0	0
417	10/16/2011 14:59	0	0	0
418	10/16/2011 15:00	0	0	0
419	10/16/2011 15:01	0	0	0
420	10/16/2011 15:02	0	0	0
421	10/16/2011 15:03	0	0	0
422	10/16/2011 15:04	0	0	0
423	10/16/2011 15:05	0	0	0
424	10/16/2011 15:06	0	0	0
425	10/16/2011 15:07	0	0	0
426	10/16/2011 15:08	0	0	0
427	10/16/2011 15:09	0	0	0
428	10/16/2011 15:10	0	0	0
429	10/16/2011 15:11	0	0	0
430	10/16/2011 15:12	0	0	0
431	10/16/2011 15:13	0	0	0
432	10/16/2011 15:14	0	0	0
433	10/16/2011 15:15	0	0	0
434	10/16/2011 15:16	0	0	0
435	10/16/2011 15:17	0	0	0
436	10/16/2011 15:18	0	0	0
437	10/16/2011 15:19	0	0	0

438	10/16/2011 15:20	0	0	0
439	10/16/2011 15:21	0	0	0
440	10/16/2011 15:22	0	0	0
441	10/16/2011 15:23	0	0	0
442	10/16/2011 15:24	0	0	0
443	10/16/2011 15:25	0	0	0
444	10/16/2011 15:26	0	0	0
445	10/16/2011 15:27	0	0	0
446	10/16/2011 15:28	0	0	0
447	10/16/2011 15:29	0	0	0
448	10/16/2011 15:30	0	0	0
449	10/16/2011 15:31	0	0	0
450	10/16/2011 15:32	0	0	0
451	10/16/2011 15:33	0	0	0
452	10/16/2011 15:34	0	0	0
453	10/16/2011 15:35	0	0	0
454	10/16/2011 15:36	0	0	0
455	10/16/2011 15:37	0	0	0
456	10/16/2011 15:38	0	0	0
457	10/16/2011 15:39	0	0	0
458	10/16/2011 15:40	0	0	0
459	10/16/2011 15:41	0	0	0
460	10/16/2011 15:42	0	0	0
461	10/16/2011 15:43	0	0	0
462	10/16/2011 15:44	0	0	0
463	10/16/2011 15:45	0	0	0
464	10/16/2011 15:46	0	0	0
465	10/16/2011 15:47	0	0	0
466	10/16/2011 15:48	0	0	0
467	10/16/2011 15:49	0	0	0
468	10/16/2011 15:50	0	0	0
469	10/16/2011 15:51	0	0	0
470	10/16/2011 15:52	0	0	0
471	10/16/2011 15:53	0	0	0
472	10/16/2011 15:54	0	0	0
473	10/16/2011 15:55	0	0	0
474	10/16/2011 15:56	0	0	0
475	10/16/2011 15:57	0	0	0
476	10/16/2011 15:58	0	0	0
477	10/16/2011 15:59	0	0	0

==========Event #42 information (end)==========

up

=========Event #30 information (begin)=========

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[Event #30 name:]--[Event #30]2011-10-16 07:34<-->2011-10-16 08:00

[Event start time:]--2011-10-16 07:34:21[Event end time:]--2011-10-16 08:00:21

==========Event #30 head information==========

Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367

Data Points: 26 Sample Period: 60 s Datalog Mode: Automatic

SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode

==========

Sensor Information : PID(ppb)

Measurement Gas : Isobutene

Calibration Time : 2011-10-16 07:34:00

Drift Value : ---

Low Alarm Levels : 25847

High Alarm Levels : 51694

Span Value : 100000

Correction Factor : 1.00

Over Alarm Levels : 15000000

==========Event #30 data informations==========

LINE#	Date/Time	PID(ppm)	PID(ppb)
1	10/16/2011 7:35	8.555	8555
2	10/16/2011 7:36	0	0
3	10/16/2011 7:37	0	0
4	10/16/2011 7:38	0	0
5	10/16/2011 7:39	0	0
6	10/16/2011 7:40	0	0
7	10/16/2011 7:41	0	0
8	10/16/2011 7:42	0	0
9	10/16/2011 7:43	0	0
10	10/16/2011 7:44	0	0
11	10/16/2011 7:45	0	0
12	10/16/2011 7:46	0	0
13	10/16/2011 7:47	0	0
14	10/16/2011 7:48	0	0
15	10/16/2011 7:49	0	0
16	10/16/2011 7:50	0	0
17	10/16/2011 7:51	0	0
18	10/16/2011 7:52	0	0
19	10/16/2011 7:53	0	0
20	10/16/2011 7:54	0	0
21	10/16/2011 7:55	0	0
22	10/16/2011 7:56	0	0
23	10/16/2011 7:57	0	0
24	10/16/2011 7:58	0	0
25	10/16/2011 7:59	0	0
26	10/16/2011 8:00	0	0

==========Event #30 information (end)==========

=========Event #33 information (begin)=========

==========

[Event #33 name:]--[Event #33]2011-10-16 08:07<-->2011-10-16 16:11

[Event start time:]--2011-10-16 08:07:38[Event end time:]--2011-10-16 16:11:38

==========Event #33 head information==========

Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367

Data Points: 484 Sample Period: 60 s Datalog Mode: Automatic

SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode

==========

Sensor Information : PID(ppb)

Measurement Gas : Isobutene

Calibration Time : 2011-10-16 08:07:00

Drift Value : ---

Low Alarm Levels : 25847

High Alarm Levels : 51694

Span Value : 100000

Correction Factor : 1.00

Over Alarm Levels : 15000000

==========Event #33 data informations==========

LINE#	Date/Time	PID(ppm)	PID(ppb)
1	10/16/2011 8:08	0.004	4
2	10/16/2011 8:09	0	0
3	10/16/2011 8:10	0	0
4	10/16/2011 8:11	0	0
5	10/16/2011 8:12	0	0
6	10/16/2011 8:13	0	0
7	10/16/2011 8:14	0	0
8	10/16/2011 8:15	0	0
9	10/16/2011 8:16	0	0
10	10/16/2011 8:17	0	0
11	10/16/2011 8:18	0	0
12	10/16/2011 8:19	0	0
13	10/16/2011 8:20	0	0
14	10/16/2011 8:21	0	0
15	10/16/2011 8:22	0	0
16	10/16/2011 8:23	0	0
17	10/16/2011 8:24	0	0
18	10/16/2011 8:25	0	0
19	10/16/2011 8:26	0	0
20	10/16/2011 8:27	0	0
21	10/16/2011 8:28	0	0
22	10/16/2011 8:29	0	0
23	10/16/2011 8:30	0	0

24	10/16/2011 8:31	0	0
25	10/16/2011 8:32	0	0
26	10/16/2011 8:33	0	0
27	10/16/2011 8:34	0	0
28	10/16/2011 8:35	0	0
29	10/16/2011 8:36	0	0
30	10/16/2011 8:37	0	0
31	10/16/2011 8:38	0	0
32	10/16/2011 8:39	0	0
33	10/16/2011 8:40	0	0
34	10/16/2011 8:41	0	0
35	10/16/2011 8:42	0	0
36	10/16/2011 8:43	0	0
37	10/16/2011 8:44	0	0
38	10/16/2011 8:45	0	0
39	10/16/2011 8:46	0	0
40	10/16/2011 8:47	0	0
41	10/16/2011 8:48	0	0
42	10/16/2011 8:49	0	0
43	10/16/2011 8:50	0	0
44	10/16/2011 8:51	0	0
45	10/16/2011 8:52	0	0
46	10/16/2011 8:53	0	0
47	10/16/2011 8:54	0	0
48	10/16/2011 8:55	0	0
49	10/16/2011 8:56	0	0
50	10/16/2011 8:57	0	0
51	10/16/2011 8:58	0	0
52	10/16/2011 8:59	0	0
53	10/16/2011 9:00	0	0
54	10/16/2011 9:01	0	0
55	10/16/2011 9:02	0	0
56	10/16/2011 9:03	0	0
57	10/16/2011 9:04	0	0
58	10/16/2011 9:05	0	0
59	10/16/2011 9:06	0	0
60	10/16/2011 9:07	0	0
61	10/16/2011 9:08	0	0
62	10/16/2011 9:09	0	0
63	10/16/2011 9:10	0	0
64	10/16/2011 9:11	0	0
65	10/16/2011 9:12	0	0
66	10/16/2011 9:13	0	0
67	10/16/2011 9:14	0	0
68	10/16/2011 9:15	0	0
69	10/16/2011 9:16	0	0
70	10/16/2011 9:17	0	0

71	10/16/2011 9:18	0	0
72	10/16/2011 9:19	0	0
73	10/16/2011 9:20	0	0
74	10/16/2011 9:21	0	0
75	10/16/2011 9:22	0	0
76	10/16/2011 9:23	0	0
77	10/16/2011 9:24	0	0
78	10/16/2011 9:25	0	0
79	10/16/2011 9:26	0	0
80	10/16/2011 9:27	0	0
81	10/16/2011 9:28	0	0
82	10/16/2011 9:29	0	0
83	10/16/2011 9:30	0	0
84	10/16/2011 9:31	0	0
85	10/16/2011 9:32	0	0
86	10/16/2011 9:33	0	0
87	10/16/2011 9:34	0	0
88	10/16/2011 9:35	0	0
89	10/16/2011 9:36	0	0
90	10/16/2011 9:37	0	0
91	10/16/2011 9:38	0	0
92	10/16/2011 9:39	0	0
93	10/16/2011 9:40	0	0
94	10/16/2011 9:41	0	0
95	10/16/2011 9:42	0	0
96	10/16/2011 9:43	0	0
97	10/16/2011 9:44	0	0
98	10/16/2011 9:45	0	0
99	10/16/2011 9:46	0	0
100	10/16/2011 9:47	0	0
101	10/16/2011 9:48	0	0
102	10/16/2011 9:49	0	0
103	10/16/2011 9:50	0	0
104	10/16/2011 9:51	0	0
105	10/16/2011 9:52	0	0
106	10/16/2011 9:53	0	0
107	10/16/2011 9:54	0	0
108	10/16/2011 9:55	0	0
109	10/16/2011 9:56	0	0
110	10/16/2011 9:57	0	0
111	10/16/2011 9:58	0	0
112	10/16/2011 9:59	0	0
113	10/16/2011 10:00	0	0
114	10/16/2011 10:01	0	0
115	10/16/2011 10:02	0	0
116	10/16/2011 10:03	0	0
117	10/16/2011 10:04	0	0

118	10/16/2011 10:05	0	0
119	10/16/2011 10:06	0	0
120	10/16/2011 10:07	0	0
121	10/16/2011 10:08	0	0
122	10/16/2011 10:09	0	0
123	10/16/2011 10:10	0	0
124	10/16/2011 10:11	0	0
125	10/16/2011 10:12	0	0
126	10/16/2011 10:13	0	0
127	10/16/2011 10:14	0	0
128	10/16/2011 10:15	0	0
129	10/16/2011 10:16	0	0
130	10/16/2011 10:17	0	0
131	10/16/2011 10:18	0	0
132	10/16/2011 10:19	0	0
133	10/16/2011 10:20	0	0
134	10/16/2011 10:21	0	0
135	10/16/2011 10:22	0	0
136	10/16/2011 10:23	0	0
137	10/16/2011 10:24	0	0
138	10/16/2011 10:25	0	0
139	10/16/2011 10:26	0	0
140	10/16/2011 10:27	0	0
141	10/16/2011 10:28	0	0
142	10/16/2011 10:29	0	0
143	10/16/2011 10:30	0	0
144	10/16/2011 10:31	0	0
145	10/16/2011 10:32	0	0
146	10/16/2011 10:33	0	0
147	10/16/2011 10:34	0	0
148	10/16/2011 10:35	0	0
149	10/16/2011 10:36	0	0
150	10/16/2011 10:37	0	0
151	10/16/2011 10:38	0	0
152	10/16/2011 10:39	0	0
153	10/16/2011 10:40	0	0
154	10/16/2011 10:41	0	0
155	10/16/2011 10:42	0	0
156	10/16/2011 10:43	0	0
157	10/16/2011 10:44	0	0
158	10/16/2011 10:45	0	0
159	10/16/2011 10:46	0	0
160	10/16/2011 10:47	0	0
161	10/16/2011 10:48	0	0
162	10/16/2011 10:49	0	0
163	10/16/2011 10:50	0	0
164	10/16/2011 10:51	0	0

165	10/16/2011 10:52	0	0
166	10/16/2011 10:53	0	0
167	10/16/2011 10:54	0	0
168	10/16/2011 10:55	0	0
169	10/16/2011 10:56	0	0
170	10/16/2011 10:57	0	0
171	10/16/2011 10:58	0	0
172	10/16/2011 10:59	0	0
173	10/16/2011 11:00	0	0
174	10/16/2011 11:01	0	0
175	10/16/2011 11:02	0	0
176	10/16/2011 11:03	0	0
177	10/16/2011 11:04	0	0
178	10/16/2011 11:05	0	0
179	10/16/2011 11:06	0	0
180	10/16/2011 11:07	0	0
181	10/16/2011 11:08	0	0
182	10/16/2011 11:09	0	0
183	10/16/2011 11:10	0	0
184	10/16/2011 11:11	0	0
185	10/16/2011 11:12	0	0
186	10/16/2011 11:13	0	0
187	10/16/2011 11:14	0	0
188	10/16/2011 11:15	0	0
189	10/16/2011 11:16	0	0
190	10/16/2011 11:17	0	0
191	10/16/2011 11:18	0	0
192	10/16/2011 11:19	0	0
193	10/16/2011 11:20	0	0
194	10/16/2011 11:21	0	0
195	10/16/2011 11:22	0	0
196	10/16/2011 11:23	0	0
197	10/16/2011 11:24	0	0
198	10/16/2011 11:25	0	0
199	10/16/2011 11:26	0	0
200	10/16/2011 11:27	0	0
201	10/16/2011 11:28	0	0
202	10/16/2011 11:29	0	0
203	10/16/2011 11:30	0	0
204	10/16/2011 11:31	0	0
205	10/16/2011 11:32	0	0
206	10/16/2011 11:33	0	0
207	10/16/2011 11:34	0	0
208	10/16/2011 11:35	0	0
209	10/16/2011 11:36	0	0
210	10/16/2011 11:37	0	0
211	10/16/2011 11:38	0	0

212	10/16/2011 11:39	0	0
213	10/16/2011 11:40	0	0
214	10/16/2011 11:41	0	0
215	10/16/2011 11:42	0	0
216	10/16/2011 11:43	0	0
217	10/16/2011 11:44	0	0
218	10/16/2011 11:45	0	0
219	10/16/2011 11:46	0	0
220	10/16/2011 11:47	0	0
221	10/16/2011 11:48	0	0
222	10/16/2011 11:49	0	0
223	10/16/2011 11:50	0	0
224	10/16/2011 11:51	0	0
225	10/16/2011 11:52	0	0
226	10/16/2011 11:53	0	0
227	10/16/2011 11:54	0	0
228	10/16/2011 11:55	0	0
229	10/16/2011 11:56	0	0
230	10/16/2011 11:57	0	0
231	10/16/2011 11:58	0	0
232	10/16/2011 11:59	0	0
233	10/16/2011 12:00	0	0
234	10/16/2011 12:01	0	0
235	10/16/2011 12:02	0	0
236	10/16/2011 12:03	0	0
237	10/16/2011 12:04	0	0
238	10/16/2011 12:05	0	0
239	10/16/2011 12:06	0	0
240	10/16/2011 12:07	0	0
241	10/16/2011 12:08	0	0
242	10/16/2011 12:09	0	0
243	10/16/2011 12:10	0	0
244	10/16/2011 12:11	0	0
245	10/16/2011 12:12	0	0
246	10/16/2011 12:13	0	0
247	10/16/2011 12:14	0	0
248	10/16/2011 12:15	0	0
249	10/16/2011 12:16	0	0
250	10/16/2011 12:17	0	0
251	10/16/2011 12:18	0	0
252	10/16/2011 12:19	0	0
253	10/16/2011 12:20	0	0
254	10/16/2011 12:21	0	0
255	10/16/2011 12:22	0	0
256	10/16/2011 12:23	0	0
257	10/16/2011 12:24	0	0
258	10/16/2011 12:25	0	0

259	10/16/2011 12:26	0	0
260	10/16/2011 12:27	0	0
261	10/16/2011 12:28	0	0
262	10/16/2011 12:29	0	0
263	10/16/2011 12:30	0	0
264	10/16/2011 12:31	0	0
265	10/16/2011 12:32	0	0
266	10/16/2011 12:33	0	0
267	10/16/2011 12:34	0	0
268	10/16/2011 12:35	0	0
269	10/16/2011 12:36	0	0
270	10/16/2011 12:37	0	0
271	10/16/2011 12:38	0	0
272	10/16/2011 12:39	0	0
273	10/16/2011 12:40	0	0
274	10/16/2011 12:41	0	0
275	10/16/2011 12:42	0	0
276	10/16/2011 12:43	0	0
277	10/16/2011 12:44	0	0
278	10/16/2011 12:45	0	0
279	10/16/2011 12:46	0	0
280	10/16/2011 12:47	0	0
281	10/16/2011 12:48	0	0
282	10/16/2011 12:49	0	0
283	10/16/2011 12:50	0	0
284	10/16/2011 12:51	0	0
285	10/16/2011 12:52	0	0
286	10/16/2011 12:53	0	0
287	10/16/2011 12:54	0	0
288	10/16/2011 12:55	0	0
289	10/16/2011 12:56	0	0
290	10/16/2011 12:57	0	0
291	10/16/2011 12:58	0	0
292	10/16/2011 12:59	0	0
293	10/16/2011 13:00	0	0
294	10/16/2011 13:01	0	0
295	10/16/2011 13:02	0	0
296	10/16/2011 13:03	0	0
297	10/16/2011 13:04	0	0
298	10/16/2011 13:05	0	0
299	10/16/2011 13:06	0	0
300	10/16/2011 13:07	0	0
301	10/16/2011 13:08	0	0
302	10/16/2011 13:09	0	0
303	10/16/2011 13:10	0	0
304	10/16/2011 13:11	0	0
305	10/16/2011 13:12	0	0

306	10/16/2011 13:13	0	0
307	10/16/2011 13:14	0	0
308	10/16/2011 13:15	0	0
309	10/16/2011 13:16	0	0
310	10/16/2011 13:17	0	0
311	10/16/2011 13:18	0	0
312	10/16/2011 13:19	0	0
313	10/16/2011 13:20	0	0
314	10/16/2011 13:21	0	0
315	10/16/2011 13:22	0	0
316	10/16/2011 13:23	0	0
317	10/16/2011 13:24	0	0
318	10/16/2011 13:25	0	0
319	10/16/2011 13:26	0	0
320	10/16/2011 13:27	0	0
321	10/16/2011 13:28	0	0
322	10/16/2011 13:29	0	0
323	10/16/2011 13:30	0	0
324	10/16/2011 13:31	0	0
325	10/16/2011 13:32	0	0
326	10/16/2011 13:33	0	0
327	10/16/2011 13:34	0	0
328	10/16/2011 13:35	0	0
329	10/16/2011 13:36	0	0
330	10/16/2011 13:37	0	0
331	10/16/2011 13:38	0	0
332	10/16/2011 13:39	0	0
333	10/16/2011 13:40	0	0
334	10/16/2011 13:41	0	0
335	10/16/2011 13:42	0	0
336	10/16/2011 13:43	0	0
337	10/16/2011 13:44	0	0
338	10/16/2011 13:45	0	0
339	10/16/2011 13:46	0	0
340	10/16/2011 13:47	0	0
341	10/16/2011 13:48	0	0
342	10/16/2011 13:49	0	0
343	10/16/2011 13:50	0	0
344	10/16/2011 13:51	0	0
345	10/16/2011 13:52	0	0
346	10/16/2011 13:53	0	0
347	10/16/2011 13:54	0	0
348	10/16/2011 13:55	0	0
349	10/16/2011 13:56	0	0
350	10/16/2011 13:57	0	0
351	10/16/2011 13:58	0	0
352	10/16/2011 13:59	0	0

353	10/16/2011 14:00	0	0
354	10/16/2011 14:01	0	0
355	10/16/2011 14:02	0	0
356	10/16/2011 14:03	0	0
357	10/16/2011 14:04	0	0
358	10/16/2011 14:05	0	0
359	10/16/2011 14:06	0	0
360	10/16/2011 14:07	0	0
361	10/16/2011 14:08	0	0
362	10/16/2011 14:09	0	0
363	10/16/2011 14:10	0	0
364	10/16/2011 14:11	0	0
365	10/16/2011 14:12	0	0
366	10/16/2011 14:13	0	0
367	10/16/2011 14:14	0	0
368	10/16/2011 14:15	0	0
369	10/16/2011 14:16	0	0
370	10/16/2011 14:17	0	0
371	10/16/2011 14:18	0	0
372	10/16/2011 14:19	0	0
373	10/16/2011 14:20	0	0
374	10/16/2011 14:21	0	0
375	10/16/2011 14:22	0	0
376	10/16/2011 14:23	0	0
377	10/16/2011 14:24	0	0
378	10/16/2011 14:25	0	0
379	10/16/2011 14:26	0	0
380	10/16/2011 14:27	0	0
381	10/16/2011 14:28	0	0
382	10/16/2011 14:29	0	0
383	10/16/2011 14:30	0	0
384	10/16/2011 14:31	0	0
385	10/16/2011 14:32	0	0
386	10/16/2011 14:33	0	0
387	10/16/2011 14:34	0	0
388	10/16/2011 14:35	0	0
389	10/16/2011 14:36	0	0
390	10/16/2011 14:37	0	0
391	10/16/2011 14:38	0	0
392	10/16/2011 14:39	0	0
393	10/16/2011 14:40	0	0
394	10/16/2011 14:41	0	0
395	10/16/2011 14:42	0	0
396	10/16/2011 14:43	0	0
397	10/16/2011 14:44	0	0
398	10/16/2011 14:45	0	0
399	10/16/2011 14:46	0	0

400	10/16/2011 14:47	0	0
401	10/16/2011 14:48	0	0
402	10/16/2011 14:49	0	0
403	10/16/2011 14:50	0	0
404	10/16/2011 14:51	0	0
405	10/16/2011 14:52	0	0
406	10/16/2011 14:53	0	0
407	10/16/2011 14:54	0	0
408	10/16/2011 14:55	0	0
409	10/16/2011 14:56	0	0
410	10/16/2011 14:57	0	0
411	10/16/2011 14:58	0	0
412	10/16/2011 14:59	0	0
413	10/16/2011 15:00	0	0
414	10/16/2011 15:01	0	0
415	10/16/2011 15:02	0	0
416	10/16/2011 15:03	0	0
417	10/16/2011 15:04	0	0
418	10/16/2011 15:05	0	0
419	10/16/2011 15:06	0	0
420	10/16/2011 15:07	0	0
421	10/16/2011 15:08	0	0
422	10/16/2011 15:09	0	0
423	10/16/2011 15:10	0	0
424	10/16/2011 15:11	0	0
425	10/16/2011 15:12	0	0
426	10/16/2011 15:13	0	0
427	10/16/2011 15:14	0	0
428	10/16/2011 15:15	0	0
429	10/16/2011 15:16	0	0
430	10/16/2011 15:17	0	0
431	10/16/2011 15:18	0	0
432	10/16/2011 15:19	0	0
433	10/16/2011 15:20	0	0
434	10/16/2011 15:21	0	0
435	10/16/2011 15:22	0	0
436	10/16/2011 15:23	0	0
437	10/16/2011 15:24	0	0
438	10/16/2011 15:25	0	0
439	10/16/2011 15:26	0	0
440	10/16/2011 15:27	0	0
441	10/16/2011 15:28	0	0
442	10/16/2011 15:29	0	0
443	10/16/2011 15:30	0	0
444	10/16/2011 15:31	0	0
445	10/16/2011 15:32	0	0
446	10/16/2011 15:33	0	0

447	10/16/2011 15:34	0	0
448	10/16/2011 15:35	0	0
449	10/16/2011 15:36	0	0
450	10/16/2011 15:37	0	0
451	10/16/2011 15:38	0	0
452	10/16/2011 15:39	0	0
453	10/16/2011 15:40	0	0
454	10/16/2011 15:41	0	0
455	10/16/2011 15:42	0	0
456	10/16/2011 15:43	0	0
457	10/16/2011 15:44	0	0
458	10/16/2011 15:45	0	0
459	10/16/2011 15:46	0	0
460	10/16/2011 15:47	0	0
461	10/16/2011 15:48	0	0
462	10/16/2011 15:49	0	0
463	10/16/2011 15:50	0	0
464	10/16/2011 15:51	0	0
465	10/16/2011 15:52	0	0
466	10/16/2011 15:53	0	0
467	10/16/2011 15:54	0	0
468	10/16/2011 15:55	0	0
469	10/16/2011 15:56	0	0
470	10/16/2011 15:57	0	0
471	10/16/2011 15:58	0	0
472	10/16/2011 15:59	0	0
473	10/16/2011 16:00	0	0
474	10/16/2011 16:01	0	0
475	10/16/2011 16:02	0	0
476	10/16/2011 16:03	0	0
477	10/16/2011 16:04	0	0
478	10/16/2011 16:05	0	0
479	10/16/2011 16:06	0	0
480	10/16/2011 16:07	0	0
481	10/16/2011 16:08	0	0
482	10/16/2011 16:09	0	0
483	10/16/2011 16:10	0	0
484	10/16/2011 16:11	0	0

==========Event #33 information (end)==========

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533101806
Firmware Version	2.8
Calibration Date	5/19/2011
Test Name	MANUAL_009
Test Start Time	8:04:41 AM
Test Start Date	10/16/2011
Test Length [D:H:M]	0:07:42
Test Interval [M:S]	1:00
PM1 Average [mg/m3]	0.009
PM1 Minimum [mg/m3]	0.004
PM1 Maximum [mg/m3]	0.133
PM1 TWA [mg/m3]	0.009
PM2.5 Average [mg/m3]	0.01
PM2.5 Minimum [mg/m3]	0.004
PM2.5 Maximum [mg/m3]	0.148
PM2.5 TWA [mg/m3]	0.009
PM4 Average [mg/m3]	0.011
PM4 Minimum [mg/m3]	0.005
PM4 Maximum [mg/m3]	0.192
PM4 TWA [mg/m3]	0.01
PM10 Average [mg/m3]	0.015
PM10 Minimum [mg/m3]	0.006
PM10 Maximum [mg/m3]	0.347
PM10 TWA [mg/m3]	0.015
TOTAL Average [mg/m3]	0.017
TOTAL Minimum [mg/m3]	0.006
TOTAL Maximum [mg/m3]	0.381
TOTAL TWA [mg/m3]	0.016
Photometric User Cal	1
Size Correction User Cal	1
Flow User Cal	1
Errors	
Number of Samples	462

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	TOTAL [mg/m3]	Alarms	Errors
60	0.012	0.012	0.013	0.02	0.023		
120	0.007	0.007	0.007	0.009	0.009		
180	0.006	0.007	0.007	0.008	0.008		
240	0.007	0.007	0.007	0.008	0.009		
300	0.012	0.012	0.013	0.015	0.016		
360	0.007	0.008	0.008	0.01	0.011		
420	0.015	0.015	0.017	0.02	0.02		
480	0.008	0.009	0.009	0.011	0.011		
540	0.008	0.008	0.009	0.011	0.012		

600	0.007	0.008	0.009	0.01	0.01
660	0.007	0.007	0.007	0.009	0.009
720	0.007	0.007	0.007	0.009	0.009
780	0.007	0.008	0.008	0.01	0.01
840	0.007	0.007	0.007	0.009	0.009
900	0.007	0.007	0.007	0.009	0.009
960	0.007	0.007	0.007	0.009	0.009
1020	0.007	0.007	0.007	0.008	0.009
1080	0.006	0.007	0.007	0.008	0.008
1140	0.007	0.007	0.008	0.009	0.009
1200	0.007	0.007	0.007	0.008	0.009
1260	0.011	0.011	0.012	0.019	0.023
1320	0.007	0.007	0.007	0.009	0.009
1380	0.007	0.007	0.008	0.009	0.009
1440	0.007	0.007	0.008	0.009	0.01
1500	0.007	0.007	0.007	0.009	0.009
1560	0.007	0.007	0.007	0.009	0.01
1620	0.011	0.011	0.011	0.013	0.014
1680	0.007	0.007	0.007	0.008	0.009
1740	0.007	0.008	0.008	0.01	0.011
1800	0.006	0.007	0.007	0.009	0.009
1860	0.006	0.007	0.007	0.008	0.009
1920	0.006	0.006	0.007	0.008	0.009
1980	0.007	0.007	0.008	0.009	0.009
2040	0.007	0.007	0.007	0.009	0.01
2100	0.007	0.007	0.008	0.009	0.01
2160	0.01	0.01	0.011	0.013	0.014
2220	0.007	0.007	0.008	0.009	0.01
2280	0.007	0.007	0.008	0.01	0.01
2340	0.007	0.008	0.008	0.009	0.01
2400	0.007	0.007	0.007	0.009	0.009
2460	0.007	0.008	0.008	0.01	0.01
2520	0.006	0.006	0.007	0.008	0.009
2580	0.007	0.007	0.007	0.009	0.009
2640	0.006	0.006	0.007	0.008	0.008
2700	0.006	0.006	0.007	0.008	0.009
2760	0.006	0.006	0.007	0.008	0.009
2820	0.006	0.006	0.007	0.008	0.008
2880	0.006	0.006	0.007	0.008	0.009
2940	0.006	0.007	0.007	0.009	0.009
3000	0.006	0.006	0.007	0.007	0.008
3060	0.007	0.007	0.008	0.009	0.009
3120	0.007	0.007	0.007	0.01	0.01
3180	0.007	0.007	0.007	0.009	0.01
3240	0.017	0.017	0.018	0.021	0.024
3300	0.006	0.006	0.007	0.009	0.009
3360	0.006	0.006	0.007	0.008	0.009

3420	0.006	0.006	0.007	0.008	0.009
3480	0.006	0.006	0.006	0.007	0.008
3540	0.007	0.007	0.008	0.009	0.01
3600	0.007	0.007	0.007	0.009	0.009
3660	0.006	0.007	0.007	0.008	0.009
3720	0.007	0.007	0.008	0.009	0.009
3780	0.007	0.007	0.007	0.009	0.009
3840	0.007	0.007	0.007	0.009	0.01
3900	0.007	0.007	0.007	0.008	0.008
3960	0.008	0.008	0.008	0.01	0.01
4020	0.008	0.008	0.008	0.009	0.01
4080	0.008	0.009	0.009	0.012	0.013
4140	0.007	0.007	0.008	0.01	0.01
4200	0.007	0.007	0.007	0.009	0.01
4260	0.007	0.007	0.008	0.009	0.011
4320	0.007	0.007	0.008	0.009	0.009
4380	0.007	0.007	0.008	0.01	0.011
4440	0.006	0.006	0.007	0.008	0.009
4500	0.006	0.007	0.007	0.008	0.008
4560	0.006	0.007	0.007	0.008	0.009
4620	0.007	0.007	0.007	0.008	0.009
4680	0.007	0.007	0.007	0.009	0.01
4740	0.007	0.007	0.007	0.009	0.01
4800	0.007	0.007	0.007	0.009	0.01
4860	0.01	0.01	0.011	0.012	0.013
4920	0.007	0.007	0.007	0.009	0.009
4980	0.007	0.007	0.007	0.01	0.011
5040	0.006	0.007	0.007	0.008	0.008
5100	0.007	0.007	0.008	0.009	0.01
5160	0.008	0.008	0.008	0.01	0.01
5220	0.008	0.008	0.008	0.009	0.01
5280	0.007	0.008	0.008	0.009	0.01
5340	0.007	0.007	0.008	0.009	0.009
5400	0.007	0.007	0.008	0.009	0.01
5460	0.007	0.007	0.007	0.009	0.009
5520	0.007	0.007	0.008	0.009	0.01
5580	0.007	0.007	0.007	0.009	0.01
5640	0.006	0.006	0.007	0.008	0.008
5700	0.006	0.006	0.007	0.008	0.009
5760	0.007	0.007	0.007	0.008	0.009
5820	0.006	0.007	0.007	0.009	0.009
5880	0.012	0.012	0.012	0.015	0.017
5940	0.007	0.008	0.008	0.009	0.01
6000	0.009	0.009	0.01	0.011	0.012
6060	0.015	0.015	0.017	0.026	0.03
6120	0.008	0.008	0.009	0.012	0.013
6180	0.008	0.008	0.009	0.012	0.012

6240	0.008	0.009	0.009	0.011	0.011
6300	0.009	0.01	0.01	0.012	0.013
6360	0.006	0.006	0.007	0.008	0.008
6420	0.006	0.006	0.007	0.008	0.009
6480	0.008	0.008	0.009	0.012	0.014
6540	0.008	0.008	0.009	0.014	0.016
6600	0.005	0.006	0.006	0.007	0.007
6660	0.007	0.007	0.007	0.009	0.01
6720	0.007	0.007	0.007	0.009	0.01
6780	0.007	0.007	0.007	0.01	0.011
6840	0.006	0.006	0.006	0.008	0.008
6900	0.013	0.013	0.013	0.016	0.018
6960	0.007	0.007	0.008	0.011	0.011
7020	0.006	0.006	0.007	0.009	0.01
7080	0.006	0.006	0.006	0.008	0.009
7140	0.007	0.007	0.007	0.009	0.012
7200	0.006	0.007	0.007	0.009	0.01
7260	0.007	0.007	0.008	0.012	0.013
7320	0.006	0.006	0.007	0.008	0.009
7380	0.006	0.006	0.006	0.008	0.009
7440	0.006	0.006	0.007	0.008	0.008
7500	0.006	0.006	0.006	0.008	0.008
7560	0.009	0.009	0.009	0.012	0.012
7620	0.007	0.008	0.008	0.011	0.011
7680	0.006	0.006	0.007	0.01	0.01
7740	0.006	0.006	0.007	0.008	0.008
7800	0.007	0.007	0.007	0.009	0.01
7860	0.006	0.006	0.007	0.009	0.01
7920	0.006	0.006	0.006	0.008	0.008
7980	0.007	0.007	0.007	0.009	0.01
8040	0.006	0.006	0.007	0.009	0.01
8100	0.006	0.007	0.007	0.009	0.01
8160	0.007	0.007	0.008	0.01	0.01
8220	0.008	0.008	0.009	0.014	0.014
8280	0.007	0.007	0.008	0.011	0.012
8340	0.01	0.011	0.012	0.021	0.023
8400	0.007	0.007	0.007	0.009	0.011
8460	0.007	0.007	0.007	0.009	0.011
8520	0.006	0.006	0.007	0.008	0.009
8580	0.007	0.007	0.007	0.009	0.011
8640	0.006	0.006	0.007	0.008	0.008
8700	0.006	0.006	0.006	0.007	0.008
8760	0.007	0.008	0.008	0.01	0.011
8820	0.007	0.007	0.007	0.009	0.009
8880	0.006	0.007	0.007	0.009	0.009
8940	0.007	0.007	0.007	0.009	0.01
9000	0.006	0.006	0.006	0.007	0.008

9060	0.006	0.006	0.006	0.008	0.008
9120	0.007	0.007	0.008	0.011	0.013
9180	0.006	0.006	0.007	0.011	0.012
9240	0.006	0.006	0.006	0.008	0.009
9300	0.006	0.006	0.006	0.008	0.009
9360	0.005	0.006	0.006	0.008	0.008
9420	0.006	0.006	0.006	0.008	0.009
9480	0.006	0.006	0.006	0.008	0.009
9540	0.006	0.006	0.006	0.007	0.009
9600	0.006	0.006	0.006	0.008	0.009
9660	0.006	0.006	0.006	0.008	0.009
9720	0.005	0.006	0.006	0.007	0.008
9780	0.008	0.008	0.009	0.012	0.014
9840	0.005	0.005	0.006	0.007	0.008
9900	0.006	0.006	0.006	0.008	0.008
9960	0.006	0.007	0.007	0.009	0.01
10020	0.006	0.006	0.007	0.009	0.01
10080	0.006	0.006	0.007	0.009	0.01
10140	0.006	0.006	0.007	0.01	0.01
10200	0.005	0.006	0.006	0.008	0.009
10260	0.006	0.006	0.007	0.009	0.009
10320	0.006	0.006	0.006	0.009	0.01
10380	0.005	0.005	0.006	0.008	0.009
10440	0.005	0.005	0.006	0.007	0.008
10500	0.005	0.006	0.006	0.007	0.008
10560	0.005	0.005	0.006	0.007	0.007
10620	0.005	0.005	0.006	0.007	0.008
10680	0.005	0.005	0.006	0.007	0.007
10740	0.007	0.007	0.007	0.008	0.01
10800	0.007	0.007	0.007	0.01	0.011
10860	0.005	0.005	0.006	0.007	0.007
10920	0.006	0.006	0.006	0.007	0.008
10980	0.006	0.006	0.006	0.008	0.009
11040	0.005	0.006	0.006	0.008	0.009
11100	0.005	0.005	0.006	0.008	0.008
11160	0.005	0.006	0.006	0.007	0.008
11220	0.008	0.009	0.01	0.016	0.016
11280	0.006	0.006	0.007	0.009	0.01
11340	0.013	0.013	0.013	0.015	0.015
11400	0.008	0.008	0.009	0.01	0.011
11460	0.005	0.005	0.006	0.007	0.008
11520	0.006	0.006	0.007	0.009	0.01
11580	0.006	0.006	0.007	0.008	0.009
11640	0.006	0.006	0.007	0.01	0.01
11700	0.005	0.005	0.006	0.007	0.007
11760	0.006	0.007	0.007	0.009	0.011
11820	0.007	0.007	0.008	0.009	0.011

11880	0.007	0.007	0.008	0.009	0.01
11940	0.006	0.006	0.006	0.008	0.008
12000	0.005	0.005	0.006	0.006	0.007
12060	0.005	0.005	0.005	0.006	0.006
12120	0.005	0.005	0.006	0.007	0.008
12180	0.005	0.005	0.006	0.007	0.007
12240	0.005	0.006	0.006	0.008	0.008
12300	0.008	0.008	0.009	0.012	0.013
12360	0.006	0.006	0.006	0.008	0.009
12420	0.007	0.007	0.008	0.012	0.013
12480	0.006	0.007	0.008	0.011	0.012
12540	0.008	0.008	0.01	0.016	0.017
12600	0.005	0.005	0.006	0.009	0.009
12660	0.005	0.005	0.005	0.006	0.007
12720	0.006	0.006	0.007	0.012	0.013
12780	0.005	0.005	0.006	0.009	0.01
12840	0.008	0.008	0.009	0.016	0.018
12900	0.008	0.008	0.009	0.014	0.018
12960	0.007	0.007	0.008	0.01	0.011
13020	0.005	0.005	0.005	0.007	0.007
13080	0.005	0.006	0.006	0.009	0.009
13140	0.006	0.006	0.006	0.008	0.008
13200	0.005	0.005	0.006	0.008	0.009
13260	0.005	0.005	0.006	0.008	0.008
13320	0.005	0.005	0.006	0.006	0.006
13380	0.005	0.005	0.006	0.008	0.008
13440	0.006	0.006	0.007	0.009	0.01
13500	0.007	0.007	0.008	0.012	0.012
13560	0.005	0.006	0.006	0.008	0.009
13620	0.005	0.005	0.006	0.007	0.007
13680	0.005	0.005	0.005	0.007	0.008
13740	0.005	0.005	0.005	0.006	0.007
13800	0.005	0.005	0.005	0.007	0.007
13860	0.005	0.005	0.005	0.006	0.007
13920	0.006	0.007	0.007	0.01	0.01
13980	0.006	0.006	0.006	0.009	0.01
14040	0.006	0.006	0.007	0.009	0.009
14100	0.005	0.005	0.006	0.008	0.008
14160	0.005	0.005	0.005	0.006	0.007
14220	0.005	0.005	0.005	0.006	0.006
14280	0.006	0.006	0.007	0.009	0.01
14340	0.005	0.005	0.005	0.006	0.006
14400	0.005	0.005	0.006	0.007	0.008
14460	0.005	0.005	0.006	0.007	0.007
14520	0.007	0.007	0.008	0.009	0.009
14580	0.005	0.005	0.006	0.007	0.009
14640	0.005	0.005	0.005	0.007	0.007

14700	0.005	0.005	0.005	0.007	0.008
14760	0.005	0.005	0.005	0.007	0.008
14820	0.005	0.005	0.006	0.007	0.009
14880	0.005	0.005	0.005	0.007	0.008
14940	0.006	0.006	0.006	0.008	0.008
15000	0.005	0.005	0.006	0.007	0.008
15060	0.005	0.005	0.006	0.007	0.008
15120	0.005	0.006	0.006	0.008	0.008
15180	0.009	0.01	0.011	0.017	0.019
15240	0.007	0.008	0.008	0.01	0.011
15300	0.007	0.008	0.008	0.01	0.011
15360	0.015	0.015	0.017	0.024	0.027
15420	0.007	0.008	0.008	0.01	0.011
15480	0.009	0.009	0.01	0.013	0.014
15540	0.005	0.005	0.005	0.006	0.007
15600	0.005	0.006	0.006	0.008	0.008
15660	0.006	0.006	0.006	0.008	0.009
15720	0.011	0.011	0.012	0.019	0.022
15780	0.01	0.01	0.012	0.019	0.022
15840	0.006	0.006	0.006	0.009	0.009
15900	0.028	0.029	0.034	0.062	0.072
15960	0.023	0.025	0.028	0.048	0.059
16020	0.023	0.024	0.029	0.057	0.065
16080	0.042	0.044	0.054	0.1	0.114
16140	0.033	0.035	0.04	0.068	0.077
16200	0.03	0.031	0.035	0.057	0.066
16260	0.036	0.037	0.041	0.06	0.066
16320	0.02	0.021	0.025	0.044	0.048
16380	0.02	0.02	0.021	0.028	0.029
16440	0.011	0.012	0.013	0.015	0.019
16500	0.021	0.022	0.024	0.033	0.035
16560	0.061	0.064	0.074	0.134	0.152
16620	0.04	0.041	0.049	0.096	0.114
16680	0.017	0.018	0.021	0.039	0.046
16740	0.048	0.051	0.062	0.125	0.149
16800	0.032	0.034	0.041	0.084	0.096
16860	0.009	0.01	0.011	0.019	0.023
16920	0.01	0.01	0.012	0.022	0.025
16980	0.006	0.006	0.007	0.011	0.011
17040	0.006	0.006	0.007	0.009	0.01
17100	0.005	0.005	0.006	0.007	0.008
17160	0.004	0.004	0.005	0.006	0.007
17220	0.007	0.007	0.008	0.011	0.013
17280	0.006	0.006	0.006	0.008	0.01
17340	0.007	0.008	0.009	0.014	0.015
17400	0.009	0.009	0.01	0.018	0.021
17460	0.007	0.008	0.008	0.014	0.014

17520	0.012	0.012	0.015	0.027	0.031
17580	0.009	0.009	0.011	0.018	0.021
17640	0.039	0.042	0.051	0.092	0.104
17700	0.018	0.019	0.022	0.042	0.049
17760	0.013	0.014	0.017	0.03	0.035
17820	0.008	0.009	0.01	0.016	0.017
17880	0.007	0.007	0.008	0.012	0.013
17940	0.007	0.007	0.007	0.011	0.012
18000	0.008	0.008	0.009	0.011	0.012
18060	0.009	0.01	0.01	0.015	0.015
18120	0.009	0.009	0.009	0.013	0.014
18180	0.008	0.008	0.009	0.013	0.015
18240	0.006	0.006	0.006	0.009	0.009
18300	0.005	0.005	0.006	0.008	0.008
18360	0.006	0.006	0.006	0.008	0.01
18420	0.005	0.005	0.006	0.008	0.008
18480	0.005	0.005	0.005	0.007	0.008
18540	0.007	0.007	0.007	0.01	0.011
18600	0.006	0.006	0.007	0.008	0.009
18660	0.025	0.026	0.029	0.043	0.049
18720	0.009	0.009	0.01	0.015	0.016
18780	0.012	0.013	0.015	0.024	0.029
18840	0.022	0.024	0.03	0.054	0.062
18900	0.006	0.006	0.007	0.011	0.012
18960	0.006	0.006	0.007	0.01	0.011
19020	0.005	0.005	0.006	0.008	0.009
19080	0.005	0.005	0.005	0.006	0.007
19140	0.006	0.006	0.007	0.009	0.01
19200	0.006	0.006	0.007	0.009	0.01
19260	0.005	0.005	0.006	0.008	0.008
19320	0.005	0.005	0.006	0.008	0.008
19380	0.005	0.005	0.005	0.007	0.007
19440	0.006	0.006	0.006	0.009	0.01
19500	0.005	0.005	0.006	0.009	0.009
19560	0.005	0.005	0.006	0.008	0.009
19620	0.016	0.017	0.021	0.038	0.046
19680	0.03	0.032	0.037	0.063	0.073
19740	0.018	0.019	0.02	0.026	0.028
19800	0.031	0.033	0.037	0.054	0.055
19860	0.014	0.014	0.015	0.021	0.023
19920	0.019	0.019	0.02	0.027	0.029
19980	0.014	0.015	0.016	0.024	0.026
20040	0.017	0.018	0.019	0.027	0.029
20100	0.018	0.019	0.022	0.035	0.037
20160	0.018	0.019	0.022	0.039	0.045
20220	0.017	0.017	0.02	0.034	0.041
20280	0.055	0.055	0.057	0.061	0.061

20340	0.032	0.032	0.033	0.036	0.036
20400	0.031	0.032	0.033	0.035	0.035
20460	0.019	0.02	0.02	0.024	0.025
20520	0.011	0.012	0.012	0.014	0.015
20580	0.019	0.019	0.02	0.023	0.024
20640	0.019	0.02	0.021	0.028	0.03
20700	0.012	0.012	0.014	0.02	0.021
20760	0.009	0.009	0.01	0.013	0.014
20820	0.015	0.015	0.017	0.028	0.034
20880	0.009	0.009	0.01	0.015	0.017
20940	0.01	0.011	0.012	0.019	0.021
21000	0.011	0.011	0.012	0.016	0.017
21060	0.008	0.008	0.008	0.01	0.011
21120	0.008	0.009	0.009	0.013	0.014
21180	0.007	0.008	0.008	0.01	0.011
21240	0.01	0.01	0.011	0.016	0.018
21300	0.007	0.007	0.008	0.01	0.011
21360	0.005	0.006	0.006	0.008	0.008
21420	0.006	0.007	0.007	0.009	0.01
21480	0.014	0.015	0.017	0.029	0.033
21540	0.082	0.087	0.108	0.211	0.25
21600	0.046	0.048	0.054	0.085	0.098
21660	0.022	0.023	0.027	0.045	0.054
21720	0.03	0.031	0.033	0.044	0.048
21780	0.022	0.023	0.024	0.031	0.034
21840	0.024	0.025	0.026	0.033	0.035
21900	0.012	0.012	0.014	0.019	0.02
21960	0.133	0.148	0.192	0.347	0.381
22020	0.017	0.018	0.023	0.036	0.038
22080	0.027	0.028	0.03	0.046	0.057
22140	0.008	0.009	0.009	0.012	0.015
22200	0.053	0.055	0.061	0.087	0.098
22260	0.02	0.021	0.024	0.041	0.046
22320	0.011	0.012	0.013	0.019	0.023
22380	0.008	0.008	0.009	0.012	0.013
22440	0.009	0.01	0.01	0.012	0.013
22500	0.007	0.007	0.007	0.009	0.01
22560	0.005	0.006	0.006	0.007	0.008
22620	0.005	0.006	0.006	0.007	0.008
22680	0.006	0.006	0.007	0.009	0.009
22740	0.005	0.006	0.006	0.008	0.009
22800	0.005	0.005	0.006	0.007	0.007
22860	0.008	0.009	0.01	0.017	0.019
22920	0.005	0.006	0.006	0.007	0.008
22980	0.006	0.006	0.006	0.007	0.008
23040	0.006	0.006	0.006	0.008	0.008
23100	0.006	0.007	0.007	0.009	0.009

23160	0.012	0.012	0.014	0.023	0.026
23220	0.007	0.008	0.008	0.01	0.011
23280	0.006	0.006	0.006	0.008	0.008
23340	0.005	0.005	0.005	0.006	0.006
23400	0.005	0.005	0.006	0.007	0.007
23460	0.005	0.006	0.006	0.007	0.008
23520	0.006	0.006	0.006	0.008	0.008
23580	0.005	0.006	0.006	0.008	0.008
23640	0.006	0.006	0.006	0.008	0.008
23700	0.006	0.006	0.007	0.009	0.01
23760	0.007	0.007	0.007	0.009	0.01
23820	0.007	0.007	0.008	0.009	0.01
23880	0.007	0.007	0.007	0.009	0.009
23940	0.006	0.006	0.007	0.008	0.009
24000	0.006	0.006	0.007	0.009	0.009
24060	0.006	0.006	0.007	0.009	0.011
24120	0.015	0.015	0.017	0.031	0.034
24180	0.013	0.013	0.015	0.025	0.028
24240	0.039	0.041	0.049	0.1	0.115
24300	0.009	0.009	0.01	0.014	0.017
24360	0.007	0.007	0.008	0.01	0.01
24420	0.009	0.01	0.011	0.014	0.016
24480	0.008	0.008	0.009	0.012	0.015
24540	0.013	0.014	0.015	0.024	0.028
24600	0.01	0.01	0.011	0.014	0.015
24660	0.007	0.008	0.008	0.011	0.012
24720	0.007	0.007	0.008	0.01	0.01
24780	0.006	0.006	0.006	0.007	0.008
24840	0.005	0.005	0.006	0.007	0.008
24900	0.006	0.006	0.007	0.008	0.01
24960	0.005	0.005	0.006	0.007	0.008
25020	0.005	0.005	0.005	0.006	0.007
25080	0.005	0.005	0.006	0.007	0.007
25140	0.005	0.005	0.005	0.006	0.006
25200	0.006	0.006	0.006	0.007	0.008
25260	0.005	0.006	0.006	0.007	0.008
25320	0.005	0.005	0.006	0.007	0.007
25380	0.005	0.006	0.006	0.007	0.007
25440	0.006	0.007	0.007	0.01	0.011
25500	0.006	0.006	0.007	0.008	0.008
25560	0.007	0.008	0.008	0.011	0.012
25620	0.008	0.008	0.009	0.011	0.011
25680	0.008	0.008	0.009	0.011	0.012
25740	0.006	0.006	0.007	0.008	0.008
25800	0.006	0.006	0.007	0.009	0.009
25860	0.007	0.007	0.008	0.01	0.011
25920	0.006	0.006	0.007	0.008	0.008

25980	0.006	0.006	0.006	0.007	0.007
26040	0.006	0.006	0.006	0.007	0.008
26100	0.006	0.006	0.006	0.008	0.009
26160	0.007	0.007	0.008	0.009	0.009
26220	0.006	0.006	0.006	0.008	0.008
26280	0.005	0.006	0.006	0.007	0.007
26340	0.006	0.006	0.006	0.007	0.008
26400	0.006	0.006	0.007	0.008	0.008
26460	0.006	0.006	0.007	0.008	0.009
26520	0.006	0.007	0.007	0.008	0.008
26580	0.006	0.006	0.007	0.008	0.008
26640	0.024	0.025	0.026	0.034	0.043
26700	0.01	0.01	0.011	0.016	0.02
26760	0.007	0.007	0.008	0.01	0.011
26820	0.006	0.006	0.007	0.008	0.008
26880	0.006	0.006	0.007	0.008	0.008
26940	0.007	0.008	0.008	0.01	0.01
27000	0.009	0.009	0.011	0.017	0.019
27060	0.006	0.006	0.007	0.009	0.009
27120	0.006	0.006	0.006	0.008	0.008
27180	0.006	0.006	0.006	0.007	0.007
27240	0.007	0.007	0.007	0.009	0.009
27300	0.006	0.006	0.006	0.008	0.008
27360	0.006	0.006	0.007	0.008	0.008
27420	0.006	0.007	0.007	0.009	0.009
27480	0.007	0.007	0.008	0.01	0.011
27540	0.006	0.006	0.007	0.008	0.008
27600	0.006	0.007	0.007	0.009	0.01
27660	0.006	0.006	0.007	0.008	0.01
27720	0.006	0.006	0.006	0.008	0.009

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533112903
Firmware Version	2.8
Calibration Date	7/18/2011
Test Name	MANUAL_009
Test Start Time	8:06:12
Test Start Date	10/16/2011
Test Length [D:H:M]	0:07:42
Test Interval [M:S]	1:00
PM1 Average [mg/m3]	0.015
PM1 Minimum [mg/m3]	0.006
PM1 Maximum [mg/m3]	0.185
PM1 TWA [mg/m3]	0.014
PM2.5 Average [mg/m3]	0.015
PM2.5 Minimum [mg/m3]	0.006
PM2.5 Maximum [mg/m3]	0.193
PM2.5 TWA [mg/m3]	0.015
PM4 Average [mg/m3]	0.017
PM4 Minimum [mg/m3]	0.007
PM4 Maximum [mg/m3]	0.226
PM4 TWA [mg/m3]	0.016
PM10 Average [mg/m3]	0.025
PM10 Minimum [mg/m3]	0.008
PM10 Maximum [mg/m3]	0.459
PM10 TWA [mg/m3]	0.024
TOTAL Average [mg/m3]	0.028
TOTAL Minimum [mg/m3]	0.008
TOTAL Maximum [mg/m3]	0.552
TOTAL TWA [mg/m3]	0.027
Photometric User Cal	1
Size Correction User Cal	1
Flow User Cal	1
Errors	
Number of Samples	462

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	TOTAL [mg/m3]	Alarms	Errors
60	0.01	0.01	0.012	0.022	0.032		
120	0.013	0.013	0.015	0.027	0.032		
180	0.019	0.02	0.023	0.04	0.047		
240	0.008	0.008	0.009	0.012	0.012		
300	0.01	0.01	0.011	0.013	0.013		
360	0.01	0.01	0.011	0.013	0.015		
420	0.018	0.019	0.022	0.037	0.045		
480	0.011	0.012	0.013	0.017	0.018		
540	0.007	0.008	0.008	0.01	0.01		
600	0.011	0.012	0.012	0.015	0.016		
660	0.009	0.01	0.011	0.014	0.015		
720	0.007	0.007	0.008	0.01	0.01		
780	0.007	0.008	0.008	0.011	0.011		
840	0.01	0.01	0.011	0.017	0.019		
900	0.008	0.008	0.009	0.012	0.012		
960	0.009	0.009	0.01	0.014	0.015		
1020	0.018	0.019	0.021	0.035	0.039		
1080	0.011	0.011	0.012	0.018	0.02		
1140	0.008	0.009	0.009	0.012	0.013		
1200	0.019	0.02	0.021	0.029	0.034		
1260	0.069	0.069	0.071	0.084	0.096		
1320	0.008	0.008	0.009	0.012	0.013		
1380	0.01	0.011	0.012	0.018	0.02		
1440	0.008	0.008	0.009	0.012	0.014		
1500	0.008	0.008	0.008	0.012	0.013		
1560	0.008	0.008	0.009	0.012	0.013		
1620	0.008	0.008	0.009	0.012	0.013		
1680	0.007	0.008	0.008	0.01	0.01		
1740	0.009	0.01	0.011	0.015	0.017		
1800	0.007	0.008	0.008	0.01	0.01		
1860	0.008	0.009	0.009	0.012	0.013		
1920	0.01	0.011	0.011	0.013	0.014		
1980	0.021	0.022	0.023	0.027	0.027		
2040	0.013	0.014	0.015	0.02	0.021		
2100	0.116	0.121	0.145	0.294	0.347		
2160	0.041	0.042	0.047	0.08	0.102		
2220	0.013	0.013	0.014	0.017	0.017		
2280	0.017	0.018	0.02	0.026	0.029		
2340	0.011	0.011	0.012	0.015	0.017		
2400	0.011	0.011	0.012	0.02	0.023		
2460	0.006	0.007	0.007	0.009	0.009		
2520	0.01	0.01	0.011	0.014	0.016		
2580	0.011	0.011	0.012	0.017	0.019		
2640	0.006	0.006	0.007	0.008	0.008		
2700	0.009	0.009	0.01	0.014	0.015		
2760	0.01	0.011	0.012	0.018	0.021		

2820	0.017	0.017	0.019	0.025	0.028
2880	0.012	0.013	0.013	0.015	0.017
2940	0.011	0.011	0.011	0.015	0.017
3000	0.022	0.023	0.026	0.048	0.055
3060	0.024	0.025	0.029	0.055	0.066
3120	0.009	0.009	0.01	0.014	0.016
3180	0.036	0.036	0.037	0.042	0.045
3240	0.008	0.008	0.009	0.01	0.011
3300	0.012	0.012	0.014	0.023	0.027
3360	0.185	0.193	0.226	0.421	0.5
3420	0.009	0.01	0.011	0.015	0.016
3480	0.008	0.008	0.008	0.012	0.014
3540	0.009	0.009	0.01	0.013	0.016
3600	0.008	0.008	0.009	0.011	0.012
3660	0.009	0.01	0.01	0.013	0.014
3720	0.019	0.02	0.024	0.044	0.052
3780	0.008	0.009	0.009	0.011	0.011
3840	0.01	0.01	0.011	0.013	0.014
3900	0.01	0.011	0.011	0.014	0.015
3960	0.011	0.011	0.011	0.013	0.015
4020	0.028	0.028	0.03	0.042	0.052
4080	0.009	0.01	0.01	0.012	0.013
4140	0.008	0.009	0.009	0.01	0.01
4200	0.008	0.008	0.008	0.01	0.01
4260	0.009	0.009	0.009	0.011	0.011
4320	0.008	0.008	0.009	0.01	0.01
4380	0.008	0.008	0.009	0.01	0.011
4440	0.007	0.007	0.008	0.009	0.009
4500	0.009	0.009	0.01	0.013	0.014
4560	0.009	0.009	0.01	0.011	0.014
4620	0.007	0.007	0.008	0.009	0.009
4680	0.009	0.01	0.01	0.013	0.014
4740	0.01	0.01	0.01	0.012	0.013
4800	0.01	0.01	0.01	0.011	0.013
4860	0.018	0.018	0.019	0.027	0.032
4920	0.01	0.01	0.011	0.012	0.013
4980	0.009	0.01	0.01	0.011	0.012
5040	0.01	0.01	0.01	0.012	0.013
5100	0.01	0.01	0.01	0.011	0.012
5160	0.01	0.01	0.01	0.012	0.012
5220	0.009	0.009	0.009	0.011	0.011
5280	0.009	0.009	0.01	0.012	0.012
5340	0.008	0.008	0.008	0.009	0.01
5400	0.008	0.008	0.008	0.009	0.01
5460	0.024	0.025	0.029	0.044	0.049
5520	0.013	0.014	0.015	0.019	0.021
5580	0.009	0.009	0.01	0.012	0.012
5640	0.009	0.009	0.01	0.011	0.012
5700	0.012	0.012	0.013	0.016	0.017
5760	0.011	0.011	0.012	0.013	0.013
5820	0.016	0.017	0.018	0.026	0.031
5880	0.093	0.094	0.097	0.134	0.163
5940	0.011	0.011	0.012	0.013	0.014
6000	0.01	0.01	0.011	0.012	0.013
6060	0.009	0.009	0.009	0.011	0.011
6120	0.008	0.009	0.009	0.011	0.011
6180	0.008	0.008	0.008	0.01	0.011
6240	0.008	0.008	0.008	0.009	0.009
6300	0.009	0.009	0.01	0.012	0.013
6360	0.009	0.01	0.011	0.015	0.017
6420	0.018	0.018	0.021	0.036	0.043
6480	0.008	0.008	0.008	0.01	0.011
6540	0.008	0.009	0.009	0.013	0.014
6600	0.014	0.015	0.017	0.03	0.035
6660	0.008	0.009	0.009	0.011	0.011
6720	0.01	0.01	0.01	0.012	0.014
6780	0.02	0.02	0.023	0.037	0.044
6840	0.078	0.08	0.085	0.121	0.152
6900	0.013	0.014	0.015	0.024	0.027
6960	0.01	0.011	0.012	0.016	0.018
7020	0.015	0.016	0.017	0.024	0.026
7080	0.01	0.011	0.012	0.016	0.019
7140	0.008	0.008	0.008	0.01	0.011
7200	0.008	0.009	0.009	0.011	0.011
7260	0.008	0.008	0.009	0.01	0.011
7320	0.009	0.009	0.01	0.012	0.014
7380	0.009	0.01	0.01	0.013	0.014
7440	0.013	0.014	0.015	0.024	0.028
7500	0.01	0.01	0.011	0.015	0.019
7560	0.023	0.023	0.024	0.033	0.042
7620	0.009	0.009	0.01	0.011	0.012
7680	0.01	0.01	0.011	0.012	0.012
7740	0.009	0.009	0.01	0.011	0.012
7800	0.009	0.009	0.01	0.011	0.012

7860	0.019	0.019	0.022	0.036	0.042
7920	0.017	0.018	0.02	0.035	0.039
7980	0.014	0.015	0.017	0.025	0.028
8040	0.053	0.056	0.068	0.131	0.15
8100	0.047	0.05	0.059	0.118	0.136
8160	0.012	0.012	0.013	0.02	0.022
8220	0.02	0.021	0.024	0.044	0.05
8280	0.013	0.013	0.014	0.016	0.018
8340	0.008	0.009	0.009	0.011	0.011
8400	0.018	0.019	0.021	0.034	0.038
8460	0.009	0.009	0.009	0.012	0.012
8520	0.009	0.009	0.01	0.011	0.012
8580	0.015	0.015	0.017	0.026	0.027
8640	0.008	0.008	0.009	0.011	0.012
8700	0.008	0.008	0.009	0.01	0.01
8760	0.009	0.009	0.01	0.012	0.013
8820	0.009	0.009	0.01	0.012	0.012
8880	0.01	0.01	0.01	0.013	0.014
8940	0.12	0.125	0.146	0.258	0.291
9000	0.071	0.075	0.091	0.176	0.207
9060	0.011	0.012	0.013	0.016	0.019
9120	0.009	0.009	0.009	0.011	0.011
9180	0.009	0.009	0.009	0.011	0.011
9240	0.009	0.009	0.01	0.011	0.011
9300	0.01	0.01	0.01	0.012	0.012
9360	0.077	0.077	0.081	0.105	0.137
9420	0.01	0.011	0.011	0.015	0.016
9480	0.01	0.01	0.01	0.012	0.013
9540	0.01	0.01	0.011	0.013	0.014
9600	0.025	0.027	0.031	0.056	0.064
9660	0.039	0.041	0.051	0.097	0.107
9720	0.01	0.01	0.011	0.013	0.015
9780	0.008	0.009	0.009	0.011	0.011
9840	0.013	0.013	0.015	0.023	0.026
9900	0.01	0.01	0.011	0.014	0.016
9960	0.009	0.01	0.01	0.014	0.015
10020	0.008	0.008	0.009	0.01	0.011
10080	0.01	0.01	0.011	0.016	0.018
10140	0.011	0.011	0.013	0.02	0.023
10200	0.028	0.029	0.032	0.053	0.059
10260	0.031	0.031	0.032	0.039	0.046
10320	0.01	0.01	0.011	0.015	0.017
10380	0.008	0.009	0.009	0.011	0.011
10440	0.01	0.01	0.011	0.014	0.016
10500	0.009	0.009	0.01	0.013	0.013
10560	0.008	0.008	0.008	0.009	0.01
10620	0.008	0.008	0.009	0.009	0.01
10680	0.009	0.009	0.009	0.01	0.011
10740	0.01	0.01	0.011	0.015	0.017
10800	0.013	0.014	0.016	0.024	0.028
10860	0.009	0.01	0.01	0.011	0.011
10920	0.012	0.012	0.013	0.018	0.02
10980	0.009	0.009	0.009	0.011	0.012
11040	0.009	0.009	0.01	0.011	0.011
11100	0.01	0.01	0.011	0.013	0.014
11160	0.009	0.009	0.01	0.011	0.011
11220	0.01	0.01	0.01	0.012	0.013
11280	0.013	0.013	0.014	0.015	0.016
11340	0.013	0.014	0.015	0.024	0.027
11400	0.014	0.015	0.017	0.025	0.03
11460	0.01	0.01	0.01	0.013	0.015
11520	0.01	0.01	0.01	0.013	0.015
11580	0.009	0.009	0.009	0.011	0.012
11640	0.01	0.01	0.011	0.014	0.016
11700	0.011	0.011	0.012	0.016	0.018
11760	0.01	0.01	0.01	0.012	0.013
11820	0.009	0.009	0.009	0.011	0.012
11880	0.009	0.009	0.009	0.011	0.012
11940	0.008	0.008	0.009	0.012	0.013
12000	0.008	0.008	0.009	0.01	0.01
12060	0.008	0.008	0.008	0.01	0.011
12120	0.009	0.009	0.01	0.011	0.012
12180	0.015	0.016	0.018	0.029	0.033
12240	0.01	0.011	0.012	0.015	0.016
12300	0.013	0.014	0.015	0.023	0.025
12360	0.056	0.057	0.06	0.078	0.086
12420	0.013	0.014	0.015	0.023	0.024
12480	0.015	0.015	0.017	0.026	0.027
12540	0.036	0.038	0.045	0.084	0.097
12600	0.01	0.01	0.011	0.014	0.015
12660	0.011	0.011	0.012	0.017	0.018
12720	0.013	0.014	0.015	0.023	0.026
12780	0.032	0.033	0.038	0.066	0.075
12840	0.031	0.032	0.038	0.072	0.087

12900	0.011	0.011	0.012	0.017	0.018
12960	0.017	0.017	0.02	0.033	0.038
13020	0.011	0.012	0.013	0.017	0.018
13080	0.017	0.017	0.019	0.032	0.035
13140	0.011	0.012	0.013	0.017	0.017
13200	0.011	0.011	0.012	0.016	0.017
13260	0.016	0.017	0.018	0.029	0.035
13320	0.017	0.017	0.02	0.034	0.037
13380	0.012	0.013	0.014	0.02	0.022
13440	0.011	0.012	0.013	0.017	0.018
13500	0.01	0.01	0.011	0.014	0.014
13560	0.013	0.013	0.014	0.019	0.02
13620	0.014	0.015	0.016	0.024	0.026
13680	0.01	0.01	0.011	0.013	0.013
13740	0.044	0.046	0.054	0.111	0.132
13800	0.009	0.009	0.009	0.01	0.01
13860	0.009	0.01	0.01	0.014	0.014
13920	0.01	0.011	0.011	0.014	0.014
13980	0.009	0.009	0.01	0.011	0.011
14040	0.009	0.009	0.009	0.01	0.011
14100	0.011	0.011	0.012	0.016	0.018
14160	0.037	0.039	0.043	0.066	0.07
14220	0.01	0.01	0.011	0.014	0.014
14280	0.011	0.011	0.012	0.015	0.016
14340	0.011	0.011	0.012	0.017	0.018
14400	0.009	0.009	0.009	0.01	0.01
14460	0.008	0.008	0.009	0.01	0.01
14520	0.009	0.009	0.01	0.011	0.012
14580	0.009	0.009	0.01	0.012	0.012
14640	0.008	0.008	0.009	0.01	0.01
14700	0.013	0.014	0.016	0.025	0.029
14760	0.067	0.068	0.071	0.089	0.1
14820	0.017	0.017	0.018	0.024	0.026
14880	0.009	0.01	0.01	0.012	0.013
14940	0.009	0.009	0.01	0.012	0.013
15000	0.009	0.009	0.01	0.011	0.011
15060	0.012	0.013	0.013	0.017	0.017
15120	0.008	0.009	0.009	0.011	0.011
15180	0.011	0.012	0.012	0.014	0.014
15240	0.035	0.036	0.041	0.065	0.073
15300	0.014	0.015	0.016	0.026	0.028
15360	0.011	0.011	0.012	0.015	0.016
15420	0.01	0.01	0.011	0.012	0.012
15480	0.01	0.01	0.011	0.012	0.013
15540	0.01	0.011	0.011	0.013	0.013
15600	0.012	0.012	0.013	0.019	0.02
15660	0.01	0.01	0.011	0.014	0.015
15720	0.01	0.01	0.011	0.013	0.014
15780	0.01	0.011	0.011	0.013	0.014
15840	0.016	0.016	0.018	0.028	0.032
15900	0.011	0.011	0.013	0.019	0.02
15960	0.015	0.016	0.018	0.03	0.036
16020	0.01	0.01	0.011	0.015	0.015
16080	0.01	0.01	0.011	0.012	0.012
16140	0.016	0.017	0.02	0.03	0.031
16200	0.01	0.01	0.011	0.013	0.014
16260	0.01	0.01	0.01	0.011	0.012
16320	0.009	0.009	0.01	0.01	0.01
16380	0.013	0.014	0.015	0.022	0.023
16440	0.021	0.022	0.025	0.041	0.046
16500	0.011	0.011	0.012	0.015	0.016
16560	0.01	0.011	0.011	0.016	0.017
16620	0.009	0.009	0.01	0.014	0.014
16680	0.02	0.021	0.024	0.04	0.045
16740	0.01	0.01	0.012	0.017	0.019
16800	0.008	0.009	0.009	0.01	0.011
16860	0.008	0.008	0.009	0.01	0.01
16920	0.01	0.01	0.011	0.013	0.013
16980	0.009	0.009	0.009	0.011	0.011
17040	0.008	0.008	0.009	0.01	0.011
17100	0.009	0.009	0.01	0.012	0.013
17160	0.011	0.011	0.012	0.016	0.017
17220	0.009	0.01	0.01	0.012	0.012
17280	0.009	0.009	0.009	0.012	0.013
17340	0.015	0.016	0.018	0.026	0.029
17400	0.015	0.015	0.018	0.026	0.028
17460	0.01	0.011	0.012	0.016	0.018
17520	0.029	0.03	0.033	0.048	0.05
17580	0.011	0.012	0.013	0.019	0.021
17640	0.011	0.011	0.012	0.017	0.02
17700	0.008	0.008	0.009	0.01	0.011
17760	0.016	0.017	0.019	0.032	0.034
17820	0.009	0.009	0.01	0.013	0.014
17880	0.008	0.009	0.009	0.011	0.011

17940	0.008	0.008	0.008	0.009	0.01
18000	0.008	0.008	0.009	0.01	0.01
18060	0.014	0.015	0.017	0.027	0.029
18120	0.008	0.008	0.009	0.009	0.01
18180	0.009	0.009	0.009	0.01	0.01
18240	0.008	0.009	0.009	0.01	0.01
18300	0.008	0.008	0.009	0.01	0.01
18360	0.008	0.009	0.009	0.01	0.01
18420	0.009	0.009	0.01	0.011	0.012
18480	0.009	0.009	0.01	0.011	0.012
18540	0.01	0.01	0.011	0.015	0.016
18600	0.011	0.011	0.012	0.015	0.017
18660	0.009	0.01	0.01	0.012	0.013
18720	0.011	0.011	0.012	0.015	0.016
18780	0.013	0.014	0.015	0.023	0.025
18840	0.02	0.021	0.024	0.037	0.042
18900	0.032	0.034	0.039	0.056	0.062
18960	0.01	0.01	0.011	0.013	0.014
19020	0.011	0.011	0.012	0.014	0.014
19080	0.014	0.014	0.015	0.02	0.02
19140	0.012	0.012	0.013	0.016	0.016
19200	0.013	0.014	0.015	0.021	0.023
19260	0.014	0.014	0.014	0.016	0.017
19320	0.017	0.018	0.019	0.023	0.024
19380	0.011	0.012	0.012	0.015	0.016
19440	0.016	0.016	0.017	0.019	0.02
19500	0.03	0.031	0.035	0.056	0.064
19560	0.022	0.023	0.026	0.041	0.046
19620	0.011	0.012	0.012	0.017	0.018
19680	0.01	0.01	0.011	0.012	0.013
19740	0.011	0.011	0.012	0.013	0.013
19800	0.01	0.01	0.011	0.012	0.013
19860	0.009	0.009	0.009	0.011	0.011
19920	0.009	0.009	0.01	0.011	0.011
19980	0.01	0.01	0.011	0.014	0.014
20040	0.029	0.03	0.035	0.064	0.076
20100	0.036	0.036	0.038	0.05	0.062
20160	0.011	0.011	0.011	0.013	0.014
20220	0.011	0.011	0.011	0.013	0.013
20280	0.011	0.011	0.012	0.013	0.013
20340	0.01	0.01	0.011	0.012	0.013
20400	0.01	0.011	0.011	0.013	0.014
20460	0.011	0.012	0.012	0.016	0.017
20520	0.01	0.01	0.01	0.012	0.012
20580	0.032	0.034	0.039	0.063	0.071
20640	0.011	0.011	0.012	0.016	0.017
20700	0.013	0.013	0.014	0.022	0.025
20760	0.012	0.012	0.013	0.015	0.016
20820	0.018	0.019	0.022	0.039	0.047
20880	0.012	0.012	0.013	0.014	0.017
20940	0.011	0.011	0.012	0.015	0.017
21000	0.009	0.009	0.01	0.012	0.012
21060	0.011	0.012	0.012	0.017	0.019
21120	0.011	0.012	0.012	0.015	0.016
21180	0.01	0.01	0.01	0.013	0.013
21240	0.009	0.01	0.01	0.011	0.013
21300	0.009	0.009	0.01	0.011	0.012
21360	0.014	0.014	0.016	0.022	0.023
21420	0.06	0.063	0.076	0.147	0.174
21480	0.013	0.013	0.015	0.021	0.022
21540	0.012	0.012	0.013	0.019	0.021
21600	0.009	0.01	0.01	0.012	0.013
21660	0.009	0.009	0.009	0.01	0.011
21720	0.175	0.186	0.225	0.459	0.552
21780	0.012	0.012	0.013	0.016	0.019
21840	0.012	0.013	0.013	0.018	0.02
21900	0.049	0.053	0.062	0.113	0.127
21960	0.011	0.011	0.012	0.015	0.017
22020	0.019	0.019	0.021	0.036	0.043
22080	0.01	0.01	0.01	0.012	0.013
22140	0.01	0.01	0.011	0.013	0.014
22200	0.011	0.011	0.012	0.016	0.016
22260	0.011	0.011	0.012	0.016	0.018
22320	0.01	0.01	0.011	0.015	0.016
22380	0.02	0.021	0.024	0.04	0.046
22440	0.011	0.011	0.012	0.014	0.015
22500	0.018	0.018	0.018	0.02	0.02
22560	0.01	0.011	0.011	0.013	0.015
22620	0.022	0.023	0.027	0.048	0.055
22680	0.017	0.018	0.02	0.029	0.033
22740	0.028	0.029	0.034	0.063	0.07
22800	0.014	0.014	0.016	0.024	0.025
22860	0.012	0.012	0.013	0.016	0.018
22920	0.01	0.01	0.011	0.013	0.013

22980	0.011	0.011	0.012	0.013	0.014
23040	0.016	0.017	0.019	0.032	0.036
23100	0.011	0.011	0.011	0.013	0.015
23160	0.011	0.011	0.012	0.014	0.015
23220	0.011	0.011	0.012	0.014	0.014
23280	0.012	0.012	0.013	0.016	0.018
23340	0.011	0.011	0.012	0.015	0.017
23400	0.01	0.01	0.01	0.012	0.012
23460	0.012	0.012	0.013	0.014	0.014
23520	0.01	0.01	0.011	0.012	0.012
23580	0.009	0.01	0.01	0.012	0.012
23640	0.012	0.013	0.014	0.021	0.025
23700	0.011	0.011	0.012	0.014	0.015
23760	0.011	0.011	0.012	0.013	0.013
23820	0.01	0.01	0.011	0.012	0.013
23880	0.01	0.01	0.01	0.011	0.012
23940	0.011	0.011	0.012	0.016	0.017
24000	0.01	0.01	0.011	0.012	0.013
24060	0.012	0.013	0.014	0.018	0.022
24120	0.016	0.016	0.018	0.028	0.031
24180	0.009	0.01	0.01	0.011	0.011
24240	0.009	0.01	0.01	0.011	0.012
24300	0.009	0.01	0.01	0.011	0.012
24360	0.01	0.01	0.011	0.012	0.012
24420	0.01	0.01	0.01	0.012	0.013
24480	0.035	0.036	0.037	0.053	0.067
24540	0.01	0.011	0.011	0.013	0.014
24600	0.01	0.01	0.011	0.012	0.012
24660	0.009	0.009	0.009	0.01	0.01
24720	0.01	0.01	0.011	0.014	0.014
24780	0.009	0.009	0.009	0.013	0.014
24840	0.01	0.011	0.011	0.015	0.016
24900	0.009	0.009	0.009	0.011	0.012
24960	0.008	0.009	0.009	0.011	0.011
25020	0.059	0.062	0.075	0.154	0.178
25080	0.017	0.018	0.02	0.034	0.037
25140	0.013	0.014	0.016	0.024	0.027
25200	0.016	0.016	0.018	0.029	0.034
25260	0.015	0.015	0.017	0.026	0.033
25320	0.009	0.01	0.01	0.013	0.013
25380	0.01	0.01	0.011	0.013	0.014
25440	0.013	0.013	0.014	0.018	0.02
25500	0.016	0.017	0.018	0.025	0.028
25560	0.018	0.019	0.021	0.032	0.036
25620	0.01	0.011	0.011	0.013	0.015
25680	0.015	0.016	0.018	0.028	0.031
25740	0.039	0.039	0.04	0.049	0.058
25800	0.011	0.011	0.012	0.016	0.018
25860	0.013	0.014	0.016	0.024	0.029
25920	0.009	0.009	0.01	0.011	0.013
25980	0.008	0.008	0.009	0.01	0.01
26040	0.014	0.014	0.015	0.023	0.025
26100	0.028	0.03	0.034	0.058	0.067
26160	0.009	0.01	0.01	0.013	0.013
26220	0.009	0.009	0.01	0.012	0.012
26280	0.008	0.009	0.009	0.01	0.01
26340	0.009	0.01	0.01	0.012	0.012
26400	0.009	0.01	0.01	0.011	0.011
26460	0.013	0.013	0.014	0.022	0.029
26520	0.01	0.01	0.011	0.013	0.014
26580	0.008	0.008	0.009	0.01	0.01
26640	0.009	0.009	0.009	0.011	0.011
26700	0.008	0.008	0.009	0.01	0.01
26760	0.009	0.009	0.009	0.011	0.011
26820	0.008	0.008	0.009	0.01	0.011
26880	0.026	0.027	0.032	0.06	0.067
26940	0.008	0.008	0.009	0.011	0.012
27000	0.008	0.008	0.008	0.01	0.01
27060	0.008	0.009	0.009	0.011	0.012
27120	0.029	0.03	0.035	0.064	0.073
27180	0.012	0.013	0.014	0.021	0.024
27240	0.01	0.01	0.011	0.013	0.014
27300	0.008	0.009	0.009	0.011	0.011
27360	0.009	0.009	0.01	0.011	0.011
27420	0.009	0.009	0.009	0.011	0.011
27480	0.013	0.014	0.015	0.025	0.029
27540	0.011	0.012	0.013	0.02	0.022
27600	0.009	0.009	0.01	0.014	0.015
27660	0.009	0.009	0.009	0.011	0.012
27720	0.013	0.013	0.015	0.025	0.027

AECOM

Client: National Grid
Location: Metro-Lowe's
Date: 10/3/11
Field Personnel:

Project:
Project Number:
Weather:
Ambient Noise:

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
1035	0.0	0.005	0.0	0.1	0.010	79	hand clearing
1145	0.0	0.007	0.0	0.1	0.012	83	Staging rig over borehole
1215	0.0	0.008	0.0	0.1	0.019	92	Drilling
1235	0.0	0.011	0.0	0.1	0.009	86	Drilling
1250	0.0	0.005	0.1	0.1	0.006	87	"
1310	0.0	0.010	0.2	0.2	0.005	87	"
1330	0.0	0.005	0.1	0.1	0.004	87	"
1415	0.0	0.005	0.1	0.1	0.005		Mobilizing

==========Event #5 information (begin)==========

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[Event #5 name:]--[Event #5]2011-10-03 09:31<-->2011-10-03 14:23

[Event start time:]--2011-10-03 09:31:46[Event end time:]--2011-10-03 14:23:46

==========Event #5 head information==========

Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624

Data Points: 292 Sample Period: 60 s Datalog Mode: Automatic

SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode

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Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)

Measurement Gas : Isobutene

Calibration Time : 2011-10-03 07:27:002011-10-03 07:27:002011-10-03 07:27:00

Drift Value : --- --- ---

Low Alarm Levels : 50.000 50.000 50.000

High Alarm Levels : 100.000 100.000 100.000

Span Value : 100.000 100.000 100.000

Correction Factor : 1.00 1.00 1.00

Over Alarm Levels : 15000.000 15000.000 15000.000

==========Event #5 data informations==========

LINE#	Date/Time	PID-Max(ppm)	PID-Min(ppm)	PID-Avg(ppm)
1	10/3/2011 9:32	1.024	0.263	0.889
2	10/3/2011 9:33	0.905	0.629	0.755
3	10/3/2011 9:34	0.636	0.519	0.569
4	10/3/2011 9:35	0.596	0.545	0.563
5	10/3/2011 9:36	0.564	0.467	0.529
6	10/3/2011 9:37	0.485	0.423	0.451
7	10/3/2011 9:38	0.458	0.39	0.412
8	10/3/2011 9:39	0.428	0.378	0.403
9	10/3/2011 9:40	0.528	0.375	0.404
10	10/3/2011 9:41	0.419	0.337	0.374
11	10/3/2011 9:42	0.36	0.33	0.344
12	10/3/2011 9:43	0.389	0.34	0.361
13	10/3/2011 9:44	0.558	0.39	0.486
14	10/3/2011 9:45	0.44	0.376	0.399
15	10/3/2011 9:46	0.415	0.376	0.393
16	10/3/2011 9:47	0.403	0.35	0.371
17	10/3/2011 9:48	0.394	0.349	0.361
18	10/3/2011 9:49	0.435	0.359	0.392
19	10/3/2011 9:50	0.444	0.294	0.368
20	10/3/2011 9:51	0.348	0.241	0.278
21	10/3/2011 9:52	0.358	0.274	0.318
22	10/3/2011 9:53	0.513	0.269	0.305
23	10/3/2011 9:54	0.513	0.363	0.399
24	10/3/2011 9:55	0.479	0.365	0.429
25	10/3/2011 9:56	0.409	0.246	0.299
26	10/3/2011 9:57	0.281	0.247	0.256
27	10/3/2011 9:58	0.341	0.281	0.304
28	10/3/2011 9:59	0.361	0.299	0.326
29	10/3/2011 10:00	0.356	0.25	0.285
30	10/3/2011 10:01	0.331	0.226	0.262
31	10/3/2011 10:02	0.248	0.185	0.212
32	10/3/2011 10:03	0.268	0.175	0.21
33	10/3/2011 10:04	0.245	0.172	0.204
34	10/3/2011 10:05	0.295	0.198	0.25
35	10/3/2011 10:06	0.239	0.197	0.216
36	10/3/2011 10:07	0.315	0.226	0.268
37	10/3/2011 10:08	0.339	0.246	0.29
38	10/3/2011 10:09	0.246	0.2	0.219
39	10/3/2011 10:10	0.3	0.175	0.234
40	10/3/2011 10:11	0.234	0.188	0.204
41	10/3/2011 10:12	0.266	0.202	0.235
42	10/3/2011 10:13	0.24	0.132	0.189
43	10/3/2011 10:14	0.147	0.123	0.134
44	10/3/2011 10:15	0.13	0.046	0.085
45	10/3/2011 10:16	0.046	0.027	0.035
46	10/3/2011 10:17	0.037	0.018	0.028
47	10/3/2011 10:18	0.226	0.02	0.045
48	10/3/2011 10:19	0.07	0.004	0.029

49	10/3/2011 10:20	0.023	0	0.012
50	10/3/2011 10:21	0.054	0.026	0.037
51	10/3/2011 10:22	0.03	0.004	0.015
52	10/3/2011 10:23	0.009	0	0.002
53	10/3/2011 10:24	0.007	0	0.003
54	10/3/2011 10:25	0.044	0	0.004
55	10/3/2011 10:26	0.005	0	0
56	10/3/2011 10:27	0.001	0	0
57	10/3/2011 10:28	0	0	0
58	10/3/2011 10:29	0	0	0
59	10/3/2011 10:30	0	0	0
60	10/3/2011 10:31	0	0	0
61	10/3/2011 10:32	0.001	0	0
62	10/3/2011 10:33	0.001	0	0
63	10/3/2011 10:34	0	0	0
64	10/3/2011 10:35	0.002	0	0
65	10/3/2011 10:36	0.003	0	0
66	10/3/2011 10:37	0	0	0
67	10/3/2011 10:38	0	0	0
68	10/3/2011 10:39	0	0	0
69	10/3/2011 10:40	0	0	0
70	10/3/2011 10:41	0	0	0
71	10/3/2011 10:42	0	0	0
72	10/3/2011 10:43	0	0	0
73	10/3/2011 10:44	0	0	0
74	10/3/2011 10:45	0	0	0
75	10/3/2011 10:46	0	0	0
76	10/3/2011 10:47	0	0	0
77	10/3/2011 10:48	0	0	0
78	10/3/2011 10:49	0	0	0
79	10/3/2011 10:50	0	0	0
80	10/3/2011 10:51	0	0	0
81	10/3/2011 10:52	0	0	0
82	10/3/2011 10:53	0	0	0
83	10/3/2011 10:54	0	0	0
84	10/3/2011 10:55	0	0	0
85	10/3/2011 10:56	0	0	0
86	10/3/2011 10:57	0	0	0
87	10/3/2011 10:58	0	0	0
88	10/3/2011 10:59	0	0	0
89	10/3/2011 11:00	0	0	0
90	10/3/2011 11:01	0	0	0
91	10/3/2011 11:02	0	0	0
92	10/3/2011 11:03	0	0	0
93	10/3/2011 11:04	0	0	0
94	10/3/2011 11:05	0	0	0
95	10/3/2011 11:06	0	0	0
96	10/3/2011 11:07	0	0	0
97	10/3/2011 11:08	0	0	0
98	10/3/2011 11:09	0	0	0
99	10/3/2011 11:10	0	0	0
100	10/3/2011 11:11	0.002	0	0
101	10/3/2011 11:12	0.002	0	0
102	10/3/2011 11:13	0	0	0
103	10/3/2011 11:14	0	0	0
104	10/3/2011 11:15	0	0	0
105	10/3/2011 11:16	0	0	0
106	10/3/2011 11:17	0	0	0
107	10/3/2011 11:18	0	0	0
108	10/3/2011 11:19	0	0	0
109	10/3/2011 11:20	0	0	0
110	10/3/2011 11:21	0.001	0	0
111	10/3/2011 11:22	0	0	0
112	10/3/2011 11:23	0	0	0
113	10/3/2011 11:24	0	0	0
114	10/3/2011 11:25	0	0	0
115	10/3/2011 11:26	0	0	0
116	10/3/2011 11:27	0	0	0
117	10/3/2011 11:28	0	0	0

118	10/3/2011 11:29	0	0	0
119	10/3/2011 11:30	0	0	0
120	10/3/2011 11:31	0.447	0	0.108
121	10/3/2011 11:32	0.072	0	0.017
122	10/3/2011 11:33	0.007	0	0
123	10/3/2011 11:34	0	0	0
124	10/3/2011 11:35	0.002	0	0
125	10/3/2011 11:36	0	0	0
126	10/3/2011 11:37	0	0	0
127	10/3/2011 11:38	0	0	0
128	10/3/2011 11:39	0	0	0
129	10/3/2011 11:40	0	0	0
130	10/3/2011 11:41	0	0	0
131	10/3/2011 11:42	0	0	0
132	10/3/2011 11:43	0	0	0
133	10/3/2011 11:44	0	0	0
134	10/3/2011 11:45	0	0	0
135	10/3/2011 11:46	0	0	0
136	10/3/2011 11:47	0.002	0	0
137	10/3/2011 11:48	0.001	0	0
138	10/3/2011 11:49	0	0	0
139	10/3/2011 11:50	0	0	0
140	10/3/2011 11:51	0	0	0
141	10/3/2011 11:52	0	0	0
142	10/3/2011 11:53	0	0	0
143	10/3/2011 11:54	0	0	0
144	10/3/2011 11:55	0	0	0
145	10/3/2011 11:56	0	0	0
146	10/3/2011 11:57	0	0	0
147	10/3/2011 11:58	0.001	0	0
148	10/3/2011 11:59	0	0	0
149	10/3/2011 12:00	0	0	0
150	10/3/2011 12:01	0	0	0
151	10/3/2011 12:02	0	0	0
152	10/3/2011 12:03	0	0	0
153	10/3/2011 12:04	0	0	0
154	10/3/2011 12:05	0.004	0	0
155	10/3/2011 12:06	0.003	0	0
156	10/3/2011 12:07	0	0	0
157	10/3/2011 12:08	0.012	0	0
158	10/3/2011 12:09	0	0	0
159	10/3/2011 12:10	0	0	0
160	10/3/2011 12:11	0	0	0
161	10/3/2011 12:12	0	0	0
162	10/3/2011 12:13	0	0	0
163	10/3/2011 12:14	0.004	0	0
164	10/3/2011 12:15	0	0	0
165	10/3/2011 12:16	0	0	0
166	10/3/2011 12:17	0	0	0
167	10/3/2011 12:18	0	0	0
168	10/3/2011 12:19	0	0	0
169	10/3/2011 12:20	0	0	0
170	10/3/2011 12:21	0	0	0
171	10/3/2011 12:22	0	0	0
172	10/3/2011 12:23	0	0	0
173	10/3/2011 12:24	0	0	0
174	10/3/2011 12:25	0	0	0
175	10/3/2011 12:26	0	0	0
176	10/3/2011 12:27	0	0	0
177	10/3/2011 12:28	0	0	0
178	10/3/2011 12:29	0	0	0
179	10/3/2011 12:30	0	0	0
180	10/3/2011 12:31	0	0	0
181	10/3/2011 12:32	0	0	0
182	10/3/2011 12:33	0	0	0
183	10/3/2011 12:34	0	0	0
184	10/3/2011 12:35	0	0	0
185	10/3/2011 12:36	0	0	0
186	10/3/2011 12:37	0	0	0

187	10/3/2011 12:38	0	0	0
188	10/3/2011 12:39	0	0	0
189	10/3/2011 12:40	0	0	0
190	10/3/2011 12:41	0	0	0
191	10/3/2011 12:42	0.001	0	0
192	10/3/2011 12:43	0.001	0	0
193	10/3/2011 12:44	0	0	0
194	10/3/2011 12:45	0	0	0
195	10/3/2011 12:46	0	0	0
196	10/3/2011 12:47	0	0	0
197	10/3/2011 12:48	0.006	0	0
198	10/3/2011 12:49	0.005	0	0
199	10/3/2011 12:50	0	0	0
200	10/3/2011 12:51	0	0	0
201	10/3/2011 12:52	0	0	0
202	10/3/2011 12:53	0	0	0
203	10/3/2011 12:54	0	0	0
204	10/3/2011 12:55	0	0	0
205	10/3/2011 12:56	0	0	0
206	10/3/2011 12:57	0	0	0
207	10/3/2011 12:58	0	0	0
208	10/3/2011 12:59	0	0	0
209	10/3/2011 13:00	0	0	0
210	10/3/2011 13:01	0	0	0
211	10/3/2011 13:02	0	0	0
212	10/3/2011 13:03	0	0	0
213	10/3/2011 13:04	0	0	0
214	10/3/2011 13:05	0	0	0
215	10/3/2011 13:06	0	0	0
216	10/3/2011 13:07	0	0	0
217	10/3/2011 13:08	0	0	0
218	10/3/2011 13:09	0	0	0
219	10/3/2011 13:10	0	0	0
220	10/3/2011 13:11	0	0	0
221	10/3/2011 13:12	0	0	0
222	10/3/2011 13:13	0	0	0
223	10/3/2011 13:14	0	0	0
224	10/3/2011 13:15	0	0	0
225	10/3/2011 13:16	0	0	0
226	10/3/2011 13:17	0	0	0
227	10/3/2011 13:18	0	0	0
228	10/3/2011 13:19	0	0	0
229	10/3/2011 13:20	0	0	0
230	10/3/2011 13:21	0	0	0
231	10/3/2011 13:22	0	0	0
232	10/3/2011 13:23	0	0	0
233	10/3/2011 13:24	0	0	0
234	10/3/2011 13:25	0	0	0
235	10/3/2011 13:26	0	0	0
236	10/3/2011 13:27	0	0	0
237	10/3/2011 13:28	0	0	0
238	10/3/2011 13:29	0	0	0
239	10/3/2011 13:30	0	0	0
240	10/3/2011 13:31	0	0	0
241	10/3/2011 13:32	0	0	0
242	10/3/2011 13:33	0	0	0
243	10/3/2011 13:34	0	0	0
244	10/3/2011 13:35	0	0	0
245	10/3/2011 13:36	0	0	0
246	10/3/2011 13:37	0	0	0
247	10/3/2011 13:38	0	0	0
248	10/3/2011 13:39	0	0	0
249	10/3/2011 13:40	0	0	0
250	10/3/2011 13:41	0	0	0
251	10/3/2011 13:42	0	0	0
252	10/3/2011 13:43	0	0	0
253	10/3/2011 13:44	0	0	0
254	10/3/2011 13:45	0	0	0
255	10/3/2011 13:46	0	0	0

256	10/3/2011 13:47	0	0	0
257	10/3/2011 13:48	0	0	0
258	10/3/2011 13:49	0	0	0
259	10/3/2011 13:50	0	0	0
260	10/3/2011 13:51	0	0	0
261	10/3/2011 13:52	0	0	0
262	10/3/2011 13:53	0	0	0
263	10/3/2011 13:54	0	0	0
264	10/3/2011 13:55	0	0	0
265	10/3/2011 13:56	0	0	0
266	10/3/2011 13:57	0	0	0
267	10/3/2011 13:58	0	0	0
268	10/3/2011 13:59	0	0	0
269	10/3/2011 14:00	0	0	0
270	10/3/2011 14:01	0	0	0
271	10/3/2011 14:02	0	0	0
272	10/3/2011 14:03	0	0	0
273	10/3/2011 14:04	0	0	0
274	10/3/2011 14:05	0	0	0
275	10/3/2011 14:06	0	0	0
276	10/3/2011 14:07	0	0	0
277	10/3/2011 14:08	0	0	0
278	10/3/2011 14:09	0	0	0
279	10/3/2011 14:10	0	0	0
280	10/3/2011 14:11	0	0	0
281	10/3/2011 14:12	0	0	0
282	10/3/2011 14:13	0	0	0
283	10/3/2011 14:14	0	0	0
284	10/3/2011 14:15	0	0	0
285	10/3/2011 14:16	0	0	0
286	10/3/2011 14:17	0	0	0
287	10/3/2011 14:18	0	0	0
288	10/3/2011 14:19	0	0	0
289	10/3/2011 14:20	0	0	0
290	10/3/2011 14:21	0	0	0
291	10/3/2011 14:22	0	0	0
292	10/3/2011 14:23	0	0	0

==========Event #5 information (end)==========

==========Event #5 information (begin)==========

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[Event #5 name:]--[Event #5]2011-10-03 09:46<-->2011-10-03 14:33

[Event start time:]--2011-10-03 09:46:54[Event end time:]--2011-10-03 14:33:54

==========Event #5 head information==========

Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367

Data Points: 287 Sample Period: 60 s Datalog Mode: Automatic

SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode

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Sensor Information : PID(ppb)

Measurement Gas : Isobutene

Calibration Time : 2011-10-03 07:37:00

Drift Value : ---

Low Alarm Levels : 25847

High Alarm Levels : 51694

Span Value : 100000

Correction Factor : 1.00

Over Alarm Levels : 15000000

==========Event #5 data informations==========

LINE#	Date/Time	PID(ppm)	PID(ppb)
1	10/3/2011 9:47	0	0
2	10/3/2011 9:48	0	0
3	10/3/2011 9:49	0	0
4	10/3/2011 9:50	0	0
5	10/3/2011 9:51	0.002	2
6	10/3/2011 9:52	0.02	20
7	10/3/2011 9:53	0.006	6
8	10/3/2011 9:54	0.008	8
9	10/3/2011 9:55	0.014	14
10	10/3/2011 9:56	0.023	23
11	10/3/2011 9:57	0.026	26
12	10/3/2011 9:58	0.031	31
13	10/3/2011 9:59	0.028	28
14	10/3/2011 10:00	0.034	34
15	10/3/2011 10:01	0.038	38
16	10/3/2011 10:02	0.039	39
17	10/3/2011 10:03	0.045	45
18	10/3/2011 10:04	0.061	61
19	10/3/2011 10:05	0.357	357
20	10/3/2011 10:06	0.216	216
21	10/3/2011 10:07	0.22	220
22	10/3/2011 10:08	0.061	61
23	10/3/2011 10:09	0.466	466
24	10/3/2011 10:10	0.14	140
25	10/3/2011 10:11	0.24	240
26	10/3/2011 10:12	0.127	127
27	10/3/2011 10:13	0.199	199
28	10/3/2011 10:14	0.143	143
29	10/3/2011 10:15	0.107	107
30	10/3/2011 10:16	0.707	707
31	10/3/2011 10:17	0.786	786
32	10/3/2011 10:18	0.674	674
33	10/3/2011 10:19	0.111	111
34	10/3/2011 10:20	0.12	120
35	10/3/2011 10:21	0.123	123
36	10/3/2011 10:22	0.104	104
37	10/3/2011 10:23	0.135	135
38	10/3/2011 10:24	0.158	158
39	10/3/2011 10:25	0.235	235
40	10/3/2011 10:26	0.149	149
41	10/3/2011 10:27	0.134	134
42	10/3/2011 10:28	0.095	95
43	10/3/2011 10:29	0.095	95
44	10/3/2011 10:30	0.098	98
45	10/3/2011 10:31	0.093	93
46	10/3/2011 10:32	0.109	109
47	10/3/2011 10:33	0.099	99
48	10/3/2011 10:34	0.099	99

49	10/3/2011 10:35	0.133	133
50	10/3/2011 10:36	0.103	103
51	10/3/2011 10:37	0.1	100
52	10/3/2011 10:38	0.097	97
53	10/3/2011 10:39	0.096	96
54	10/3/2011 10:40	0.094	94
55	10/3/2011 10:41	0.099	99
56	10/3/2011 10:42	0.099	99
57	10/3/2011 10:43	0.1	100
58	10/3/2011 10:44	0.099	99
59	10/3/2011 10:45	0.099	99
60	10/3/2011 10:46	0.103	103
61	10/3/2011 10:47	0.1	100
62	10/3/2011 10:48	0.11	110
63	10/3/2011 10:49	0.146	146
64	10/3/2011 10:50	0.139	139
65	10/3/2011 10:51	0.143	143
66	10/3/2011 10:52	0.132	132
67	10/3/2011 10:53	0.11	110
68	10/3/2011 10:54	0.097	97
69	10/3/2011 10:55	0.098	98
70	10/3/2011 10:56	0.091	91
71	10/3/2011 10:57	0.091	91
72	10/3/2011 10:58	0.096	96
73	10/3/2011 10:59	0.098	98
74	10/3/2011 11:00	0.1	100
75	10/3/2011 11:01	0.098	98
76	10/3/2011 11:02	0.098	98
77	10/3/2011 11:03	0.097	97
78	10/3/2011 11:04	0.095	95
79	10/3/2011 11:05	0.093	93
80	10/3/2011 11:06	0.097	97
81	10/3/2011 11:07	0.098	98
82	10/3/2011 11:08	0.105	105
83	10/3/2011 11:09	0.102	102
84	10/3/2011 11:10	0.101	101
85	10/3/2011 11:11	0.093	93
86	10/3/2011 11:12	0.092	92
87	10/3/2011 11:13	0.094	94
88	10/3/2011 11:14	0.205	205
89	10/3/2011 11:15	0.117	117
90	10/3/2011 11:16	0.11	110
91	10/3/2011 11:17	0.107	107
92	10/3/2011 11:18	0.113	113
93	10/3/2011 11:19	0.12	120
94	10/3/2011 11:20	0.107	107
95	10/3/2011 11:21	0.101	101
96	10/3/2011 11:22	0.111	111
97	10/3/2011 11:23	0.117	117
98	10/3/2011 11:24	0.107	107
99	10/3/2011 11:25	0.11	110
100	10/3/2011 11:26	0.128	128
101	10/3/2011 11:27	0.116	116
102	10/3/2011 11:28	0.11	110
103	10/3/2011 11:29	0.129	129
104	10/3/2011 11:30	0.129	129
105	10/3/2011 11:31	0.116	116
106	10/3/2011 11:32	0.124	124
107	10/3/2011 11:33	0.132	132
108	10/3/2011 11:34	0.114	114
109	10/3/2011 11:35	0.112	112
110	10/3/2011 11:36	0.13	130
111	10/3/2011 11:37	0.135	135
112	10/3/2011 11:38	0.108	108
113	10/3/2011 11:39	0.107	107
114	10/3/2011 11:40	0.106	106
115	10/3/2011 11:41	0.11	110
116	10/3/2011 11:42	0.107	107
117	10/3/2011 11:43	0.11	110

118	10/3/2011 11:44	0.117	117
119	10/3/2011 11:45	0.127	127
120	10/3/2011 11:46	0.123	123
121	10/3/2011 11:47	0.118	118
122	10/3/2011 11:48	0.118	118
123	10/3/2011 11:49	0.124	124
124	10/3/2011 11:50	0.12	120
125	10/3/2011 11:51	0.116	116
126	10/3/2011 11:52	0.113	113
127	10/3/2011 11:53	0.114	114
128	10/3/2011 11:54	0.119	119
129	10/3/2011 11:55	0.116	116
130	10/3/2011 11:56	0.12	120
131	10/3/2011 11:57	0.12	120
132	10/3/2011 11:58	0.13	130
133	10/3/2011 11:59	0.128	128
134	10/3/2011 12:00	0.135	135
135	10/3/2011 12:01	0.119	119
136	10/3/2011 12:02	0.121	121
137	10/3/2011 12:03	0.136	136
138	10/3/2011 12:04	0.156	156
139	10/3/2011 12:05	0.144	144
140	10/3/2011 12:06	0.127	127
141	10/3/2011 12:07	0.126	126
142	10/3/2011 12:08	0.138	138
143	10/3/2011 12:09	0.159	159
144	10/3/2011 12:10	0.142	142
145	10/3/2011 12:11	0.131	131
146	10/3/2011 12:12	0.132	132
147	10/3/2011 12:13	0.13	130
148	10/3/2011 12:14	0.133	133
149	10/3/2011 12:15	0.14	140
150	10/3/2011 12:16	0.164	164
151	10/3/2011 12:17	0.164	164
152	10/3/2011 12:18	0.17	170
153	10/3/2011 12:19	0.169	169
154	10/3/2011 12:20	0.165	165
155	10/3/2011 12:21	0.171	171
156	10/3/2011 12:22	0.141	141
157	10/3/2011 12:23	0.121	121
158	10/3/2011 12:24	0.131	131
159	10/3/2011 12:25	0.152	152
160	10/3/2011 12:26	0.16	160
161	10/3/2011 12:27	0.161	161
162	10/3/2011 12:28	0.136	136
163	10/3/2011 12:29	0.131	131
164	10/3/2011 12:30	0.131	131
165	10/3/2011 12:31	0.123	123
166	10/3/2011 12:32	0.134	134
167	10/3/2011 12:33	0.141	141
168	10/3/2011 12:34	0.166	166
169	10/3/2011 12:35	0.178	178
170	10/3/2011 12:36	0.131	131
171	10/3/2011 12:37	0.131	131
172	10/3/2011 12:38	0.13	130
173	10/3/2011 12:39	0.123	123
174	10/3/2011 12:40	0.224	224
175	10/3/2011 12:41	0.166	166
176	10/3/2011 12:42	0.141	141
177	10/3/2011 12:43	0.133	133
178	10/3/2011 12:44	0.129	129
179	10/3/2011 12:45	0.133	133
180	10/3/2011 12:46	0.152	152
181	10/3/2011 12:47	0.146	146
182	10/3/2011 12:48	0.151	151
183	10/3/2011 12:49	0.135	135
184	10/3/2011 12:50	0.13	130
185	10/3/2011 12:51	0.136	136
186	10/3/2011 12:52	0.148	148

187	10/3/2011 12:53	0.146	146
188	10/3/2011 12:54	0.138	138
189	10/3/2011 12:55	0.15	150
190	10/3/2011 12:56	0.161	161
191	10/3/2011 12:57	0.174	174
192	10/3/2011 12:58	0.173	173
193	10/3/2011 12:59	0.187	187
194	10/3/2011 13:00	0.164	164
195	10/3/2011 13:01	0.144	144
196	10/3/2011 13:02	0.138	138
197	10/3/2011 13:03	0.143	143
198	10/3/2011 13:04	0.143	143
199	10/3/2011 13:05	0.144	144
200	10/3/2011 13:06	0.151	151
201	10/3/2011 13:07	0.16	160
202	10/3/2011 13:08	0.137	137
203	10/3/2011 13:09	0.133	133
204	10/3/2011 13:10	0.131	131
205	10/3/2011 13:11	0.14	140
206	10/3/2011 13:12	0.137	137
207	10/3/2011 13:13	0.148	148
208	10/3/2011 13:14	0.168	168
209	10/3/2011 13:15	0.164	164
210	10/3/2011 13:16	0.185	185
211	10/3/2011 13:17	0.178	178
212	10/3/2011 13:18	0.177	177
213	10/3/2011 13:19	0.164	164
214	10/3/2011 13:20	0.134	134
215	10/3/2011 13:21	0.146	146
216	10/3/2011 13:22	0.135	135
217	10/3/2011 13:23	0.146	146
218	10/3/2011 13:24	0.157	157
219	10/3/2011 13:25	0.135	135
220	10/3/2011 13:26	0.16	160
221	10/3/2011 13:27	0.147	147
222	10/3/2011 13:28	0.135	135
223	10/3/2011 13:29	0.134	134
224	10/3/2011 13:30	0.135	135
225	10/3/2011 13:31	0.137	137
226	10/3/2011 13:32	0.138	138
227	10/3/2011 13:33	0.13	130
228	10/3/2011 13:34	0.134	134
229	10/3/2011 13:35	0.149	149
230	10/3/2011 13:36	0.142	142
231	10/3/2011 13:37	0.131	131
232	10/3/2011 13:38	0.128	128
233	10/3/2011 13:39	0.129	129
234	10/3/2011 13:40	0.128	128
235	10/3/2011 13:41	0.131	131
236	10/3/2011 13:42	0.143	143
237	10/3/2011 13:43	0.142	142
238	10/3/2011 13:44	0.145	145
239	10/3/2011 13:45	0.145	145
240	10/3/2011 13:46	0.136	136
241	10/3/2011 13:47	0.136	136
242	10/3/2011 13:48	0.143	143
243	10/3/2011 13:49	0.173	173
244	10/3/2011 13:50	0.159	159
245	10/3/2011 13:51	0.134	134
246	10/3/2011 13:52	0.133	133
247	10/3/2011 13:53	0.136	136
248	10/3/2011 13:54	0.137	137
249	10/3/2011 13:55	0.146	146
250	10/3/2011 13:56	0.159	159
251	10/3/2011 13:57	0.141	141
252	10/3/2011 13:58	0.139	139
253	10/3/2011 13:59	0.144	144
254	10/3/2011 14:00	0.148	148
255	10/3/2011 14:01	0.151	151

256	10/3/2011 14:02	0.142	142
257	10/3/2011 14:03	0.144	144
258	10/3/2011 14:04	0.155	155
259	10/3/2011 14:05	0.142	142
260	10/3/2011 14:06	0.165	165
261	10/3/2011 14:07	0.174	174
262	10/3/2011 14:08	0.17	170
263	10/3/2011 14:09	0.153	153
264	10/3/2011 14:10	0.143	143
265	10/3/2011 14:11	0.139	139
266	10/3/2011 14:12	0.141	141
267	10/3/2011 14:13	0.141	141
268	10/3/2011 14:14	0.145	145
269	10/3/2011 14:15	0.155	155
270	10/3/2011 14:16	0.173	173
271	10/3/2011 14:17	0.141	141
272	10/3/2011 14:18	0.141	141
273	10/3/2011 14:19	0.135	135
274	10/3/2011 14:20	0.132	132
275	10/3/2011 14:21	0.125	125
276	10/3/2011 14:22	0.13	130
277	10/3/2011 14:23	0.141	141
278	10/3/2011 14:24	0.132	132
279	10/3/2011 14:25	0.163	163
280	10/3/2011 14:26	0.131	131
281	10/3/2011 14:27	0.133	133
282	10/3/2011 14:28	0.128	128
283	10/3/2011 14:29	0.134	134
284	10/3/2011 14:30	0.166	166
285	10/3/2011 14:31	0.159	159
286	10/3/2011 14:32	0.142	142
287	10/3/2011 14:33	0.137	137

==========Event #5 information (end)==========

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533101806
Firmware Version	2.8
Calibration Date	5/19/2011
Test Name	MANUAL_002
Test Start Time	9:22:50 AM
Test Start Date	10/3/2011
Test Length [D:H:M	0:04:52
Test Interval [M:S]	1:00
PM1 Average [mg/	0.008
PM1 Minimum [mg	0.003
PM1 Maximum [mg	0.149
PM1 TWA [mg/m3]	0.005
PM2.5 Average [mg	0.008
PM2.5 Minimum [n	0.003
PM2.5 Maximum [r	0.149
PM2.5 TWA [mg/m	0.005
PM4 Average [mg/	0.008
PM4 Minimum [mg	0.003
PM4 Maximum [mg	0.15
PM4 TWA [mg/m3]	0.005
PM10 Average [mg	0.009
PM10 Minimum [m	0.003
PM10 Maximum [m	0.151
PM10 TWA [mg/m3	0.005
TOTAL Average [mg	0.009
TOTAL Minimum [n	0.003
TOTAL Maximum [r	0.152
TOTAL TWA [mg/m	0.005
Photometric User C	1
Size Correction Use	1
Flow User Cal	1
Errors	
Number of Samples	292

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	9:22:50 AM	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.015	0.015	0.015	0.017	9:23:50 AM	10/3/2011 9:23	0.018		
120	0.013	0.013	0.013	0.013	9:24:50 AM	10/3/2011 9:24	0.013		
180	0.014	0.014	0.014	0.014	9:25:50 AM	10/3/2011 9:25	0.014		
240	0.012	0.012	0.012	0.012	9:26:50 AM	10/3/2011 9:26	0.012		
300	0.011	0.011	0.011	0.012	9:27:50 AM	10/3/2011 9:27	0.012		
360	0.011	0.011	0.011	0.012	9:28:50 AM	10/3/2011 9:28	0.012		
420	0.011	0.012	0.012	0.012	9:29:50 AM	10/3/2011 9:29	0.012		
480	0.01	0.01	0.01	0.01	9:30:50 AM	10/3/2011 9:30	0.011		
540	0.021	0.021	0.021	0.022	9:31:50 AM	10/3/2011 9:31	0.022		
600	0.029	0.029	0.029	0.03	9:32:50 AM	10/3/2011 9:32	0.03		
660	0.015	0.015	0.015	0.016	9:33:50 AM	10/3/2011 9:33	0.016		
720	0.015	0.015	0.015	0.015	9:34:50 AM	10/3/2011 9:34	0.015		
780	0.015	0.015	0.015	0.015	9:35:50 AM	10/3/2011 9:35	0.015		
840	0.014	0.014	0.014	0.015	9:36:50 AM	10/3/2011 9:36	0.015		
900	0.014	0.015	0.015	0.015	9:37:50 AM	10/3/2011 9:37	0.015		
960	0.016	0.017	0.017	0.018	9:38:50 AM	10/3/2011 9:38	0.018		
1020	0.015	0.015	0.015	0.015	9:39:50 AM	10/3/2011 9:39	0.015		
1080	0.016	0.016	0.016	0.016	9:40:50 AM	10/3/2011 9:40	0.016		
1140	0.012	0.013	0.013	0.013	9:41:50 AM	10/3/2011 9:41	0.013		
1200	0.012	0.012	0.012	0.012	9:42:50 AM	10/3/2011 9:42	0.012		
1260	0.014	0.014	0.014	0.014	9:43:50 AM	10/3/2011 9:43	0.014		

1320	0.149	0.149	0.15	0.151	9:44:50 AM	10/3/2011 9:44	0.152
1380	0.012	0.012	0.012	0.012	9:45:50 AM	10/3/2011 9:45	0.012
1440	0.012	0.012	0.012	0.012	9:46:50 AM	10/3/2011 9:46	0.012
1500	0.011	0.011	0.011	0.011	9:47:50 AM	10/3/2011 9:47	0.011
1560	0.011	0.011	0.011	0.011	9:48:50 AM	10/3/2011 9:48	0.011
1620	0.011	0.011	0.012	0.012	9:49:50 AM	10/3/2011 9:49	0.012
1680	0.022	0.022	0.022	0.023	9:50:50 AM	10/3/2011 9:50	0.024
1740	0.013	0.013	0.013	0.013	9:51:50 AM	10/3/2011 9:51	0.014
1800	0.012	0.012	0.012	0.012	9:52:50 AM	10/3/2011 9:52	0.012
1860	0.02	0.02	0.02	0.021	9:53:50 AM	10/3/2011 9:53	0.021
1920	0.009	0.009	0.009	0.01	9:54:50 AM	10/3/2011 9:54	0.01
1980	0.008	0.008	0.008	0.008	9:55:50 AM	10/3/2011 9:55	0.008
2040	0.008	0.008	0.008	0.008	9:56:50 AM	10/3/2011 9:56	0.008
2100	0.009	0.01	0.01	0.01	9:57:50 AM	10/3/2011 9:57	0.01
2160	0.009	0.009	0.009	0.009	9:58:50 AM	10/3/2011 9:58	0.009
2220	0.009	0.009	0.009	0.009	9:59:50 AM	10/3/2011 9:59	0.009
2280	0.009	0.009	0.009	0.009	10:00:50 AM	10/3/2011 10:00	0.009
2340	0.009	0.009	0.009	0.01	10:01:50 AM	10/3/2011 10:01	0.01
2400	0.01	0.01	0.01	0.011	10:02:50 AM	10/3/2011 10:02	0.011
2460	0.009	0.009	0.009	0.01	10:03:50 AM	10/3/2011 10:03	0.01
2520	0.01	0.01	0.01	0.011	10:04:50 AM	10/3/2011 10:04	0.011
2580	0.01	0.01	0.01	0.01	10:05:50 AM	10/3/2011 10:05	0.011
2640	0.009	0.009	0.009	0.009	10:06:50 AM	10/3/2011 10:06	0.009
2700	0.007	0.007	0.008	0.008	10:07:50 AM	10/3/2011 10:07	0.008
2760	0.007	0.007	0.007	0.007	10:08:50 AM	10/3/2011 10:08	0.007
2820	0.053	0.053	0.054	0.059	10:09:50 AM	10/3/2011 10:09	0.06
2880	0.008	0.008	0.009	0.009	10:10:50 AM	10/3/2011 10:10	0.009
2940	0.007	0.007	0.007	0.007	10:11:50 AM	10/3/2011 10:11	0.007
3000	0.007	0.007	0.007	0.008	10:12:50 AM	10/3/2011 10:12	0.008
3060	0.008	0.008	0.008	0.008	10:13:50 AM	10/3/2011 10:13	0.008
3120	0.01	0.01	0.01	0.01	10:14:50 AM	10/3/2011 10:14	0.01
3180	0.008	0.008	0.008	0.008	10:15:50 AM	10/3/2011 10:15	0.008
3240	0.019	0.02	0.02	0.022	10:16:50 AM	10/3/2011 10:16	0.022
3300	0.014	0.014	0.014	0.015	10:17:50 AM	10/3/2011 10:17	0.015
3360	0.006	0.006	0.006	0.007	10:18:50 AM	10/3/2011 10:18	0.007
3420	0.006	0.006	0.006	0.006	10:19:50 AM	10/3/2011 10:19	0.006
3480	0.006	0.006	0.006	0.006	10:20:50 AM	10/3/2011 10:20	0.006
3540	0.006	0.006	0.007	0.007	10:21:50 AM	10/3/2011 10:21	0.007
3600	0.006	0.006	0.006	0.006	10:22:50 AM	10/3/2011 10:22	0.006
3660	0.006	0.006	0.006	0.006	10:23:50 AM	10/3/2011 10:23	0.006
3720	0.005	0.005	0.005	0.006	10:24:50 AM	10/3/2011 10:24	0.006
3780	0.007	0.007	0.007	0.007	10:25:50 AM	10/3/2011 10:25	0.007
3840	0.007	0.007	0.007	0.008	10:26:50 AM	10/3/2011 10:26	0.008
3900	0.007	0.007	0.007	0.008	10:27:50 AM	10/3/2011 10:27	0.008
3960	0.014	0.014	0.014	0.016	10:28:50 AM	10/3/2011 10:28	0.016
4020	0.032	0.033	0.034	0.038	10:29:50 AM	10/3/2011 10:29	0.039
4080	0.012	0.012	0.013	0.014	10:30:50 AM	10/3/2011 10:30	0.014
4140	0.025	0.025	0.026	0.027	10:31:50 AM	10/3/2011 10:31	0.027
4200	0.011	0.011	0.011	0.011	10:32:50 AM	10/3/2011 10:32	0.011
4260	0.007	0.007	0.007	0.007	10:33:50 AM	10/3/2011 10:33	0.007
4320	0.007	0.007	0.007	0.007	10:34:50 AM	10/3/2011 10:34	0.008
4380	0.006	0.006	0.006	0.007	10:35:50 AM	10/3/2011 10:35	0.007
4440	0.005	0.005	0.005	0.006	10:36:50 AM	10/3/2011 10:36	0.006
4500	0.005	0.005	0.005	0.005	10:37:50 AM	10/3/2011 10:37	0.005
4560	0.005	0.006	0.006	0.006	10:38:50 AM	10/3/2011 10:38	0.006
4620	0.005	0.005	0.005	0.005	10:39:50 AM	10/3/2011 10:39	0.006
4680	0.005	0.005	0.005	0.005	10:40:50 AM	10/3/2011 10:40	0.005
4740	0.005	0.005	0.005	0.006	10:41:50 AM	10/3/2011 10:41	0.006

4800	0.007	0.007	0.007	0.008	10:42:50 AM	10/3/2011 10:42	0.008
4860	0.006	0.006	0.006	0.006	10:43:50 AM	10/3/2011 10:43	0.006
4920	0.006	0.006	0.006	0.006	10:44:50 AM	10/3/2011 10:44	0.006
4980	0.005	0.005	0.005	0.005	10:45:50 AM	10/3/2011 10:45	0.005
5040	0.005	0.005	0.005	0.005	10:46:50 AM	10/3/2011 10:46	0.005
5100	0.005	0.005	0.005	0.005	10:47:50 AM	10/3/2011 10:47	0.005
5160	0.006	0.006	0.006	0.006	10:48:50 AM	10/3/2011 10:48	0.006
5220	0.01	0.01	0.01	0.011	10:49:50 AM	10/3/2011 10:49	0.012
5280	0.007	0.007	0.007	0.007	10:50:50 AM	10/3/2011 10:50	0.007
5340	0.005	0.005	0.005	0.005	10:51:50 AM	10/3/2011 10:51	0.005
5400	0.005	0.005	0.005	0.005	10:52:50 AM	10/3/2011 10:52	0.005
5460	0.005	0.005	0.005	0.005	10:53:50 AM	10/3/2011 10:53	0.005
5520	0.006	0.006	0.006	0.006	10:54:50 AM	10/3/2011 10:54	0.006
5580	0.005	0.005	0.005	0.005	10:55:50 AM	10/3/2011 10:55	0.005
5640	0.006	0.006	0.006	0.006	10:56:50 AM	10/3/2011 10:56	0.006
5700	0.006	0.007	0.007	0.007	10:57:50 AM	10/3/2011 10:57	0.007
5760	0.006	0.007	0.007	0.007	10:58:50 AM	10/3/2011 10:58	0.007
5820	0.009	0.009	0.009	0.009	10:59:50 AM	10/3/2011 10:59	0.009
5880	0.008	0.008	0.008	0.008	11:00:50 AM	10/3/2011 11:00	0.008
5940	0.007	0.007	0.007	0.007	11:01:50 AM	10/3/2011 11:01	0.007
6000	0.016	0.016	0.016	0.017	11:02:50 AM	10/3/2011 11:02	0.017
6060	0.007	0.007	0.007	0.007	11:03:50 AM	10/3/2011 11:03	0.007
6120	0.008	0.008	0.008	0.008	11:04:50 AM	10/3/2011 11:04	0.008
6180	0.008	0.008	0.008	0.008	11:05:50 AM	10/3/2011 11:05	0.008
6240	0.011	0.011	0.011	0.011	11:06:50 AM	10/3/2011 11:06	0.011
6300	0.007	0.007	0.007	0.008	11:07:50 AM	10/3/2011 11:07	0.008
6360	0.008	0.008	0.008	0.008	11:08:50 AM	10/3/2011 11:08	0.008
6420	0.01	0.01	0.01	0.01	11:09:50 AM	10/3/2011 11:09	0.01
6480	0.007	0.007	0.007	0.007	11:10:50 AM	10/3/2011 11:10	0.007
6540	0.014	0.014	0.014	0.015	11:11:50 AM	10/3/2011 11:11	0.015
6600	0.017	0.018	0.018	0.02	11:12:50 AM	10/3/2011 11:12	0.02
6660	0.007	0.007	0.007	0.007	11:13:50 AM	10/3/2011 11:13	0.007
6720	0.005	0.006	0.006	0.006	11:14:50 AM	10/3/2011 11:14	0.006
6780	0.006	0.006	0.006	0.006	11:15:50 AM	10/3/2011 11:15	0.006
6840	0.006	0.006	0.006	0.006	11:16:50 AM	10/3/2011 11:16	0.007
6900	0.006	0.006	0.006	0.007	11:17:50 AM	10/3/2011 11:17	0.007
6960	0.006	0.006	0.006	0.006	11:18:50 AM	10/3/2011 11:18	0.006
7020	0.006	0.006	0.006	0.006	11:19:50 AM	10/3/2011 11:19	0.006
7080	0.006	0.006	0.006	0.006	11:20:50 AM	10/3/2011 11:20	0.006
7140	0.008	0.008	0.008	0.009	11:21:50 AM	10/3/2011 11:21	0.01
7200	0.011	0.011	0.012	0.014	11:22:50 AM	10/3/2011 11:22	0.014
7260	0.009	0.01	0.01	0.011	11:23:50 AM	10/3/2011 11:23	0.011
7320	0.006	0.006	0.006	0.006	11:24:50 AM	10/3/2011 11:24	0.006
7380	0.006	0.006	0.006	0.007	11:25:50 AM	10/3/2011 11:25	0.007
7440	0.007	0.007	0.007	0.007	11:26:50 AM	10/3/2011 11:26	0.007
7500	0.007	0.007	0.007	0.007	11:27:50 AM	10/3/2011 11:27	0.007
7560	0.007	0.007	0.007	0.008	11:28:50 AM	10/3/2011 11:28	0.008
7620	0.007	0.007	0.007	0.007	11:29:50 AM	10/3/2011 11:29	0.007
7680	0.009	0.009	0.009	0.009	11:30:50 AM	10/3/2011 11:30	0.009
7740	0.007	0.007	0.008	0.008	11:31:50 AM	10/3/2011 11:31	0.008
7800	0.007	0.007	0.007	0.007	11:32:50 AM	10/3/2011 11:32	0.007
7860	0.007	0.007	0.007	0.007	11:33:50 AM	10/3/2011 11:33	0.007
7920	0.008	0.008	0.008	0.008	11:34:50 AM	10/3/2011 11:34	0.008
7980	0.009	0.009	0.009	0.009	11:35:50 AM	10/3/2011 11:35	0.009
8040	0.008	0.008	0.008	0.008	11:36:50 AM	10/3/2011 11:36	0.008
8100	0.008	0.008	0.008	0.008	11:37:50 AM	10/3/2011 11:37	0.008
8160	0.006	0.006	0.006	0.007	11:38:50 AM	10/3/2011 11:38	0.007
8220	0.008	0.008	0.008	0.009	11:39:50 AM	10/3/2011 11:39	0.009

8280	0.007	0.007	0.007	0.007	11:40:50 AM	10/3/2011 11:40	0.007
8340	0.007	0.007	0.007	0.007	11:41:50 AM	10/3/2011 11:41	0.007
8400	0.006	0.006	0.006	0.006	11:42:50 AM	10/3/2011 11:42	0.006
8460	0.006	0.006	0.007	0.007	11:43:50 AM	10/3/2011 11:43	0.007
8520	0.006	0.007	0.007	0.007	11:44:50 AM	10/3/2011 11:44	0.007
8580	0.005	0.005	0.005	0.005	11:45:50 AM	10/3/2011 11:45	0.005
8640	0.004	0.004	0.005	0.005	11:46:50 AM	10/3/2011 11:46	0.005
8700	0.005	0.005	0.005	0.005	11:47:50 AM	10/3/2011 11:47	0.005
8760	0.004	0.004	0.004	0.004	11:48:50 AM	10/3/2011 11:48	0.004
8820	0.005	0.005	0.005	0.005	11:49:50 AM	10/3/2011 11:49	0.005
8880	0.005	0.005	0.005	0.006	11:50:50 AM	10/3/2011 11:50	0.006
8940	0.006	0.006	0.006	0.007	11:51:50 AM	10/3/2011 11:51	0.007
9000	0.006	0.006	0.006	0.006	11:52:50 AM	10/3/2011 11:52	0.006
9060	0.007	0.007	0.007	0.007	11:53:50 AM	10/3/2011 11:53	0.007
9120	0.007	0.007	0.007	0.008	11:54:50 AM	10/3/2011 11:54	0.008
9180	0.007	0.007	0.007	0.007	11:55:50 AM	10/3/2011 11:55	0.007
9240	0.007	0.007	0.007	0.007	11:56:50 AM	10/3/2011 11:56	0.007
9300	0.008	0.008	0.009	0.009	11:57:50 AM	10/3/2011 11:57	0.009
9360	0.008	0.008	0.008	0.008	11:58:50 AM	10/3/2011 11:58	0.008
9420	0.013	0.014	0.014	0.015	11:59:50 AM	10/3/2011 11:59	0.015
9480	0.007	0.007	0.007	0.007	12:00:50 PM	10/3/2011 12:00	0.008
9540	0.007	0.007	0.007	0.007	12:01:50 PM	10/3/2011 12:01	0.007
9600	0.006	0.006	0.006	0.006	12:02:50 PM	10/3/2011 12:02	0.006
9660	0.006	0.006	0.006	0.007	12:03:50 PM	10/3/2011 12:03	0.007
9720	0.006	0.006	0.006	0.006	12:04:50 PM	10/3/2011 12:04	0.006
9780	0.006	0.006	0.006	0.007	12:05:50 PM	10/3/2011 12:05	0.007
9840	0.006	0.006	0.006	0.006	12:06:50 PM	10/3/2011 12:06	0.006
9900	0.005	0.006	0.006	0.006	12:07:50 PM	10/3/2011 12:07	0.006
9960	0.005	0.005	0.005	0.006	12:08:50 PM	10/3/2011 12:08	0.006
10020	0.006	0.006	0.006	0.006	12:09:50 PM	10/3/2011 12:09	0.006
10080	0.006	0.006	0.006	0.006	12:10:50 PM	10/3/2011 12:10	0.007
10140	0.007	0.007	0.007	0.007	12:11:50 PM	10/3/2011 12:11	0.007
10200	0.006	0.006	0.006	0.006	12:12:50 PM	10/3/2011 12:12	0.006
10260	0.006	0.006	0.006	0.006	12:13:50 PM	10/3/2011 12:13	0.006
10320	0.005	0.005	0.005	0.005	12:14:50 PM	10/3/2011 12:14	0.005
10380	0.006	0.006	0.006	0.006	12:15:50 PM	10/3/2011 12:15	0.006
10440	0.005	0.006	0.006	0.006	12:16:50 PM	10/3/2011 12:16	0.006
10500	0.005	0.005	0.005	0.006	12:17:50 PM	10/3/2011 12:17	0.006
10560	0.005	0.005	0.005	0.005	12:18:50 PM	10/3/2011 12:18	0.005
10620	0.005	0.005	0.005	0.006	12:19:50 PM	10/3/2011 12:19	0.006
10680	0.005	0.005	0.005	0.005	12:20:50 PM	10/3/2011 12:20	0.005
10740	0.005	0.005	0.005	0.005	12:21:50 PM	10/3/2011 12:21	0.005
10800	0.004	0.004	0.004	0.005	12:22:50 PM	10/3/2011 12:22	0.005
10860	0.004	0.004	0.004	0.004	12:23:50 PM	10/3/2011 12:23	0.005
10920	0.004	0.004	0.004	0.004	12:24:50 PM	10/3/2011 12:24	0.004
10980	0.004	0.004	0.004	0.004	12:25:50 PM	10/3/2011 12:25	0.004
11040	0.005	0.005	0.005	0.005	12:26:50 PM	10/3/2011 12:26	0.005
11100	0.004	0.004	0.004	0.005	12:27:50 PM	10/3/2011 12:27	0.005
11160	0.005	0.005	0.005	0.006	12:28:50 PM	10/3/2011 12:28	0.006
11220	0.009	0.009	0.009	0.01	12:29:50 PM	10/3/2011 12:29	0.01
11280	0.01	0.01	0.011	0.011	12:30:50 PM	10/3/2011 12:30	0.011
11340	0.009	0.01	0.01	0.011	12:31:50 PM	10/3/2011 12:31	0.011
11400	0.01	0.01	0.01	0.011	12:32:50 PM	10/3/2011 12:32	0.011
11460	0.006	0.006	0.006	0.006	12:33:50 PM	10/3/2011 12:33	0.006
11520	0.005	0.005	0.005	0.005	12:34:50 PM	10/3/2011 12:34	0.005
11580	0.005	0.005	0.005	0.005	12:35:50 PM	10/3/2011 12:35	0.005
11640	0.005	0.005	0.005	0.006	12:36:50 PM	10/3/2011 12:36	0.006
11700	0.005	0.005	0.005	0.005	12:37:50 PM	10/3/2011 12:37	0.005

11760	0.005	0.005	0.005	0.005	12:38:50 PM	10/3/2011 12:38	0.005
11820	0.005	0.005	0.005	0.006	12:39:50 PM	10/3/2011 12:39	0.006
11880	0.005	0.005	0.006	0.006	12:40:50 PM	10/3/2011 12:40	0.006
11940	0.006	0.006	0.006	0.006	12:41:50 PM	10/3/2011 12:41	0.006
12000	0.005	0.005	0.005	0.005	12:42:50 PM	10/3/2011 12:42	0.005
12060	0.005	0.005	0.005	0.005	12:43:50 PM	10/3/2011 12:43	0.005
12120	0.004	0.004	0.005	0.005	12:44:50 PM	10/3/2011 12:44	0.005
12180	0.006	0.006	0.006	0.006	12:45:50 PM	10/3/2011 12:45	0.006
12240	0.005	0.005	0.005	0.005	12:46:50 PM	10/3/2011 12:46	0.005
12300	0.005	0.005	0.005	0.005	12:47:50 PM	10/3/2011 12:47	0.005
12360	0.006	0.006	0.006	0.007	12:48:50 PM	10/3/2011 12:48	0.007
12420	0.004	0.004	0.004	0.005	12:49:50 PM	10/3/2011 12:49	0.005
12480	0.004	0.004	0.004	0.004	12:50:50 PM	10/3/2011 12:50	0.004
12540	0.004	0.004	0.004	0.004	12:51:50 PM	10/3/2011 12:51	0.004
12600	0.004	0.004	0.004	0.004	12:52:50 PM	10/3/2011 12:52	0.004
12660	0.005	0.005	0.005	0.005	12:53:50 PM	10/3/2011 12:53	0.005
12720	0.005	0.005	0.005	0.005	12:54:50 PM	10/3/2011 12:54	0.005
12780	0.005	0.005	0.005	0.005	12:55:50 PM	10/3/2011 12:55	0.005
12840	0.007	0.007	0.007	0.007	12:56:50 PM	10/3/2011 12:56	0.007
12900	0.005	0.005	0.006	0.006	12:57:50 PM	10/3/2011 12:57	0.006
12960	0.005	0.005	0.005	0.006	12:58:50 PM	10/3/2011 12:58	0.006
13020	0.006	0.006	0.006	0.007	12:59:50 PM	10/3/2011 12:59	0.007
13080	0.004	0.004	0.004	0.004	1:00:50 PM	10/3/2011 13:00	0.004
13140	0.004	0.004	0.004	0.004	1:01:50 PM	10/3/2011 13:01	0.004
13200	0.005	0.005	0.005	0.006	1:02:50 PM	10/3/2011 13:02	0.006
13260	0.005	0.005	0.005	0.006	1:03:50 PM	10/3/2011 13:03	0.006
13320	0.005	0.005	0.005	0.005	1:04:50 PM	10/3/2011 13:04	0.005
13380	0.007	0.008	0.008	0.009	1:05:50 PM	10/3/2011 13:05	0.009
13440	0.01	0.011	0.011	0.014	1:06:50 PM	10/3/2011 13:06	0.017
13500	0.004	0.004	0.004	0.005	1:07:50 PM	10/3/2011 13:07	0.005
13560	0.003	0.003	0.003	0.003	1:08:50 PM	10/3/2011 13:08	0.003
13620	0.005	0.005	0.006	0.007	1:09:50 PM	10/3/2011 13:09	0.007
13680	0.004	0.004	0.004	0.004	1:10:50 PM	10/3/2011 13:10	0.004
13740	0.004	0.004	0.004	0.004	1:11:50 PM	10/3/2011 13:11	0.004
13800	0.004	0.004	0.004	0.004	1:12:50 PM	10/3/2011 13:12	0.004
13860	0.003	0.003	0.003	0.003	1:13:50 PM	10/3/2011 13:13	0.003
13920	0.003	0.003	0.003	0.003	1:14:50 PM	10/3/2011 13:14	0.003
13980	0.003	0.003	0.003	0.003	1:15:50 PM	10/3/2011 13:15	0.003
14040	0.003	0.003	0.003	0.004	1:16:50 PM	10/3/2011 13:16	0.004
14100	0.003	0.003	0.003	0.004	1:17:50 PM	10/3/2011 13:17	0.004
14160	0.003	0.003	0.003	0.003	1:18:50 PM	10/3/2011 13:18	0.003
14220	0.003	0.003	0.003	0.003	1:19:50 PM	10/3/2011 13:19	0.003
14280	0.004	0.004	0.004	0.004	1:20:50 PM	10/3/2011 13:20	0.004
14340	0.003	0.003	0.003	0.004	1:21:50 PM	10/3/2011 13:21	0.004
14400	0.009	0.009	0.01	0.01	1:22:50 PM	10/3/2011 13:22	0.011
14460	0.012	0.012	0.012	0.014	1:23:50 PM	10/3/2011 13:23	0.014
14520	0.018	0.018	0.019	0.021	1:24:50 PM	10/3/2011 13:24	0.021
14580	0.008	0.008	0.009	0.009	1:25:50 PM	10/3/2011 13:25	0.009
14640	0.006	0.006	0.006	0.006	1:26:50 PM	10/3/2011 13:26	0.006
14700	0.004	0.004	0.004	0.005	1:27:50 PM	10/3/2011 13:27	0.005
14760	0.005	0.005	0.005	0.005	1:28:50 PM	10/3/2011 13:28	0.005
14820	0.004	0.004	0.004	0.005	1:29:50 PM	10/3/2011 13:29	0.005
14880	0.004	0.004	0.004	0.004	1:30:50 PM	10/3/2011 13:30	0.004
14940	0.004	0.004	0.004	0.004	1:31:50 PM	10/3/2011 13:31	0.004
15000	0.004	0.004	0.004	0.005	1:32:50 PM	10/3/2011 13:32	0.005
15060	0.004	0.004	0.004	0.004	1:33:50 PM	10/3/2011 13:33	0.004
15120	0.005	0.005	0.005	0.005	1:34:50 PM	10/3/2011 13:34	0.005
15180	0.006	0.006	0.006	0.007	1:35:50 PM	10/3/2011 13:35	0.007

15240	0.006	0.006	0.006	0.006	1:36:50 PM	10/3/2011 13:36	0.006
15300	0.005	0.005	0.005	0.005	1:37:50 PM	10/3/2011 13:37	0.005
15360	0.005	0.005	0.005	0.006	1:38:50 PM	10/3/2011 13:38	0.006
15420	0.007	0.007	0.007	0.008	1:39:50 PM	10/3/2011 13:39	0.008
15480	0.009	0.009	0.01	0.01	1:40:50 PM	10/3/2011 13:40	0.01
15540	0.007	0.007	0.007	0.007	1:41:50 PM	10/3/2011 13:41	0.007
15600	0.006	0.006	0.006	0.007	1:42:50 PM	10/3/2011 13:42	0.007
15660	0.006	0.006	0.006	0.006	1:43:50 PM	10/3/2011 13:43	0.006
15720	0.005	0.005	0.005	0.006	1:44:50 PM	10/3/2011 13:44	0.006
15780	0.006	0.006	0.006	0.007	1:45:50 PM	10/3/2011 13:45	0.007
15840	0.01	0.011	0.011	0.013	1:46:50 PM	10/3/2011 13:46	0.013
15900	0.008	0.008	0.009	0.01	1:47:50 PM	10/3/2011 13:47	0.01
15960	0.005	0.005	0.005	0.005	1:48:50 PM	10/3/2011 13:48	0.005
16020	0.004	0.004	0.004	0.004	1:49:50 PM	10/3/2011 13:49	0.004
16080	0.004	0.004	0.004	0.004	1:50:50 PM	10/3/2011 13:50	0.004
16140	0.003	0.003	0.003	0.003	1:51:50 PM	10/3/2011 13:51	0.003
16200	0.003	0.003	0.003	0.003	1:52:50 PM	10/3/2011 13:52	0.003
16260	0.003	0.003	0.003	0.003	1:53:50 PM	10/3/2011 13:53	0.003
16320	0.003	0.003	0.003	0.004	1:54:50 PM	10/3/2011 13:54	0.004
16380	0.005	0.005	0.006	0.006	1:55:50 PM	10/3/2011 13:55	0.007
16440	0.005	0.005	0.005	0.005	1:56:50 PM	10/3/2011 13:56	0.005
16500	0.009	0.009	0.009	0.01	1:57:50 PM	10/3/2011 13:57	0.01
16560	0.005	0.005	0.005	0.005	1:58:50 PM	10/3/2011 13:58	0.005
16620	0.004	0.004	0.004	0.004	1:59:50 PM	10/3/2011 13:59	0.004
16680	0.005	0.005	0.005	0.005	2:00:50 PM	10/3/2011 14:00	0.006
16740	0.004	0.004	0.004	0.004	2:01:50 PM	10/3/2011 14:01	0.004
16800	0.005	0.005	0.005	0.006	2:02:50 PM	10/3/2011 14:02	0.006
16860	0.007	0.007	0.007	0.007	2:03:50 PM	10/3/2011 14:03	0.008
16920	0.007	0.007	0.007	0.007	2:04:50 PM	10/3/2011 14:04	0.007
16980	0.003	0.003	0.003	0.004	2:05:50 PM	10/3/2011 14:05	0.004
17040	0.006	0.006	0.006	0.006	2:06:50 PM	10/3/2011 14:06	0.006
17100	0.004	0.004	0.004	0.004	2:07:50 PM	10/3/2011 14:07	0.004
17160	0.003	0.003	0.003	0.003	2:08:50 PM	10/3/2011 14:08	0.003
17220	0.008	0.008	0.008	0.009	2:09:50 PM	10/3/2011 14:09	0.009
17280	0.005	0.005	0.006	0.006	2:10:50 PM	10/3/2011 14:10	0.006
17340	0.004	0.004	0.004	0.004	2:11:50 PM	10/3/2011 14:11	0.004
17400	0.006	0.006	0.006	0.007	2:12:50 PM	10/3/2011 14:12	0.007
17460	0.005	0.005	0.005	0.005	2:13:50 PM	10/3/2011 14:13	0.005
17520	0.004	0.004	0.004	0.004	2:14:50 PM	10/3/2011 14:14	0.004

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533112903
Firmware Version	2.8
Calibration Date	7/18/2011
Test Name	MANUAL_002
Test Start Time	9:26:40
Test Start Date	10/3/2011
Test Length [D:H:M]	0:04:46
Test Interval [M:S]	1:00
PM1 Average [mg/m3]	0.009
PM1 Minimum [mg/m3]	0.002
PM1 Maximum [mg/m3]	0.218
PM1 TWA [mg/m3]	0.005
PM2.5 Average [mg/m3]	0.009
PM2.5 Minimum [mg/m3]	0.002
PM2.5 Maximum [mg/m3]	0.218
PM2.5 TWA [mg/m3]	0.006
PM4 Average [mg/m3]	0.01
PM4 Minimum [mg/m3]	0.002
PM4 Maximum [mg/m3]	0.221
PM4 TWA [mg/m3]	0.006
PM10 Average [mg/m3]	0.012
PM10 Minimum [mg/m3]	0.002
PM10 Maximum [mg/m3]	0.253
PM10 TWA [mg/m3]	0.007
TOTAL Average [mg/m3]	0.012
TOTAL Minimum [mg/m3]	0.003
TOTAL Maximum [mg/m3]	0.278
TOTAL TWA [mg/m3]	0.007
Photometric User Cal	1
Size Correction User Cal	1
Flow User Cal	1
Errors	
Number of Samples	286

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	9:26:40	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.024	0.024	0.025	0.052	9:27:40	10/3/2011 9:27	0.077		
120	0.01	0.01	0.011	0.012	9:28:40	10/3/2011 9:28	0.013		
180	0.009	0.009	0.01	0.01	9:29:40	10/3/2011 9:29	0.01		
240	0.009	0.009	0.009	0.01	9:30:40	10/3/2011 9:30	0.011		
300	0.034	0.034	0.034	0.035	9:31:40	10/3/2011 9:31	0.036		
360	0.022	0.022	0.023	0.025	9:32:40	10/3/2011 9:32	0.025		
420	0.015	0.015	0.016	0.017	9:33:40	10/3/2011 9:33	0.017		
480	0.015	0.015	0.015	0.016	9:34:40	10/3/2011 9:34	0.017		
540	0.014	0.015	0.015	0.017	9:35:40	10/3/2011 9:35	0.018		
600	0.014	0.014	0.015	0.017	9:36:40	10/3/2011 9:36	0.017		
660	0.014	0.014	0.014	0.015	9:37:40	10/3/2011 9:37	0.015		
720	0.013	0.013	0.014	0.015	9:38:40	10/3/2011 9:38	0.015		
780	0.014	0.014	0.015	0.016	9:39:40	10/3/2011 9:39	0.016		
840	0.014	0.015	0.016	0.018	9:40:40	10/3/2011 9:40	0.018		
900	0.01	0.01	0.01	0.011	9:41:40	10/3/2011 9:41	0.011		
960	0.011	0.011	0.012	0.013	9:42:40	10/3/2011 9:42	0.013		
1020	0.013	0.013	0.014	0.014	9:43:40	10/3/2011 9:43	0.015		
1080	0.015	0.015	0.015	0.016	9:44:40	10/3/2011 9:44	0.016		
1140	0.017	0.018	0.019	0.023	9:45:40	10/3/2011 9:45	0.025		
1200	0.034	0.037	0.043	0.054	9:46:40	10/3/2011 9:46	0.056		
1260	0.009	0.009	0.01	0.01	9:47:40	10/3/2011 9:47	0.01		
1320	0.011	0.011	0.012	0.013	9:48:40	10/3/2011 9:48	0.014		
1380	0.011	0.011	0.012	0.012	9:49:40	10/3/2011 9:49	0.012		
1440	0.026	0.026	0.028	0.03	9:50:40	10/3/2011 9:50	0.03		
1500	0.012	0.012	0.013	0.014	9:51:40	10/3/2011 9:51	0.015		
1560	0.01	0.01	0.01	0.011	9:52:40	10/3/2011 9:52	0.011		
1620	0.017	0.018	0.018	0.021	9:53:40	10/3/2011 9:53	0.021		
1680	0.008	0.008	0.009	0.01	9:54:40	10/3/2011 9:54	0.01		
1740	0.047	0.052	0.062	0.082	9:55:40	10/3/2011 9:55	0.085		
1800	0.041	0.045	0.052	0.067	9:56:40	10/3/2011 9:56	0.069		
1860	0.045	0.05	0.058	0.078	9:57:40	10/3/2011 9:57	0.081		
1920	0.009	0.009	0.009	0.01	9:58:40	10/3/2011 9:58	0.01		

1980	0.008	0.008	0.008	0.009	9:59:40	10/3/2011 9:59	0.01
2040	0.008	0.009	0.009	0.01	10:00:40	10/3/2011 10:00	0.01
2100	0.008	0.008	0.009	0.009	10:01:40	10/3/2011 10:01	0.009
2160	0.009	0.009	0.01	0.01	10:02:40	10/3/2011 10:02	0.01
2220	0.01	0.01	0.01	0.012	10:03:40	10/3/2011 10:03	0.012
2280	0.023	0.025	0.029	0.046	10:04:40	10/3/2011 10:04	0.048
2340	0.015	0.016	0.018	0.026	10:05:40	10/3/2011 10:05	0.028
2400	0.014	0.015	0.017	0.026	10:06:40	10/3/2011 10:06	0.028
2460	0.005	0.005	0.006	0.007	10:07:40	10/3/2011 10:07	0.007
2520	0.005	0.005	0.005	0.005	10:08:40	10/3/2011 10:08	0.006
2580	0.011	0.012	0.013	0.016	10:09:40	10/3/2011 10:09	0.016
2640	0.008	0.008	0.009	0.01	10:10:40	10/3/2011 10:10	0.011
2700	0.006	0.006	0.006	0.007	10:11:40	10/3/2011 10:11	0.007
2760	0.007	0.007	0.007	0.008	10:12:40	10/3/2011 10:12	0.009
2820	0.009	0.009	0.01	0.013	10:13:40	10/3/2011 10:13	0.015
2880	0.009	0.009	0.009	0.01	10:14:40	10/3/2011 10:14	0.011
2940	0.008	0.008	0.008	0.01	10:15:40	10/3/2011 10:15	0.012
3000	0.007	0.008	0.008	0.009	10:16:40	10/3/2011 10:16	0.009
3060	0.007	0.007	0.008	0.008	10:17:40	10/3/2011 10:17	0.008
3120	0.004	0.005	0.005	0.006	10:18:40	10/3/2011 10:18	0.006
3180	0.004	0.004	0.004	0.004	10:19:40	10/3/2011 10:19	0.004
3240	0.004	0.004	0.004	0.004	10:20:40	10/3/2011 10:20	0.004
3300	0.003	0.003	0.004	0.004	10:21:40	10/3/2011 10:21	0.004
3360	0.004	0.004	0.004	0.004	10:22:40	10/3/2011 10:22	0.004
3420	0.004	0.004	0.004	0.004	10:23:40	10/3/2011 10:23	0.004
3480	0.004	0.004	0.004	0.004	10:24:40	10/3/2011 10:24	0.005
3540	0.006	0.006	0.007	0.007	10:25:40	10/3/2011 10:25	0.008
3600	0.006	0.006	0.006	0.007	10:26:40	10/3/2011 10:26	0.007
3660	0.012	0.012	0.013	0.015	10:27:40	10/3/2011 10:27	0.017
3720	0.035	0.037	0.039	0.049	10:28:40	10/3/2011 10:28	0.052
3780	0.02	0.021	0.022	0.026	10:29:40	10/3/2011 10:29	0.026
3840	0.021	0.022	0.024	0.03	10:30:40	10/3/2011 10:30	0.031
3900	0.019	0.019	0.02	0.024	10:31:40	10/3/2011 10:31	0.024
3960	0.011	0.012	0.013	0.016	10:32:40	10/3/2011 10:32	0.016
4020	0.005	0.005	0.006	0.007	10:33:40	10/3/2011 10:33	0.007
4080	0.005	0.005	0.006	0.007	10:34:40	10/3/2011 10:34	0.007
4140	0.004	0.005	0.005	0.006	10:35:40	10/3/2011 10:35	0.008
4200	0.003	0.003	0.003	0.003	10:36:40	10/3/2011 10:36	0.003
4260	0.003	0.003	0.003	0.003	10:37:40	10/3/2011 10:37	0.003
4320	0.013	0.014	0.016	0.02	10:38:40	10/3/2011 10:38	0.021
4380	0.003	0.003	0.003	0.003	10:39:40	10/3/2011 10:39	0.003
4440	0.003	0.003	0.003	0.003	10:40:40	10/3/2011 10:40	0.003
4500	0.004	0.004	0.004	0.004	10:41:40	10/3/2011 10:41	0.005
4560	0.005	0.005	0.005	0.006	10:42:40	10/3/2011 10:42	0.006
4620	0.005	0.005	0.005	0.005	10:43:40	10/3/2011 10:43	0.006
4680	0.005	0.005	0.005	0.006	10:44:40	10/3/2011 10:44	0.006
4740	0.004	0.004	0.005	0.005	10:45:40	10/3/2011 10:45	0.006
4800	0.004	0.004	0.005	0.005	10:46:40	10/3/2011 10:46	0.005
4860	0.005	0.005	0.006	0.006	10:47:40	10/3/2011 10:47	0.007
4920	0.006	0.007	0.007	0.008	10:48:40	10/3/2011 10:48	0.008
4980	0.007	0.008	0.009	0.01	10:49:40	10/3/2011 10:49	0.01
5040	0.006	0.006	0.006	0.007	10:50:40	10/3/2011 10:50	0.008
5100	0.004	0.004	0.004	0.004	10:51:40	10/3/2011 10:51	0.004
5160	0.004	0.004	0.004	0.005	10:52:40	10/3/2011 10:52	0.005
5220	0.006	0.006	0.007	0.008	10:53:40	10/3/2011 10:53	0.008
5280	0.006	0.007	0.007	0.009	10:54:40	10/3/2011 10:54	0.009
5340	0.006	0.006	0.006	0.007	10:55:40	10/3/2011 10:55	0.007
5400	0.005	0.005	0.005	0.005	10:56:40	10/3/2011 10:56	0.005
5460	0.005	0.005	0.005	0.005	10:57:40	10/3/2011 10:57	0.005
5520	0.006	0.006	0.006	0.007	10:58:40	10/3/2011 10:58	0.007
5580	0.007	0.007	0.008	0.008	10:59:40	10/3/2011 10:59	0.008
5640	0.006	0.006	0.006	0.006	11:00:40	10/3/2011 11:00	0.006
5700	0.008	0.008	0.009	0.01	11:01:40	10/3/2011 11:01	0.01
5760	0.013	0.014	0.014	0.016	11:02:40	10/3/2011 11:02	0.016
5820	0.005	0.005	0.005	0.005	11:03:40	10/3/2011 11:03	0.005
5880	0.005	0.006	0.006	0.006	11:04:40	10/3/2011 11:04	0.006
5940	0.006	0.006	0.007	0.007	11:05:40	10/3/2011 11:05	0.007
6000	0.009	0.009	0.009	0.01	11:06:40	10/3/2011 11:06	0.01
6060	0.005	0.005	0.005	0.005	11:07:40	10/3/2011 11:07	0.005

6120	0.005	0.005	0.005	0.006	11:08:40	10/3/2011 11:08	0.006
6180	0.007	0.007	0.008	0.009	11:09:40	10/3/2011 11:09	0.009
6240	0.008	0.008	0.009	0.01	11:10:40	10/3/2011 11:10	0.011
6300	0.012	0.013	0.013	0.014	11:11:40	10/3/2011 11:11	0.015
6360	0.018	0.018	0.02	0.027	11:12:40	10/3/2011 11:12	0.03
6420	0.006	0.006	0.006	0.006	11:13:40	10/3/2011 11:13	0.006
6480	0.005	0.005	0.005	0.006	11:14:40	10/3/2011 11:14	0.006
6540	0.006	0.006	0.006	0.006	11:15:40	10/3/2011 11:15	0.006
6600	0.007	0.007	0.007	0.008	11:16:40	10/3/2011 11:16	0.008
6660	0.005	0.005	0.005	0.005	11:17:40	10/3/2011 11:17	0.005
6720	0.005	0.005	0.005	0.005	11:18:40	10/3/2011 11:18	0.005
6780	0.005	0.005	0.005	0.005	11:19:40	10/3/2011 11:19	0.005
6840	0.005	0.006	0.006	0.006	11:20:40	10/3/2011 11:20	0.006
6900	0.006	0.006	0.007	0.008	11:21:40	10/3/2011 11:21	0.008
6960	0.014	0.016	0.019	0.026	11:22:40	10/3/2011 11:22	0.028
7020	0.006	0.006	0.006	0.006	11:23:40	10/3/2011 11:23	0.006
7080	0.006	0.006	0.006	0.006	11:24:40	10/3/2011 11:24	0.006
7140	0.006	0.006	0.006	0.006	11:25:40	10/3/2011 11:25	0.006
7200	0.006	0.006	0.006	0.007	11:26:40	10/3/2011 11:26	0.007
7260	0.006	0.007	0.007	0.007	11:27:40	10/3/2011 11:27	0.007
7320	0.006	0.006	0.006	0.006	11:28:40	10/3/2011 11:28	0.006
7380	0.007	0.007	0.007	0.007	11:29:40	10/3/2011 11:29	0.007
7440	0.008	0.008	0.008	0.009	11:30:40	10/3/2011 11:30	0.009
7500	0.007	0.007	0.008	0.009	11:31:40	10/3/2011 11:31	0.009
7560	0.006	0.006	0.006	0.006	11:32:40	10/3/2011 11:32	0.006
7620	0.006	0.006	0.006	0.007	11:33:40	10/3/2011 11:33	0.007
7680	0.007	0.007	0.007	0.008	11:34:40	10/3/2011 11:34	0.008
7740	0.008	0.008	0.009	0.009	11:35:40	10/3/2011 11:35	0.009
7800	0.008	0.008	0.008	0.009	11:36:40	10/3/2011 11:36	0.009
7860	0.006	0.006	0.007	0.007	11:37:40	10/3/2011 11:37	0.007
7920	0.005	0.005	0.006	0.006	11:38:40	10/3/2011 11:38	0.006
7980	0.011	0.011	0.012	0.014	11:39:40	10/3/2011 11:39	0.014
8040	0.218	0.218	0.221	0.253	11:40:40	10/3/2011 11:40	0.278
8100	0.005	0.005	0.006	0.006	11:41:40	10/3/2011 11:41	0.007
8160	0.005	0.006	0.006	0.006	11:42:40	10/3/2011 11:42	0.007
8220	0.005	0.005	0.005	0.005	11:43:40	10/3/2011 11:43	0.005
8280	0.013	0.014	0.014	0.017	11:44:40	10/3/2011 11:44	0.017
8340	0.003	0.003	0.003	0.003	11:45:40	10/3/2011 11:45	0.004
8400	0.003	0.003	0.003	0.003	11:46:40	10/3/2011 11:46	0.003
8460	0.003	0.003	0.004	0.004	11:47:40	10/3/2011 11:47	0.004
8520	0.004	0.004	0.004	0.004	11:48:40	10/3/2011 11:48	0.004
8580	0.004	0.004	0.004	0.004	11:49:40	10/3/2011 11:49	0.004
8640	0.005	0.005	0.005	0.006	11:50:40	10/3/2011 11:50	0.007
8700	0.005	0.005	0.005	0.006	11:51:40	10/3/2011 11:51	0.006
8760	0.005	0.005	0.005	0.006	11:52:40	10/3/2011 11:52	0.006
8820	0.006	0.006	0.006	0.007	11:53:40	10/3/2011 11:53	0.007
8880	0.006	0.006	0.006	0.007	11:54:40	10/3/2011 11:54	0.007
8940	0.007	0.007	0.007	0.008	11:55:40	10/3/2011 11:55	0.008
9000	0.009	0.009	0.01	0.012	11:56:40	10/3/2011 11:56	0.012
9060	0.043	0.044	0.044	0.045	11:57:40	10/3/2011 11:57	0.045
9120	0.022	0.022	0.023	0.025	11:58:40	10/3/2011 11:58	0.026
9180	0.009	0.01	0.01	0.011	11:59:40	10/3/2011 11:59	0.012
9240	0.027	0.028	0.029	0.033	12:00:40	10/3/2011 12:00	0.035
9300	0.009	0.009	0.01	0.011	12:01:40	10/3/2011 12:01	0.011
9360	0.006	0.006	0.007	0.007	12:02:40	10/3/2011 12:02	0.007
9420	0.006	0.006	0.006	0.007	12:03:40	10/3/2011 12:03	0.007
9480	0.006	0.006	0.006	0.007	12:04:40	10/3/2011 12:04	0.007
9540	0.009	0.009	0.009	0.011	12:05:40	10/3/2011 12:05	0.011
9600	0.009	0.009	0.01	0.012	12:06:40	10/3/2011 12:06	0.012
9660	0.006	0.006	0.006	0.007	12:07:40	10/3/2011 12:07	0.007
9720	0.006	0.006	0.006	0.006	12:08:40	10/3/2011 12:08	0.006
9780	0.011	0.011	0.011	0.012	12:09:40	10/3/2011 12:09	0.012
9840	0.042	0.043	0.045	0.072	12:10:40	10/3/2011 12:10	0.094
9900	0.006	0.006	0.006	0.007	12:11:40	10/3/2011 12:11	0.007
9960	0.006	0.006	0.006	0.006	12:12:40	10/3/2011 12:12	0.006
10020	0.007	0.007	0.007	0.007	12:13:40	10/3/2011 12:13	0.007
10080	0.013	0.014	0.014	0.015	12:14:40	10/3/2011 12:14	0.015
10140	0.005	0.005	0.006	0.006	12:15:40	10/3/2011 12:15	0.006
10200	0.005	0.005	0.005	0.006	12:16:40	10/3/2011 12:16	0.006

10260	0.005	0.005	0.005	0.005	12:17:40	10/3/2011 12:17	0.005
10320	0.005	0.005	0.005	0.005	12:18:40	10/3/2011 12:18	0.006
10380	0.006	0.006	0.006	0.007	12:19:40	10/3/2011 12:19	0.007
10440	0.006	0.006	0.006	0.007	12:20:40	10/3/2011 12:20	0.007
10500	0.004	0.004	0.004	0.005	12:21:40	10/3/2011 12:21	0.005
10560	0.003	0.003	0.003	0.003	12:22:40	10/3/2011 12:22	0.003
10620	0.003	0.003	0.003	0.004	12:23:40	10/3/2011 12:23	0.004
10680	0.002	0.003	0.003	0.003	12:24:40	10/3/2011 12:24	0.003
10740	0.003	0.003	0.003	0.004	12:25:40	10/3/2011 12:25	0.004
10800	0.003	0.003	0.003	0.004	12:26:40	10/3/2011 12:26	0.004
10860	0.004	0.005	0.005	0.005	12:27:40	10/3/2011 12:27	0.005
10920	0.004	0.004	0.004	0.004	12:28:40	10/3/2011 12:28	0.005
10980	0.005	0.005	0.006	0.006	12:29:40	10/3/2011 12:29	0.006
11040	0.023	0.024	0.024	0.028	12:30:40	10/3/2011 12:30	0.032
11100	0.008	0.009	0.01	0.011	12:31:40	10/3/2011 12:31	0.011
11160	0.008	0.009	0.01	0.011	12:32:40	10/3/2011 12:32	0.011
11220	0.005	0.005	0.006	0.006	12:33:40	10/3/2011 12:33	0.007
11280	0.004	0.005	0.005	0.005	12:34:40	10/3/2011 12:34	0.006
11340	0.005	0.005	0.006	0.006	12:35:40	10/3/2011 12:35	0.006
11400	0.006	0.006	0.006	0.006	12:36:40	10/3/2011 12:36	0.006
11460	0.007	0.007	0.007	0.007	12:37:40	10/3/2011 12:37	0.008
11520	0.008	0.008	0.008	0.01	12:38:40	10/3/2011 12:38	0.01
11580	0.007	0.007	0.007	0.008	12:39:40	10/3/2011 12:39	0.008
11640	0.005	0.005	0.005	0.006	12:40:40	10/3/2011 12:40	0.006
11700	0.005	0.005	0.005	0.005	12:41:40	10/3/2011 12:41	0.005
11760	0.005	0.005	0.005	0.006	12:42:40	10/3/2011 12:42	0.006
11820	0.004	0.005	0.005	0.005	12:43:40	10/3/2011 12:43	0.005
11880	0.005	0.005	0.005	0.006	12:44:40	10/3/2011 12:44	0.006
11940	0.005	0.005	0.006	0.006	12:45:40	10/3/2011 12:45	0.006
12000	0.006	0.006	0.006	0.006	12:46:40	10/3/2011 12:46	0.006
12060	0.005	0.005	0.005	0.006	12:47:40	10/3/2011 12:47	0.006
12120	0.004	0.004	0.005	0.005	12:48:40	10/3/2011 12:48	0.005
12180	0.004	0.005	0.005	0.005	12:49:40	10/3/2011 12:49	0.005
12240	0.005	0.005	0.005	0.005	12:50:40	10/3/2011 12:50	0.005
12300	0.004	0.004	0.005	0.005	12:51:40	10/3/2011 12:51	0.005
12360	0.004	0.004	0.005	0.005	12:52:40	10/3/2011 12:52	0.005
12420	0.004	0.004	0.004	0.005	12:53:40	10/3/2011 12:53	0.005
12480	0.006	0.006	0.006	0.007	12:54:40	10/3/2011 12:54	0.007
12540	0.006	0.006	0.006	0.006	12:55:40	10/3/2011 12:55	0.006
12600	0.007	0.008	0.008	0.009	12:56:40	10/3/2011 12:56	0.009
12660	0.007	0.007	0.008	0.009	12:57:40	10/3/2011 12:57	0.009
12720	0.006	0.006	0.007	0.007	12:58:40	10/3/2011 12:58	0.007
12780	0.004	0.004	0.004	0.004	12:59:40	10/3/2011 12:59	0.004
12840	0.005	0.005	0.005	0.005	13:00:40	10/3/2011 13:00	0.005
12900	0.003	0.004	0.004	0.004	13:01:40	10/3/2011 13:01	0.004
12960	0.005	0.005	0.005	0.006	13:02:40	10/3/2011 13:02	0.006
13020	0.007	0.007	0.007	0.008	13:03:40	10/3/2011 13:03	0.008
13080	0.005	0.005	0.005	0.005	13:04:40	10/3/2011 13:04	0.005
13140	0.011	0.013	0.015	0.017	13:05:40	10/3/2011 13:05	0.017
13200	0.006	0.006	0.007	0.008	13:06:40	10/3/2011 13:06	0.008
13260	0.004	0.004	0.004	0.004	13:07:40	10/3/2011 13:07	0.005
13320	0.002	0.002	0.002	0.003	13:08:40	10/3/2011 13:08	0.003
13380	0.004	0.004	0.004	0.005	13:09:40	10/3/2011 13:09	0.005
13440	0.004	0.004	0.004	0.004	13:10:40	10/3/2011 13:10	0.004
13500	0.004	0.004	0.004	0.004	13:11:40	10/3/2011 13:11	0.004
13560	0.003	0.003	0.003	0.003	13:12:40	10/3/2011 13:12	0.003
13620	0.003	0.004	0.004	0.004	13:13:40	10/3/2011 13:13	0.004
13680	0.004	0.004	0.004	0.004	13:14:40	10/3/2011 13:14	0.004
13740	0.005	0.005	0.005	0.006	13:15:40	10/3/2011 13:15	0.006
13800	0.003	0.003	0.003	0.003	13:16:40	10/3/2011 13:16	0.003
13860	0.003	0.003	0.003	0.003	13:17:40	10/3/2011 13:17	0.003
13920	0.003	0.003	0.003	0.003	13:18:40	10/3/2011 13:18	0.003
13980	0.003	0.003	0.003	0.003	13:19:40	10/3/2011 13:19	0.003
14040	0.003	0.003	0.003	0.003	13:20:40	10/3/2011 13:20	0.003
14100	0.003	0.003	0.003	0.004	13:21:40	10/3/2011 13:21	0.004
14160	0.005	0.006	0.006	0.007	13:22:40	10/3/2011 13:22	0.007
14220	0.013	0.013	0.014	0.016	13:23:40	10/3/2011 13:23	0.016
14280	0.011	0.012	0.013	0.015	13:24:40	10/3/2011 13:24	0.015
14340	0.006	0.006	0.006	0.007	13:25:40	10/3/2011 13:25	0.007

14400	0.005	0.005	0.005	0.007	13:26:40	10/3/2011 13:26	0.008
14460	0.005	0.005	0.005	0.006	13:27:40	10/3/2011 13:27	0.007
14520	0.008	0.008	0.009	0.01	13:28:40	10/3/2011 13:28	0.011
14580	0.009	0.009	0.01	0.011	13:29:40	10/3/2011 13:29	0.012
14640	0.005	0.005	0.005	0.005	13:30:40	10/3/2011 13:30	0.005
14700	0.003	0.003	0.004	0.004	13:31:40	10/3/2011 13:31	0.004
14760	0.004	0.004	0.005	0.005	13:32:40	10/3/2011 13:32	0.005
14820	0.004	0.004	0.004	0.004	13:33:40	10/3/2011 13:33	0.004
14880	0.006	0.006	0.006	0.006	13:34:40	10/3/2011 13:34	0.006
14940	0.008	0.008	0.008	0.01	13:35:40	10/3/2011 13:35	0.01
15000	0.006	0.006	0.007	0.007	13:36:40	10/3/2011 13:36	0.007
15060	0.006	0.006	0.006	0.007	13:37:40	10/3/2011 13:37	0.007
15120	0.005	0.006	0.006	0.007	13:38:40	10/3/2011 13:38	0.007
15180	0.008	0.008	0.009	0.01	13:39:40	10/3/2011 13:39	0.01
15240	0.009	0.009	0.01	0.012	13:40:40	10/3/2011 13:40	0.012
15300	0.007	0.008	0.008	0.01	13:41:40	10/3/2011 13:41	0.01
15360	0.005	0.005	0.006	0.007	13:42:40	10/3/2011 13:42	0.007
15420	0.009	0.009	0.01	0.013	13:43:40	10/3/2011 13:43	0.013
15480	0.005	0.005	0.006	0.007	13:44:40	10/3/2011 13:44	0.007
15540	0.009	0.01	0.01	0.013	13:45:40	10/3/2011 13:45	0.013
15600	0.014	0.016	0.017	0.022	13:46:40	10/3/2011 13:46	0.022
15660	0.01	0.01	0.011	0.013	13:47:40	10/3/2011 13:47	0.013
15720	0.005	0.005	0.005	0.007	13:48:40	10/3/2011 13:48	0.007
15780	0.003	0.004	0.004	0.005	13:49:40	10/3/2011 13:49	0.005
15840	0.003	0.003	0.004	0.005	13:50:40	10/3/2011 13:50	0.005
15900	0.002	0.002	0.002	0.002	13:51:40	10/3/2011 13:51	0.003
15960	0.002	0.002	0.002	0.003	13:52:40	10/3/2011 13:52	0.003
16020	0.002	0.002	0.002	0.003	13:53:40	10/3/2011 13:53	0.003
16080	0.002	0.002	0.003	0.003	13:54:40	10/3/2011 13:54	0.003
16140	0.006	0.007	0.007	0.008	13:55:40	10/3/2011 13:55	0.008
16200	0.008	0.008	0.009	0.014	13:56:40	10/3/2011 13:56	0.016
16260	0.007	0.007	0.008	0.009	13:57:40	10/3/2011 13:57	0.009
16320	0.003	0.003	0.004	0.005	13:58:40	10/3/2011 13:58	0.005
16380	0.004	0.004	0.004	0.005	13:59:40	10/3/2011 13:59	0.006
16440	0.003	0.003	0.003	0.004	14:00:40	10/3/2011 14:00	0.004
16500	0.004	0.004	0.005	0.005	14:01:40	10/3/2011 14:01	0.005
16560	0.005	0.006	0.006	0.008	14:02:40	10/3/2011 14:02	0.008
16620	0.005	0.005	0.006	0.007	14:03:40	10/3/2011 14:03	0.008
16680	0.11	0.111	0.112	0.113	14:04:40	10/3/2011 14:04	0.113
16740	0.005	0.005	0.005	0.005	14:05:40	10/3/2011 14:05	0.005
16800	0.004	0.005	0.005	0.006	14:06:40	10/3/2011 14:06	0.006
16860	0.003	0.003	0.003	0.004	14:07:40	10/3/2011 14:07	0.004
16920	0.003	0.003	0.003	0.004	14:08:40	10/3/2011 14:08	0.004
16980	0.01	0.011	0.012	0.014	14:09:40	10/3/2011 14:09	0.014
17040	0.009	0.01	0.011	0.012	14:10:40	10/3/2011 14:10	0.012
17100	0.005	0.005	0.006	0.006	14:11:40	10/3/2011 14:11	0.006
17160	0.004	0.005	0.005	0.005	14:12:40	10/3/2011 14:12	0.005

AECOM

Client: National Grid
Location: Metropolitan-Lowes SB-23 (day 2)
Date: October 4, 2011
Field Personnel: J. Pfeiffer, L. Ferreira

Project: Metropolitan- Lowes
Project Number: 6013736
Weather: Temp ~55°F, partly cloudy, calm.
Ambient Noise: ~~93.7 dB~~ 84.8 dB.

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
0750	set up camp upwind and downwind begin monitoring.						Set up camp ~0750 AM.
0808	0.0	0.016	0.0	0.0	0.022	84.5	no intrusive work, setting up.
0825	0.0	0.016	0.0	0.0	0.025	86.5	SB-23 advance
0840	0.0	0.011	0.0	0.0	0.018	86.5	SB-23 advance
0900 ~~0855~~	0.0	0.014	0.0	0.0	0.017	85.5	SB-23 advance.
0913 ~~0910~~	0.0	0.011	0.0	0.0	0.017	86.3	SB-23 advance
0925	0.0	0.014	0.0	0.0	0.021	86.4	SB-23 advance @ 55' bgs.
0940	0.0	0.013	0.0	0.0	0.017	86.1	SB-23 advance.
0955	0.0	0.013	0.0	0.0	0.018	85.4	SB-23 advance @ 65' bgs.
1010	→ no reading collected						
1025	0.0	0.010	0.0	0.0	0.020	87.4	SB-23 advance @ 75' bgs.
1040	0.0	0.012	0.0	0.0	0.017	86.8	SB-23 advance.
1055	0.0	0.011	0.0	0.0	0.019	85.9	SB-23 advance @ 85' bgs.
1110	0.0	0.012	0.0	0.0	0.020	88.9	SB-23 advance
1125	0.0	0.010	0.0	0.0	0.015	80.1	SB-23 advance @ 90' bgs.
1140	0.0	0.009	0.0	~~0.0~~	~~0.016~~	~~76.6~~	~~lunch~~
1155					0.016	76.6	lunch 1145-
1210	0.0	0.010	0.0	0.0	0.015	78	No activity. Boart getting materials
1225	0.0	0.010	0.0	0.0	0.015	85	
1240	0.0	0.009	0.0	0.0	0.011	86	well construction
1255	0.0	0.009	0.0	0.0	0.012	80	"
1325	0.0	0.009	0.0	0.0	0.013	84	"

=========Event #14 information (begin)=========
==========
[Event #14 name:]--[Event #14]2011-10-04 07:10<-->2011-10-04 15:01
[Event start time:]--2011-10-04 07:10:16[Event end time:]--2011-10-04 15:01:16
==========Event #14 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624
Data Points: 471 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)
Measurement Gas : Isobutene
Calibration Time : 2011-10-04 07:07:002011-10-04 07:07:002011-10-04 07:07:00
Drift Value : --- --- ---
Low Alarm Levels : 50.000 50.000 50.000
High Alarm Levels : 100.000 100.000 100.000
Span Value : 100.000 100.000 100.000
Correction Factor : 1.00 1.00 1.00
Over Alarm Levels : 15000.000 15000.000 15000.000
==========Event #14 data informations==========

LINE#	Date/Time	PID-Max(ppm)	PID-Min(ppm)	PID-Avg(ppm)
1	10/4/2011 7:11	0.093	0	0.025
2	10/4/2011 7:12	0.004	0	0
3	10/4/2011 7:13	0.026	0	0.005
4	10/4/2011 7:14	0.033	0.004	0.017
5	10/4/2011 7:15	0.013	0.001	0.006
6	10/4/2011 7:16	0.026	0	0.01
7	10/4/2011 7:17	0.002	0	0
8	10/4/2011 7:18	0	0	0
9	10/4/2011 7:19	0	0	0
10	10/4/2011 7:20	0	0	0
11	10/4/2011 7:21	0	0	0
12	10/4/2011 7:22	0	0	0
13	10/4/2011 7:23	0	0	0
14	10/4/2011 7:24	0	0	0
15	10/4/2011 7:25	0	0	0
16	10/4/2011 7:26	0	0	0
17	10/4/2011 7:27	0	0	0
18	10/4/2011 7:28	0	0	0
19	10/4/2011 7:29	0	0	0
20	10/4/2011 7:30	0	0	0
21	10/4/2011 7:31	0	0	0
22	10/4/2011 7:32	0	0	0
23	10/4/2011 7:33	0	0	0
24	10/4/2011 7:34	0	0	0
25	10/4/2011 7:35	0	0	0
26	10/4/2011 7:36	0	0	0
27	10/4/2011 7:37	0	0	0
28	10/4/2011 7:38	0	0	0
29	10/4/2011 7:39	0	0	0
30	10/4/2011 7:40	0	0	0
31	10/4/2011 7:41	0	0	0
32	10/4/2011 7:42	0	0	0
33	10/4/2011 7:43	0	0	0
34	10/4/2011 7:44	0	0	0
35	10/4/2011 7:45	0	0	0
36	10/4/2011 7:46	0	0	0
37	10/4/2011 7:47	0	0	0
38	10/4/2011 7:48	0	0	0
39	10/4/2011 7:49	0	0	0
40	10/4/2011 7:50	0	0	0
41	10/4/2011 7:51	0	0	0
42	10/4/2011 7:52	0	0	0
43	10/4/2011 7:53	0	0	0
44	10/4/2011 7:54	0	0	0
45	10/4/2011 7:55	0	0	0
46	10/4/2011 7:56	0	0	0
47	10/4/2011 7:57	0	0	0
48	10/4/2011 7:58	0	0	0

49	10/4/2011 7:59	0	0	0
50	10/4/2011 8:00	0	0	0
51	10/4/2011 8:01	0	0	0
52	10/4/2011 8:02	0	0	0
53	10/4/2011 8:03	0	0	0
54	10/4/2011 8:04	0	0	0
55	10/4/2011 8:05	0	0	0
56	10/4/2011 8:06	0	0	0
57	10/4/2011 8:07	0	0	0
58	10/4/2011 8:08	0	0	0
59	10/4/2011 8:09	0	0	0
60	10/4/2011 8:10	0	0	0
61	10/4/2011 8:11	0	0	0
62	10/4/2011 8:12	0	0	0
63	10/4/2011 8:13	0	0	0
64	10/4/2011 8:14	0	0	0
65	10/4/2011 8:15	0	0	0
66	10/4/2011 8:16	0	0	0
67	10/4/2011 8:17	0	0	0
68	10/4/2011 8:18	0	0	0
69	10/4/2011 8:19	0	0	0
70	10/4/2011 8:20	0	0	0
71	10/4/2011 8:21	0	0	0
72	10/4/2011 8:22	0	0	0
73	10/4/2011 8:23	0	0	0
74	10/4/2011 8:24	0	0	0
75	10/4/2011 8:25	0	0	0
76	10/4/2011 8:26	0	0	0
77	10/4/2011 8:27	0	0	0
78	10/4/2011 8:28	0	0	0
79	10/4/2011 8:29	0	0	0
80	10/4/2011 8:30	0	0	0
81	10/4/2011 8:31	0	0	0
82	10/4/2011 8:32	0	0	0
83	10/4/2011 8:33	0	0	0
84	10/4/2011 8:34	0	0	0
85	10/4/2011 8:35	0	0	0
86	10/4/2011 8:36	0	0	0
87	10/4/2011 8:37	0	0	0
88	10/4/2011 8:38	0	0	0
89	10/4/2011 8:39	0	0	0
90	10/4/2011 8:40	0	0	0
91	10/4/2011 8:41	0	0	0
92	10/4/2011 8:42	0	0	0
93	10/4/2011 8:43	0	0	0
94	10/4/2011 8:44	0	0	0
95	10/4/2011 8:45	0	0	0
96	10/4/2011 8:46	0	0	0
97	10/4/2011 8:47	0	0	0
98	10/4/2011 8:48	0	0	0
99	10/4/2011 8:49	0	0	0
100	10/4/2011 8:50	0	0	0
101	10/4/2011 8:51	0	0	0
102	10/4/2011 8:52	0	0	0
103	10/4/2011 8:53	0	0	0
104	10/4/2011 8:54	0	0	0
105	10/4/2011 8:55	0	0	0
106	10/4/2011 8:56	0	0	0
107	10/4/2011 8:57	0	0	0
108	10/4/2011 8:58	0	0	0
109	10/4/2011 8:59	0	0	0
110	10/4/2011 9:00	0	0	0
111	10/4/2011 9:01	0	0	0
112	10/4/2011 9:02	0	0	0
113	10/4/2011 9:03	0	0	0
114	10/4/2011 9:04	0	0	0
115	10/4/2011 9:05	0	0	0
116	10/4/2011 9:06	0	0	0
117	10/4/2011 9:07	0.001	0	0

118	10/4/2011 9:08	0	0	0
119	10/4/2011 9:09	0	0	0
120	10/4/2011 9:10	0	0	0
121	10/4/2011 9:11	0	0	0
122	10/4/2011 9:12	0	0	0
123	10/4/2011 9:13	0	0	0
124	10/4/2011 9:14	0	0	0
125	10/4/2011 9:15	0	0	0
126	10/4/2011 9:16	0	0	0
127	10/4/2011 9:17	0	0	0
128	10/4/2011 9:18	0	0	0
129	10/4/2011 9:19	0	0	0
130	10/4/2011 9:20	0	0	0
131	10/4/2011 9:21	0	0	0
132	10/4/2011 9:22	0	0	0
133	10/4/2011 9:23	0	0	0
134	10/4/2011 9:24	0	0	0
135	10/4/2011 9:25	0	0	0
136	10/4/2011 9:26	0	0	0
137	10/4/2011 9:27	0	0	0
138	10/4/2011 9:28	0	0	0
139	10/4/2011 9:29	0	0	0
140	10/4/2011 9:30	0	0	0
141	10/4/2011 9:31	0	0	0
142	10/4/2011 9:32	0	0	0
143	10/4/2011 9:33	0	0	0
144	10/4/2011 9:34	0.002	0	0
145	10/4/2011 9:35	0.002	0	0
146	10/4/2011 9:36	0	0	0
147	10/4/2011 9:37	0	0	0
148	10/4/2011 9:38	0	0	0
149	10/4/2011 9:39	0	0	0
150	10/4/2011 9:40	0	0	0
151	10/4/2011 9:41	0	0	0
152	10/4/2011 9:42	0	0	0
153	10/4/2011 9:43	0	0	0
154	10/4/2011 9:44	0	0	0
155	10/4/2011 9:45	0	0	0
156	10/4/2011 9:46	0	0	0
157	10/4/2011 9:47	0.004	0	0
158	10/4/2011 9:48	0.004	0	0
159	10/4/2011 9:49	0.009	0	0.001
160	10/4/2011 9:50	0.02	0	0.002
161	10/4/2011 9:51	0.021	0	0.003
162	10/4/2011 9:52	0	0	0
163	10/4/2011 9:53	0	0	0
164	10/4/2011 9:54	0.01	0	0.001
165	10/4/2011 9:55	0.006	0	0
166	10/4/2011 9:56	0.007	0	0
167	10/4/2011 9:57	0.011	0	0.001
168	10/4/2011 9:58	0.013	0	0.001
169	10/4/2011 9:59	0	0	0
170	10/4/2011 10:00	0.061	0	0.005
171	10/4/2011 10:01	0.02	0	0.002
172	10/4/2011 10:02	0.015	0	0.001
173	10/4/2011 10:03	0.002	0	0
174	10/4/2011 10:04	0.032	0	0.009
175	10/4/2011 10:05	0.063	0.004	0.03
176	10/4/2011 10:06	0.091	0.036	0.058
177	10/4/2011 10:07	0.11	0.042	0.08
178	10/4/2011 10:08	0.073	0.012	0.044
179	10/4/2011 10:09	0.068	0.02	0.04
180	10/4/2011 10:10	0.085	0.008	0.04
181	10/4/2011 10:11	0.177	0.012	0.094
182	10/4/2011 10:12	0.086	0.025	0.056
183	10/4/2011 10:13	0.132	0.062	0.093
184	10/4/2011 10:14	0.115	0.042	0.076
185	10/4/2011 10:15	0.118	0	0.043
186	10/4/2011 10:16	0.046	0	0.011

187	10/4/2011 10:17	0.017	0	0.002
188	10/4/2011 10:18	0.041	0	0.01
189	10/4/2011 10:19	0.099	0.01	0.043
190	10/4/2011 10:20	0.028	0	0.007
191	10/4/2011 10:21	0.045	0	0.009
192	10/4/2011 10:22	0.017	0	0.003
193	10/4/2011 10:23	0.066	0	0.025
194	10/4/2011 10:24	0.08	0.001	0.03
195	10/4/2011 10:25	0.038	0.003	0.016
196	10/4/2011 10:26	0.03	0	0.01
197	10/4/2011 10:27	0.052	0	0.023
198	10/4/2011 10:28	0.045	0	0.01
199	10/4/2011 10:29	0.053	0	0.024
200	10/4/2011 10:30	0.07	0.024	0.051
201	10/4/2011 10:31	0.053	0	0.01
202	10/4/2011 10:32	0.058	0	0.02
203	10/4/2011 10:33	0.017	0	0.004
204	10/4/2011 10:34	0.088	0	0.03
205	10/4/2011 10:35	0.086	0	0.024
206	10/4/2011 10:36	0.039	0	0.008
207	10/4/2011 10:37	0.015	0	0.002
208	10/4/2011 10:38	0.012	0	0.002
209	10/4/2011 10:39	0.017	0	0.003
210	10/4/2011 10:40	0.004	0	0
211	10/4/2011 10:41	0.009	0	0.001
212	10/4/2011 10:42	0.006	0	0
213	10/4/2011 10:43	0.018	0	0.003
214	10/4/2011 10:44	0.018	0	0.001
215	10/4/2011 10:45	0.007	0	0.001
216	10/4/2011 10:46	0.023	0	0.003
217	10/4/2011 10:47	0.037	0.005	0.017
218	10/4/2011 10:48	0.011	0	0
219	10/4/2011 10:49	0.005	0	0
220	10/4/2011 10:50	0.014	0	0.002
221	10/4/2011 10:51	0.027	0	0.005
222	10/4/2011 10:52	0.003	0	0
223	10/4/2011 10:53	0	0	0
224	10/4/2011 10:54	0.007	0	0.001
225	10/4/2011 10:55	0	0	0
226	10/4/2011 10:56	0	0	0
227	10/4/2011 10:57	0	0	0
228	10/4/2011 10:58	0	0	0
229	10/4/2011 10:59	0	0	0
230	10/4/2011 11:00	0	0	0
231	10/4/2011 11:01	0.002	0	0
232	10/4/2011 11:02	0	0	0
233	10/4/2011 11:03	0	0	0
234	10/4/2011 11:04	0	0	0
235	10/4/2011 11:05	0	0	0
236	10/4/2011 11:06	0	0	0
237	10/4/2011 11:07	0	0	0
238	10/4/2011 11:08	0	0	0
239	10/4/2011 11:09	0	0	0
240	10/4/2011 11:10	0.002	0	0
241	10/4/2011 11:11	0	0	0
242	10/4/2011 11:12	0	0	0
243	10/4/2011 11:13	0	0	0
244	10/4/2011 11:14	0.002	0	0
245	10/4/2011 11:15	0.03	0	0.004
246	10/4/2011 11:16	0.007	0	0
247	10/4/2011 11:17	0.003	0	0
248	10/4/2011 11:18	0	0	0
249	10/4/2011 11:19	0.007	0	0
250	10/4/2011 11:20	0	0	0
251	10/4/2011 11:21	0	0	0
252	10/4/2011 11:22	0	0	0
253	10/4/2011 11:23	0	0	0
254	10/4/2011 11:24	0	0	0
255	10/4/2011 11:25	0	0	0

256	10/4/2011 11:26	0	0	0
257	10/4/2011 11:27	0	0	0
258	10/4/2011 11:28	0	0	0
259	10/4/2011 11:29	0	0	0
260	10/4/2011 11:30	0	0	0
261	10/4/2011 11:31	0	0	0
262	10/4/2011 11:32	0.037	0	0
263	10/4/2011 11:33	0.171	0	0.016
264	10/4/2011 11:34	0	0	0
265	10/4/2011 11:35	0	0	0
266	10/4/2011 11:36	0	0	0
267	10/4/2011 11:37	0	0	0
268	10/4/2011 11:38	0	0	0
269	10/4/2011 11:39	0	0	0
270	10/4/2011 11:40	0	0	0
271	10/4/2011 11:41	0	0	0
272	10/4/2011 11:42	0	0	0
273	10/4/2011 11:43	0	0	0
274	10/4/2011 11:44	0	0	0
275	10/4/2011 11:45	0	0	0
276	10/4/2011 11:46	0	0	0
277	10/4/2011 11:47	0	0	0
278	10/4/2011 11:48	0	0	0
279	10/4/2011 11:49	0	0	0
280	10/4/2011 11:50	0	0	0
281	10/4/2011 11:51	0	0	0
282	10/4/2011 11:52	0	0	0
283	10/4/2011 11:53	0	0	0
284	10/4/2011 11:54	0	0	0
285	10/4/2011 11:55	0	0	0
286	10/4/2011 11:56	0	0	0
287	10/4/2011 11:57	0	0	0
288	10/4/2011 11:58	0	0	0
289	10/4/2011 11:59	0	0	0
290	10/4/2011 12:00	0	0	0
291	10/4/2011 12:01	0	0	0
292	10/4/2011 12:02	0	0	0
293	10/4/2011 12:03	0	0	0
294	10/4/2011 12:04	0	0	0
295	10/4/2011 12:05	0	0	0
296	10/4/2011 12:06	0	0	0
297	10/4/2011 12:07	0	0	0
298	10/4/2011 12:08	0	0	0
299	10/4/2011 12:09	0	0	0
300	10/4/2011 12:10	0	0	0
301	10/4/2011 12:11	0	0	0
302	10/4/2011 12:12	0	0	0
303	10/4/2011 12:13	0	0	0
304	10/4/2011 12:14	0	0	0
305	10/4/2011 12:15	0	0	0
306	10/4/2011 12:16	0	0	0
307	10/4/2011 12:17	0	0	0
308	10/4/2011 12:18	0	0	0
309	10/4/2011 12:19	0	0	0
310	10/4/2011 12:20	0	0	0
311	10/4/2011 12:21	0	0	0
312	10/4/2011 12:22	0	0	0
313	10/4/2011 12:23	0	0	0
314	10/4/2011 12:24	0	0	0
315	10/4/2011 12:25	0	0	0
316	10/4/2011 12:26	0	0	0
317	10/4/2011 12:27	0	0	0
318	10/4/2011 12:28	0	0	0
319	10/4/2011 12:29	0	0	0
320	10/4/2011 12:30	0	0	0
321	10/4/2011 12:31	0	0	0
322	10/4/2011 12:32	0	0	0
323	10/4/2011 12:33	0	0	0
324	10/4/2011 12:34	0	0	0

325	10/4/2011 12:35	0	0	0
326	10/4/2011 12:36	0	0	0
327	10/4/2011 12:37	0	0	0
328	10/4/2011 12:38	0	0	0
329	10/4/2011 12:39	0	0	0
330	10/4/2011 12:40	0	0	0
331	10/4/2011 12:41	0	0	0
332	10/4/2011 12:42	0	0	0
333	10/4/2011 12:43	0	0	0
334	10/4/2011 12:44	0	0	0
335	10/4/2011 12:45	0	0	0
336	10/4/2011 12:46	0	0	0
337	10/4/2011 12:47	0	0	0
338	10/4/2011 12:48	0	0	0
339	10/4/2011 12:49	0	0	0
340	10/4/2011 12:50	0	0	0
341	10/4/2011 12:51	0	0	0
342	10/4/2011 12:52	0	0	0
343	10/4/2011 12:53	0	0	0
344	10/4/2011 12:54	0	0	0
345	10/4/2011 12:55	0	0	0
346	10/4/2011 12:56	0	0	0
347	10/4/2011 12:57	0	0	0
348	10/4/2011 12:58	0	0	0
349	10/4/2011 12:59	0	0	0
350	10/4/2011 13:00	0	0	0
351	10/4/2011 13:01	0	0	0
352	10/4/2011 13:02	0	0	0
353	10/4/2011 13:03	0	0	0
354	10/4/2011 13:04	0	0	0
355	10/4/2011 13:05	0	0	0
356	10/4/2011 13:06	0	0	0
357	10/4/2011 13:07	0	0	0
358	10/4/2011 13:08	0	0	0
359	10/4/2011 13:09	0	0	0
360	10/4/2011 13:10	0	0	0
361	10/4/2011 13:11	0	0	0
362	10/4/2011 13:12	0	0	0
363	10/4/2011 13:13	0	0	0
364	10/4/2011 13:14	0	0	0
365	10/4/2011 13:15	0	0	0
366	10/4/2011 13:16	0	0	0
367	10/4/2011 13:17	0	0	0
368	10/4/2011 13:18	0	0	0
369	10/4/2011 13:19	0	0	0
370	10/4/2011 13:20	0	0	0
371	10/4/2011 13:21	0	0	0
372	10/4/2011 13:22	0	0	0
373	10/4/2011 13:23	0	0	0
374	10/4/2011 13:24	0	0	0
375	10/4/2011 13:25	0	0	0
376	10/4/2011 13:26	0	0	0
377	10/4/2011 13:27	0	0	0
378	10/4/2011 13:28	0	0	0
379	10/4/2011 13:29	0	0	0
380	10/4/2011 13:30	0	0	0
381	10/4/2011 13:31	0	0	0
382	10/4/2011 13:32	0	0	0
383	10/4/2011 13:33	0	0	0
384	10/4/2011 13:34	0	0	0
385	10/4/2011 13:35	0	0	0
386	10/4/2011 13:36	0	0	0
387	10/4/2011 13:37	0	0	0
388	10/4/2011 13:38	0	0	0
389	10/4/2011 13:39	0	0	0
390	10/4/2011 13:40	0	0	0
391	10/4/2011 13:41	0	0	0
392	10/4/2011 13:42	0	0	0
393	10/4/2011 13:43	0	0	0

394	10/4/2011 13:44	0	0	0
395	10/4/2011 13:45	0	0	0
396	10/4/2011 13:46	0	0	0
397	10/4/2011 13:47	0	0	0
398	10/4/2011 13:48	0	0	0
399	10/4/2011 13:49	0	0	0
400	10/4/2011 13:50	0.004	0	0
401	10/4/2011 13:51	0	0	0
402	10/4/2011 13:52	0	0	0
403	10/4/2011 13:53	0	0	0
404	10/4/2011 13:54	0	0	0
405	10/4/2011 13:55	0	0	0
406	10/4/2011 13:56	0	0	0
407	10/4/2011 13:57	0	0	0
408	10/4/2011 13:58	0	0	0
409	10/4/2011 13:59	0	0	0
410	10/4/2011 14:00	0	0	0
411	10/4/2011 14:01	0	0	0
412	10/4/2011 14:02	0	0	0
413	10/4/2011 14:03	0	0	0
414	10/4/2011 14:04	0	0	0
415	10/4/2011 14:05	0	0	0
416	10/4/2011 14:06	0	0	0
417	10/4/2011 14:07	0	0	0
418	10/4/2011 14:08	0	0	0
419	10/4/2011 14:09	0	0	0
420	10/4/2011 14:10	0	0	0
421	10/4/2011 14:11	0	0	0
422	10/4/2011 14:12	0	0	0
423	10/4/2011 14:13	0.001	0	0
424	10/4/2011 14:14	0	0	0
425	10/4/2011 14:15	0	0	0
426	10/4/2011 14:16	0	0	0
427	10/4/2011 14:17	0	0	0
428	10/4/2011 14:18	0	0	0
429	10/4/2011 14:19	0	0	0
430	10/4/2011 14:20	0	0	0
431	10/4/2011 14:21	0	0	0
432	10/4/2011 14:22	0	0	0
433	10/4/2011 14:23	0	0	0
434	10/4/2011 14:24	0	0	0
435	10/4/2011 14:25	0	0	0
436	10/4/2011 14:26	0	0	0
437	10/4/2011 14:27	0	0	0
438	10/4/2011 14:28	0	0	0
439	10/4/2011 14:29	0	0	0
440	10/4/2011 14:30	0	0	0
441	10/4/2011 14:31	0	0	0
442	10/4/2011 14:32	0	0	0
443	10/4/2011 14:33	0	0	0
444	10/4/2011 14:34	0	0	0
445	10/4/2011 14:35	0	0	0
446	10/4/2011 14:36	0	0	0
447	10/4/2011 14:37	0	0	0
448	10/4/2011 14:38	0	0	0
449	10/4/2011 14:39	0	0	0
450	10/4/2011 14:40	0	0	0
451	10/4/2011 14:41	0	0	0
452	10/4/2011 14:42	0.089	0	0.005
453	10/4/2011 14:43	0.025	0	0
454	10/4/2011 14:44	0	0	0
455	10/4/2011 14:45	0	0	0
456	10/4/2011 14:46	0	0	0
457	10/4/2011 14:47	0	0	0
458	10/4/2011 14:48	0	0	0
459	10/4/2011 14:49	0	0	0
460	10/4/2011 14:50	0	0	0
461	10/4/2011 14:51	0	0	0
462	10/4/2011 14:52	0	0	0

463	10/4/2011 14:53	0	0	0
464	10/4/2011 14:54	0	0	0
465	10/4/2011 14:55	0	0	0
466	10/4/2011 14:56	0	0	0
467	10/4/2011 14:57	0	0	0
468	10/4/2011 14:58	0	0	0
469	10/4/2011 14:59	0	0	0
470	10/4/2011 15:00	0	0	0
471	10/4/2011 15:01	0	0	0

==========Event #14 information (end)==========

==========Event #8 information (begin)==========

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[Event #8 name:]--[Event #8]2011-10-04 07:21<-->2011-10-04 15:15

[Event start time:]--2011-10-04 07:21:10[Event end time:]--2011-10-04 15:15:10

==========Event #8 head information==========

Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367

Data Points: 474 Sample Period: 60 s Datalog Mode: Automatic

SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode

==========

Sensor Information : PID(ppb)

Measurement Gas : Isobutene

Calibration Time : 2011-10-04 07:19:00

Drift Value : ---

Low Alarm Levels : 25847

High Alarm Levels : 51694

Span Value : 100000

Correction Factor : 1.00

Over Alarm Levels : 15000000

==========Event #8 data informations==========

LINE#	Date/Time	PID(ppm)	PID(ppb)
1	10/4/2011 7:22	0.01	7
2	10/4/2011 7:23	0.00	0
3	10/4/2011 7:24	0.00	0
4	10/4/2011 7:25	0.00	0
5	10/4/2011 7:26	0.00	0
6	10/4/2011 7:27	0.00	0
7	10/4/2011 7:28	0.00	0
8	10/4/2011 7:29	0.00	0
9	10/4/2011 7:30	0.00	0
10	10/4/2011 7:31	0.00	0
11	10/4/2011 7:32	0.00	0
12	10/4/2011 7:33	0.00	0
13	10/4/2011 7:34	0.00	0
14	10/4/2011 7:35	0.00	0
15	10/4/2011 7:36	0.00	0
16	10/4/2011 7:37	0.00	0
17	10/4/2011 7:38	0.00	0
18	10/4/2011 7:39	0.00	0
19	10/4/2011 7:40	0.00	0
20	10/4/2011 7:41	0.00	0
21	10/4/2011 7:42	0.00	0
22	10/4/2011 7:43	0.00	0
23	10/4/2011 7:44	0.00	0
24	10/4/2011 7:45	0.00	0
25	10/4/2011 7:46	0.00	0
26	10/4/2011 7:47	0.00	0
27	10/4/2011 7:48	0.00	0
28	10/4/2011 7:49	0.00	0
29	10/4/2011 7:50	0.00	0
30	10/4/2011 7:51	0.00	0
31	10/4/2011 7:52	0.00	0
32	10/4/2011 7:53	0.00	0
33	10/4/2011 7:54	0.00	2
34	10/4/2011 7:55	0.01	8
35	10/4/2011 7:56	0.02	15
36	10/4/2011 7:57	0.02	22
37	10/4/2011 7:58	0.02	23
38	10/4/2011 7:59	0.02	17
39	10/4/2011 8:00	0.00	0
40	10/4/2011 8:01	0.00	0
41	10/4/2011 8:02	0.00	0
42	10/4/2011 8:03	0.00	0
43	10/4/2011 8:04	0.00	0
44	10/4/2011 8:05	0.00	0
45	10/4/2011 8:06	0.00	0
46	10/4/2011 8:07	0.00	0
47	10/4/2011 8:08	0.00	0
48	10/4/2011 8:09	0.00	0

49	10/4/2011 8:10	0.00	0
50	10/4/2011 8:11	0.00	0
51	10/4/2011 8:12	0.00	0
52	10/4/2011 8:13	0.00	0
53	10/4/2011 8:14	0.00	0
54	10/4/2011 8:15	0.00	0
55	10/4/2011 8:16	0.00	0
56	10/4/2011 8:17	0.00	0
57	10/4/2011 8:18	0.00	0
58	10/4/2011 8:19	0.00	0
59	10/4/2011 8:20	0.00	0
60	10/4/2011 8:21	0.00	0
61	10/4/2011 8:22	0.00	0
62	10/4/2011 8:23	0.00	0
63	10/4/2011 8:24	0.00	0
64	10/4/2011 8:25	0.00	0
65	10/4/2011 8:26	0.00	0
66	10/4/2011 8:27	0.00	0
67	10/4/2011 8:28	0.00	0
68	10/4/2011 8:29	0.00	0
69	10/4/2011 8:30	0.00	0
70	10/4/2011 8:31	0.00	0
71	10/4/2011 8:32	0.00	0
72	10/4/2011 8:33	0.00	0
73	10/4/2011 8:34	0.00	0
74	10/4/2011 8:35	0.00	0
75	10/4/2011 8:36	0.00	0
76	10/4/2011 8:37	0.00	0
77	10/4/2011 8:38	0.00	0
78	10/4/2011 8:39	0.00	0
79	10/4/2011 8:40	0.00	0
80	10/4/2011 8:41	0.00	0
81	10/4/2011 8:42	0.00	0
82	10/4/2011 8:43	0.00	0
83	10/4/2011 8:44	0.00	0
84	10/4/2011 8:45	0.00	0
85	10/4/2011 8:46	0.00	0
86	10/4/2011 8:47	0.00	0
87	10/4/2011 8:48	0.00	0
88	10/4/2011 8:49	0.00	0
89	10/4/2011 8:50	0.00	0
90	10/4/2011 8:51	0.00	0
91	10/4/2011 8:52	0.00	0
92	10/4/2011 8:53	0.00	0
93	10/4/2011 8:54	0.00	0
94	10/4/2011 8:55	0.00	0
95	10/4/2011 8:56	0.00	0
96	10/4/2011 8:57	0.00	0
97	10/4/2011 8:58	0.00	0
98	10/4/2011 8:59	0.00	0
99	10/4/2011 9:00	0.00	0
100	10/4/2011 9:01	0.00	0
101	10/4/2011 9:02	0.00	0
102	10/4/2011 9:03	0.00	0
103	10/4/2011 9:04	0.00	0
104	10/4/2011 9:05	0.00	0
105	10/4/2011 9:06	0.00	0
106	10/4/2011 9:07	0.00	0
107	10/4/2011 9:08	0.00	0
108	10/4/2011 9:09	0.00	0
109	10/4/2011 9:10	0.00	0
110	10/4/2011 9:11	0.00	0
111	10/4/2011 9:12	0.00	0
112	10/4/2011 9:13	0.00	0
113	10/4/2011 9:14	0.00	0
114	10/4/2011 9:15	0.00	0
115	10/4/2011 9:16	0.00	0
116	10/4/2011 9:17	0.00	0
117	10/4/2011 9:18	0.01	7

118	10/4/2011 9:19	0.00	0
119	10/4/2011 9:20	0.00	0
120	10/4/2011 9:21	0.00	0
121	10/4/2011 9:22	0.00	0
122	10/4/2011 9:23	0.00	0
123	10/4/2011 9:24	0.00	0
124	10/4/2011 9:25	0.00	0
125	10/4/2011 9:26	0.00	0
126	10/4/2011 9:27	0.00	0
127	10/4/2011 9:28	0.00	0
128	10/4/2011 9:29	0.00	0
129	10/4/2011 9:30	0.00	0
130	10/4/2011 9:31	0.00	0
131	10/4/2011 9:32	0.00	0
132	10/4/2011 9:33	0.00	0
133	10/4/2011 9:34	0.00	0
134	10/4/2011 9:35	0.00	0
135	10/4/2011 9:36	0.00	0
136	10/4/2011 9:37	0.00	0
137	10/4/2011 9:38	0.00	0
138	10/4/2011 9:39	0.00	0
139	10/4/2011 9:40	0.00	0
140	10/4/2011 9:41	0.00	0
141	10/4/2011 9:42	0.00	0
142	10/4/2011 9:43	0.00	0
143	10/4/2011 9:44	0.00	0
144	10/4/2011 9:45	0.00	0
145	10/4/2011 9:46	0.00	0
146	10/4/2011 9:47	0.00	0
147	10/4/2011 9:48	0.00	0
148	10/4/2011 9:49	0.00	0
149	10/4/2011 9:50	0.00	0
150	10/4/2011 9:51	0.00	0
151	10/4/2011 9:52	0.00	0
152	10/4/2011 9:53	0.00	0
153	10/4/2011 9:54	0.00	0
154	10/4/2011 9:55	0.00	0
155	10/4/2011 9:56	0.00	0
156	10/4/2011 9:57	0.00	0
157	10/4/2011 9:58	0.00	0
158	10/4/2011 9:59	0.00	0
159	10/4/2011 10:00	0.00	0
160	10/4/2011 10:01	0.00	0
161	10/4/2011 10:02	0.00	0
162	10/4/2011 10:03	0.00	0
163	10/4/2011 10:04	0.00	0
164	10/4/2011 10:05	0.00	0
165	10/4/2011 10:06	0.00	0
166	10/4/2011 10:07	0.00	0
167	10/4/2011 10:08	0.00	0
168	10/4/2011 10:09	0.00	0
169	10/4/2011 10:10	0.00	0
170	10/4/2011 10:11	0.00	0
171	10/4/2011 10:12	0.00	0
172	10/4/2011 10:13	0.00	0
173	10/4/2011 10:14	0.00	0
174	10/4/2011 10:15	0.00	0
175	10/4/2011 10:16	0.00	0
176	10/4/2011 10:17	0.00	0
177	10/4/2011 10:18	0.00	0
178	10/4/2011 10:19	0.00	0
179	10/4/2011 10:20	0.00	0
180	10/4/2011 10:21	0.00	0
181	10/4/2011 10:22	0.00	0
182	10/4/2011 10:23	0.00	0
183	10/4/2011 10:24	0.00	0
184	10/4/2011 10:25	0.00	0
185	10/4/2011 10:26	0.00	0
186	10/4/2011 10:27	0.00	0

187	10/4/2011 10:28	0.00	0
188	10/4/2011 10:29	0.00	0
189	10/4/2011 10:30	0.00	0
190	10/4/2011 10:31	0.00	0
191	10/4/2011 10:32	0.00	0
192	10/4/2011 10:33	0.00	0
193	10/4/2011 10:34	0.00	0
194	10/4/2011 10:35	0.00	0
195	10/4/2011 10:36	0.00	0
196	10/4/2011 10:37	0.00	0
197	10/4/2011 10:38	0.00	0
198	10/4/2011 10:39	0.00	0
199	10/4/2011 10:40	0.00	0
200	10/4/2011 10:41	0.00	0
201	10/4/2011 10:42	0.00	0
202	10/4/2011 10:43	0.00	0
203	10/4/2011 10:44	0.00	0
204	10/4/2011 10:45	0.00	0
205	10/4/2011 10:46	0.00	0
206	10/4/2011 10:47	0.00	0
207	10/4/2011 10:48	0.00	0
208	10/4/2011 10:49	0.00	0
209	10/4/2011 10:50	0.00	0
210	10/4/2011 10:51	0.00	0
211	10/4/2011 10:52	0.00	0
212	10/4/2011 10:53	0.00	0
213	10/4/2011 10:54	0.00	0
214	10/4/2011 10:55	0.00	0
215	10/4/2011 10:56	0.00	0
216	10/4/2011 10:57	0.00	0
217	10/4/2011 10:58	0.00	0
218	10/4/2011 10:59	0.00	0
219	10/4/2011 11:00	0.00	0
220	10/4/2011 11:01	0.00	0
221	10/4/2011 11:02	0.00	0
222	10/4/2011 11:03	0.00	0
223	10/4/2011 11:04	0.00	0
224	10/4/2011 11:05	0.00	0
225	10/4/2011 11:06	0.00	0
226	10/4/2011 11:07	0.00	0
227	10/4/2011 11:08	0.00	0
228	10/4/2011 11:09	0.00	0
229	10/4/2011 11:10	0.00	0
230	10/4/2011 11:11	0.00	0
231	10/4/2011 11:12	0.00	0
232	10/4/2011 11:13	0.00	0
233	10/4/2011 11:14	0.00	0
234	10/4/2011 11:15	0.00	0
235	10/4/2011 11:16	0.00	0
236	10/4/2011 11:17	0.00	0
237	10/4/2011 11:18	0.00	0
238	10/4/2011 11:19	0.00	0
239	10/4/2011 11:20	0.00	0
240	10/4/2011 11:21	0.00	0
241	10/4/2011 11:22	0.00	0
242	10/4/2011 11:23	0.00	0
243	10/4/2011 11:24	0.00	0
244	10/4/2011 11:25	0.00	0
245	10/4/2011 11:26	0.00	0
246	10/4/2011 11:27	0.00	0
247	10/4/2011 11:28	0.00	0
248	10/4/2011 11:29	0.00	0
249	10/4/2011 11:30	0.00	0
250	10/4/2011 11:31	0.00	0
251	10/4/2011 11:32	0.00	0
252	10/4/2011 11:33	0.00	0
253	10/4/2011 11:34	0.00	0
254	10/4/2011 11:35	0.00	0
255	10/4/2011 11:36	0.00	0

256	10/4/2011 11:37	0.00	0
257	10/4/2011 11:38	0.00	0
258	10/4/2011 11:39	0.00	0
259	10/4/2011 11:40	0.00	0
260	10/4/2011 11:41	0.00	0
261	10/4/2011 11:42	0.00	0
262	10/4/2011 11:43	0.00	0
263	10/4/2011 11:44	0.00	0
264	10/4/2011 11:45	0.00	0
265	10/4/2011 11:46	0.00	0
266	10/4/2011 11:47	0.00	0
267	10/4/2011 11:48	0.00	0
268	10/4/2011 11:49	0.00	0
269	10/4/2011 11:50	0.00	0
270	10/4/2011 11:51	0.00	0
271	10/4/2011 11:52	0.00	0
272	10/4/2011 11:53	0.00	0
273	10/4/2011 11:54	0.00	0
274	10/4/2011 11:55	0.00	0
275	10/4/2011 11:56	0.00	0
276	10/4/2011 11:57	0.00	0
277	10/4/2011 11:58	0.00	0
278	10/4/2011 11:59	0.00	0
279	10/4/2011 12:00	0.00	0
280	10/4/2011 12:01	0.00	0
281	10/4/2011 12:02	0.00	0
282	10/4/2011 12:03	0.00	0
283	10/4/2011 12:04	0.00	0
284	10/4/2011 12:05	0.00	0
285	10/4/2011 12:06	0.00	0
286	10/4/2011 12:07	0.00	0
287	10/4/2011 12:08	0.00	0
288	10/4/2011 12:09	0.00	0
289	10/4/2011 12:10	0.00	0
290	10/4/2011 12:11	0.00	0
291	10/4/2011 12:12	0.00	0
292	10/4/2011 12:13	0.00	0
293	10/4/2011 12:14	0.00	0
294	10/4/2011 12:15	0.00	0
295	10/4/2011 12:16	0.00	0
296	10/4/2011 12:17	0.00	0
297	10/4/2011 12:18	0.00	0
298	10/4/2011 12:19	0.00	0
299	10/4/2011 12:20	0.00	0
300	10/4/2011 12:21	0.00	0
301	10/4/2011 12:22	0.00	0
302	10/4/2011 12:23	0.00	0
303	10/4/2011 12:24	0.00	0
304	10/4/2011 12:25	0.00	0
305	10/4/2011 12:26	0.00	0
306	10/4/2011 12:27	0.00	0
307	10/4/2011 12:28	0.00	0
308	10/4/2011 12:29	0.00	0
309	10/4/2011 12:30	0.00	0
310	10/4/2011 12:31	0.00	0
311	10/4/2011 12:32	0.00	0
312	10/4/2011 12:33	0.00	0
313	10/4/2011 12:34	0.00	0
314	10/4/2011 12:35	0.00	0
315	10/4/2011 12:36	0.00	0
316	10/4/2011 12:37	0.00	0
317	10/4/2011 12:38	0.00	0
318	10/4/2011 12:39	0.00	0
319	10/4/2011 12:40	0.00	0
320	10/4/2011 12:41	0.00	0
321	10/4/2011 12:42	0.00	0
322	10/4/2011 12:43	0.00	0
323	10/4/2011 12:44	0.00	0
324	10/4/2011 12:45	0.00	0

325	10/4/2011 12:46	0.00	0
326	10/4/2011 12:47	0.00	0
327	10/4/2011 12:48	0.00	0
328	10/4/2011 12:49	0.00	0
329	10/4/2011 12:50	0.00	0
330	10/4/2011 12:51	0.00	0
331	10/4/2011 12:52	0.00	0
332	10/4/2011 12:53	0.00	0
333	10/4/2011 12:54	0.00	0
334	10/4/2011 12:55	0.00	0
335	10/4/2011 12:56	0.00	0
336	10/4/2011 12:57	0.00	0
337	10/4/2011 12:58	0.00	0
338	10/4/2011 12:59	0.00	0
339	10/4/2011 13:00	0.00	0
340	10/4/2011 13:01	0.00	0
341	10/4/2011 13:02	0.00	0
342	10/4/2011 13:03	0.00	0
343	10/4/2011 13:04	0.00	0
344	10/4/2011 13:05	0.00	0
345	10/4/2011 13:06	0.00	0
346	10/4/2011 13:07	0.00	0
347	10/4/2011 13:08	0.00	0
348	10/4/2011 13:09	0.00	0
349	10/4/2011 13:10	0.00	0
350	10/4/2011 13:11	0.00	0
351	10/4/2011 13:12	0.00	0
352	10/4/2011 13:13	0.00	0
353	10/4/2011 13:14	0.00	0
354	10/4/2011 13:15	0.00	0
355	10/4/2011 13:16	0.00	0
356	10/4/2011 13:17	0.00	0
357	10/4/2011 13:18	0.00	0
358	10/4/2011 13:19	0.00	0
359	10/4/2011 13:20	0.00	0
360	10/4/2011 13:21	0.00	0
361	10/4/2011 13:22	0.00	0
362	10/4/2011 13:23	0.00	0
363	10/4/2011 13:24	0.00	0
364	10/4/2011 13:25	0.00	0
365	10/4/2011 13:26	0.00	0
366	10/4/2011 13:27	0.00	0
367	10/4/2011 13:28	0.00	0
368	10/4/2011 13:29	0.00	0
369	10/4/2011 13:30	0.00	0
370	10/4/2011 13:31	0.00	0
371	10/4/2011 13:32	0.00	0
372	10/4/2011 13:33	0.00	0
373	10/4/2011 13:34	0.00	0
374	10/4/2011 13:35	0.00	0
375	10/4/2011 13:36	0.00	0
376	10/4/2011 13:37	0.00	0
377	10/4/2011 13:38	0.00	0
378	10/4/2011 13:39	0.00	0
379	10/4/2011 13:40	0.00	0
380	10/4/2011 13:41	0.00	0
381	10/4/2011 13:42	0.00	0
382	10/4/2011 13:43	0.00	0
383	10/4/2011 13:44	0.00	0
384	10/4/2011 13:45	0.00	0
385	10/4/2011 13:46	0.00	0
386	10/4/2011 13:47	0.00	0
387	10/4/2011 13:48	0.00	0
388	10/4/2011 13:49	0.00	0
389	10/4/2011 13:50	0.00	0
390	10/4/2011 13:51	0.00	0
391	10/4/2011 13:52	0.00	0
392	10/4/2011 13:53	0.00	0
393	10/4/2011 13:54	0.00	0

394	10/4/2011 13:55	0.00	0
395	10/4/2011 13:56	0.00	0
396	10/4/2011 13:57	0.00	0
397	10/4/2011 13:58	0.00	0
398	10/4/2011 13:59	0.00	0
399	10/4/2011 14:00	0.00	0
400	10/4/2011 14:01	0.00	0
401	10/4/2011 14:02	0.00	0
402	10/4/2011 14:03	0.00	0
403	10/4/2011 14:04	0.00	0
404	10/4/2011 14:05	0.00	0
405	10/4/2011 14:06	0.00	0
406	10/4/2011 14:07	0.00	0
407	10/4/2011 14:08	0.00	0
408	10/4/2011 14:09	0.00	0
409	10/4/2011 14:10	0.00	0
410	10/4/2011 14:11	0.00	0
411	10/4/2011 14:12	0.00	0
412	10/4/2011 14:13	0.00	0
413	10/4/2011 14:14	0.00	0
414	10/4/2011 14:15	0.00	0
415	10/4/2011 14:16	0.00	0
416	10/4/2011 14:17	0.00	0
417	10/4/2011 14:18	0.00	0
418	10/4/2011 14:19	0.00	0
419	10/4/2011 14:20	0.00	0
420	10/4/2011 14:21	0.00	0
421	10/4/2011 14:22	0.00	0
422	10/4/2011 14:23	0.00	0
423	10/4/2011 14:24	0.00	0
424	10/4/2011 14:25	0.00	0
425	10/4/2011 14:26	0.00	0
426	10/4/2011 14:27	0.00	0
427	10/4/2011 14:28	0.00	0
428	10/4/2011 14:29	0.00	0
429	10/4/2011 14:30	0.00	0
430	10/4/2011 14:31	0.00	0
431	10/4/2011 14:32	0.00	0
432	10/4/2011 14:33	0.00	0
433	10/4/2011 14:34	0.00	0
434	10/4/2011 14:35	0.00	0
435	10/4/2011 14:36	0.00	0
436	10/4/2011 14:37	0.00	0
437	10/4/2011 14:38	0.00	0
438	10/4/2011 14:39	0.00	0
439	10/4/2011 14:40	0.00	0
440	10/4/2011 14:41	0.00	0
441	10/4/2011 14:42	0.00	0
442	10/4/2011 14:43	0.00	0
443	10/4/2011 14:44	0.00	0
444	10/4/2011 14:45	0.00	0
445	10/4/2011 14:46	0.00	0
446	10/4/2011 14:47	0.00	0
447	10/4/2011 14:48	0.00	0
448	10/4/2011 14:49	0.00	0
449	10/4/2011 14:50	0.00	0
450	10/4/2011 14:51	0.00	0
451	10/4/2011 14:52	0.00	0
452	10/4/2011 14:53	0.00	0
453	10/4/2011 14:54	0.00	0
454	10/4/2011 14:55	0.00	0
455	10/4/2011 14:56	0.00	0
456	10/4/2011 14:57	0.00	0
457	10/4/2011 14:58	0.00	0
458	10/4/2011 14:59	0.00	0
459	10/4/2011 15:00	0.00	0
460	10/4/2011 15:01	0.00	0
461	10/4/2011 15:02	0.00	0
462	10/4/2011 15:03	0.00	0

463	10/4/2011 15:04	0.00	0
464	10/4/2011 15:05	0.00	0
465	10/4/2011 15:06	0.00	0
466	10/4/2011 15:07	0.00	0
467	10/4/2011 15:08	0.00	0
468	10/4/2011 15:09	0.00	0
469	10/4/2011 15:10	0.00	0
470	10/4/2011 15:11	0.00	0
471	10/4/2011 15:12	0.00	0
472	10/4/2011 15:13	0.00	0
473	10/4/2011 15:14	0.00	0
474	10/4/2011 15:15	0.00	0

==========Event #8 information (end)==========

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533112903
Firmware Version	2.8
Calibration Date	7/18/2011
Test Name	MANUAL_003
Test Start Time	7:43:56
Test Start Date	10/4/2011
Test Length [D:H:M]	0:07:10
Test Interval [M:S]	1:00
PM1 Average [mg/m3]	0.014
PM1 Minimum [mg/m3]	0.008
PM1 Maximum [mg/m3]	0.044
PM1 TWA [mg/m3]	0.013
PM2.5 Average [mg/m3]	0.015
PM2.5 Minimum [mg/m3]	0.008
PM2.5 Maximum [mg/m3]	0.045
PM2.5 TWA [mg/m3]	0.013
PM4 Average [mg/m3]	0.015
PM4 Minimum [mg/m3]	0.008
PM4 Maximum [mg/m3]	0.047
PM4 TWA [mg/m3]	0.014
PM10 Average [mg/m3]	0.016
PM10 Minimum [mg/m3]	0.009
PM10 Maximum [mg/m3]	0.063
PM10 TWA [mg/m3]	0.015
TOTAL Average [mg/m3]	0.017
TOTAL Minimum [mg/m3]	0.009
TOTAL Maximum [mg/m3]	0.075
TOTAL TWA [mg/m3]	0.015
Photometric User Cal	1
Size Correction User Cal	1
Flow User Cal	1
Errors	
Number of Samples	430

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	7:43:56	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.033	0.034	0.035	0.055	7:44:56	10/4/2011 7:44	0.072		
120	0.02	0.021	0.021	0.023	7:45:56	10/4/2011 7:45	0.023		
180	0.02	0.02	0.02	0.022	7:46:56	10/4/2011 7:46	0.022		
240	0.022	0.022	0.023	0.024	7:47:56	10/4/2011 7:47	0.025		
300	0.019	0.02	0.02	0.02	7:48:56	10/4/2011 7:48	0.02		
360	0.026	0.026	0.026	0.027	7:49:56	10/4/2011 7:49	0.027		
420	0.023	0.023	0.023	0.024	7:50:56	10/4/2011 7:50	0.024		
480	0.024	0.024	0.025	0.026	7:51:56	10/4/2011 7:51	0.026		
540	0.027	0.027	0.028	0.029	7:52:56	10/4/2011 7:52	0.03		
600	0.022	0.022	0.022	0.023	7:53:56	10/4/2011 7:53	0.023		
660	0.023	0.023	0.023	0.024	7:54:56	10/4/2011 7:54	0.024		
720	0.018	0.018	0.018	0.019	7:55:56	10/4/2011 7:55	0.019		
780	0.017	0.017	0.017	0.018	7:56:56	10/4/2011 7:56	0.018		
840	0.017	0.018	0.018	0.018	7:57:56	10/4/2011 7:57	0.018		
900	0.019	0.019	0.019	0.02	7:58:56	10/4/2011 7:58	0.02		
960	0.019	0.019	0.019	0.02	7:59:56	10/4/2011 7:59	0.02		
1020	0.019	0.019	0.02	0.021	8:00:56	10/4/2011 8:00	0.021		
1080	0.02	0.02	0.021	0.022	8:01:56	10/4/2011 8:01	0.022		
1140	0.019	0.019	0.02	0.021	8:02:56	10/4/2011 8:02	0.021		
1200	0.019	0.019	0.02	0.021	8:03:56	10/4/2011 8:03	0.021		
1260	0.019	0.02	0.02	0.022	8:04:56	10/4/2011 8:04	0.022		
1320	0.02	0.021	0.021	0.023	8:05:56	10/4/2011 8:05	0.024		
1380	0.044	0.045	0.047	0.063	8:06:56	10/4/2011 8:06	0.075		
1440	0.019	0.02	0.02	0.021	8:07:56	10/4/2011 8:07	0.021		
1500	0.018	0.019	0.019	0.02	8:08:56	10/4/2011 8:08	0.02		
1560	0.019	0.02	0.02	0.021	8:09:56	10/4/2011 8:09	0.022		
1620	0.019	0.02	0.02	0.021	8:10:56	10/4/2011 8:10	0.021		
1680	0.02	0.02	0.021	0.023	8:11:56	10/4/2011 8:11	0.023		
1740	0.022	0.023	0.024	0.027	8:12:56	10/4/2011 8:12	0.027		
1800	0.021	0.021	0.023	0.026	8:13:56	10/4/2011 8:13	0.026		
1860	0.018	0.018	0.019	0.02	8:14:56	10/4/2011 8:14	0.02		
1920	0.018	0.019	0.02	0.022	8:15:56	10/4/2011 8:15	0.022		

1980	0.018	0.018	0.019	0.021	8:16:56	10/4/2011 8:16	0.021
2040	0.019	0.019	0.02	0.021	8:17:56	10/4/2011 8:17	0.021
2100	0.019	0.019	0.02	0.021	8:18:56	10/4/2011 8:18	0.022
2160	0.019	0.019	0.02	0.022	8:19:56	10/4/2011 8:19	0.022
2220	0.021	0.021	0.022	0.024	8:20:56	10/4/2011 8:20	0.024
2280	0.021	0.021	0.022	0.024	8:21:56	10/4/2011 8:21	0.024
2340	0.021	0.022	0.022	0.024	8:22:56	10/4/2011 8:22	0.025
2400	0.02	0.02	0.021	0.023	8:23:56	10/4/2011 8:23	0.023
2460	0.018	0.019	0.019	0.021	8:24:56	10/4/2011 8:24	0.021
2520	0.018	0.019	0.019	0.02	8:25:56	10/4/2011 8:25	0.02
2580	0.017	0.017	0.017	0.018	8:26:56	10/4/2011 8:26	0.018
2640	0.018	0.018	0.019	0.019	8:27:56	10/4/2011 8:27	0.019
2700	0.018	0.018	0.018	0.019	8:28:56	10/4/2011 8:28	0.019
2760	0.017	0.018	0.018	0.019	8:29:56	10/4/2011 8:29	0.02
2820	0.017	0.017	0.017	0.018	8:30:56	10/4/2011 8:30	0.018
2880	0.022	0.023	0.023	0.026	8:31:56	10/4/2011 8:31	0.026
2940	0.024	0.024	0.025	0.028	8:32:56	10/4/2011 8:32	0.028
3000	0.023	0.023	0.024	0.026	8:33:56	10/4/2011 8:33	0.027
3060	0.017	0.017	0.018	0.018	8:34:56	10/4/2011 8:34	0.019
3120	0.016	0.017	0.017	0.018	8:35:56	10/4/2011 8:35	0.018
3180	0.015	0.016	0.016	0.017	8:36:56	10/4/2011 8:36	0.017
3240	0.017	0.017	0.017	0.018	8:37:56	10/4/2011 8:37	0.018
3300	0.019	0.019	0.02	0.022	8:38:56	10/4/2011 8:38	0.022
3360	0.019	0.02	0.02	0.022	8:39:56	10/4/2011 8:39	0.022
3420	0.021	0.021	0.022	0.023	8:40:56	10/4/2011 8:40	0.023
3480	0.022	0.023	0.024	0.026	8:41:56	10/4/2011 8:41	0.027
3540	0.02	0.02	0.021	0.024	8:42:56	10/4/2011 8:42	0.024
3600	0.018	0.018	0.019	0.021	8:43:56	10/4/2011 8:43	0.021
3660	0.018	0.018	0.019	0.021	8:44:56	10/4/2011 8:44	0.021
3720	0.016	0.017	0.017	0.018	8:45:56	10/4/2011 8:45	0.018
3780	0.016	0.017	0.017	0.018	8:46:56	10/4/2011 8:46	0.018
3840	0.017	0.018	0.018	0.019	8:47:56	10/4/2011 8:47	0.019
3900	0.017	0.017	0.018	0.019	8:48:56	10/4/2011 8:48	0.019
3960	0.016	0.016	0.017	0.018	8:49:56	10/4/2011 8:49	0.018
4020	0.016	0.017	0.017	0.018	8:50:56	10/4/2011 8:50	0.018
4080	0.016	0.016	0.017	0.017	8:51:56	10/4/2011 8:51	0.018
4140	0.016	0.016	0.017	0.017	8:52:56	10/4/2011 8:52	0.017
4200	0.016	0.016	0.016	0.017	8:53:56	10/4/2011 8:53	0.017
4260	0.016	0.016	0.017	0.018	8:54:56	10/4/2011 8:54	0.018
4320	0.016	0.017	0.017	0.018	8:55:56	10/4/2011 8:55	0.018
4380	0.018	0.018	0.019	0.019	8:56:56	10/4/2011 8:56	0.019
4440	0.017	0.018	0.018	0.019	8:57:56	10/4/2011 8:57	0.019
4500	0.016	0.017	0.017	0.018	8:58:56	10/4/2011 8:58	0.018
4560	0.017	0.017	0.018	0.019	8:59:56	10/4/2011 8:59	0.019
4620	0.017	0.017	0.018	0.019	9:00:56	10/4/2011 9:00	0.019
4680	0.017	0.017	0.018	0.019	9:01:56	10/4/2011 9:01	0.02
4740	0.017	0.018	0.018	0.02	9:02:56	10/4/2011 9:02	0.02
4800	0.015	0.015	0.015	0.016	9:03:56	10/4/2011 9:03	0.016
4860	0.014	0.014	0.014	0.014	9:04:56	10/4/2011 9:04	0.015
4920	0.014	0.015	0.015	0.016	9:05:56	10/4/2011 9:05	0.016
4980	0.015	0.015	0.016	0.017	9:06:56	10/4/2011 9:06	0.017
5040	0.014	0.014	0.015	0.015	9:07:56	10/4/2011 9:07	0.015
5100	0.015	0.016	0.016	0.017	9:08:56	10/4/2011 9:08	0.017
5160	0.016	0.016	0.016	0.017	9:09:56	10/4/2011 9:09	0.018
5220	0.015	0.015	0.015	0.015	9:10:56	10/4/2011 9:10	0.016
5280	0.017	0.017	0.017	0.017	9:11:56	10/4/2011 9:11	0.017
5340	0.015	0.016	0.016	0.017	9:12:56	10/4/2011 9:12	0.017
5400	0.016	0.016	0.016	0.017	9:13:56	10/4/2011 9:13	0.017
5460	0.016	0.016	0.017	0.018	9:14:56	10/4/2011 9:14	0.018
5520	0.015	0.016	0.016	0.016	9:15:56	10/4/2011 9:15	0.016
5580	0.015	0.015	0.015	0.015	9:16:56	10/4/2011 9:16	0.016
5640	0.017	0.017	0.018	0.019	9:17:56	10/4/2011 9:17	0.019
5700	0.017	0.018	0.018	0.019	9:18:56	10/4/2011 9:18	0.02
5760	0.017	0.017	0.017	0.018	9:19:56	10/4/2011 9:19	0.018
5820	0.022	0.022	0.022	0.023	9:20:56	10/4/2011 9:20	0.023
5880	0.016	0.017	0.017	0.018	9:21:56	10/4/2011 9:21	0.018
5940	0.017	0.017	0.018	0.018	9:22:56	10/4/2011 9:22	0.018
6000	0.019	0.019	0.02	0.021	9:23:56	10/4/2011 9:23	0.021
6060	0.019	0.019	0.02	0.02	9:24:56	10/4/2011 9:24	0.02

6120	0.018	0.019	0.019	0.02	9:25:56	10/4/2011 9:25	0.02
6180	0.018	0.019	0.019	0.021	9:26:56	10/4/2011 9:26	0.021
6240	0.017	0.017	0.017	0.019	9:27:56	10/4/2011 9:27	0.019
6300	0.015	0.015	0.015	0.016	9:28:56	10/4/2011 9:28	0.016
6360	0.015	0.016	0.016	0.017	9:29:56	10/4/2011 9:29	0.017
6420	0.016	0.016	0.016	0.018	9:30:56	10/4/2011 9:30	0.018
6480	0.017	0.017	0.018	0.02	9:31:56	10/4/2011 9:31	0.02
6540	0.015	0.015	0.016	0.017	9:32:56	10/4/2011 9:32	0.017
6600	0.015	0.015	0.016	0.016	9:33:56	10/4/2011 9:33	0.017
6660	0.017	0.017	0.017	0.019	9:34:56	10/4/2011 9:34	0.019
6720	0.019	0.019	0.02	0.022	9:35:56	10/4/2011 9:35	0.022
6780	0.015	0.015	0.016	0.017	9:36:56	10/4/2011 9:36	0.017
6840	0.016	0.016	0.017	0.019	9:37:56	10/4/2011 9:37	0.022
6900	0.017	0.017	0.018	0.019	9:38:56	10/4/2011 9:38	0.019
6960	0.018	0.018	0.019	0.02	9:39:56	10/4/2011 9:39	0.02
7020	0.017	0.017	0.018	0.019	9:40:56	10/4/2011 9:40	0.019
7080	0.014	0.014	0.014	0.015	9:41:56	10/4/2011 9:41	0.015
7140	0.016	0.016	0.016	0.017	9:42:56	10/4/2011 9:42	0.017
7200	0.018	0.019	0.019	0.021	9:43:56	10/4/2011 9:43	0.021
7260	0.017	0.018	0.018	0.02	9:44:56	10/4/2011 9:44	0.02
7320	0.015	0.015	0.015	0.016	9:45:56	10/4/2011 9:45	0.016
7380	0.015	0.016	0.016	0.017	9:46:56	10/4/2011 9:46	0.017
7440	0.016	0.016	0.016	0.017	9:47:56	10/4/2011 9:47	0.018
7500	0.015	0.016	0.016	0.017	9:48:56	10/4/2011 9:48	0.017
7560	0.017	0.017	0.017	0.018	9:49:56	10/4/2011 9:49	0.018
7620	0.017	0.017	0.018	0.019	9:50:56	10/4/2011 9:50	0.019
7680	0.017	0.017	0.018	0.019	9:51:56	10/4/2011 9:51	0.019
7740	0.015	0.015	0.015	0.016	9:52:56	10/4/2011 9:52	0.016
7800	0.015	0.016	0.016	0.017	9:53:56	10/4/2011 9:53	0.017
7860	0.017	0.017	0.018	0.019	9:54:56	10/4/2011 9:54	0.019
7920	0.017	0.018	0.018	0.019	9:55:56	10/4/2011 9:55	0.02
7980	0.018	0.018	0.019	0.02	9:56:56	10/4/2011 9:56	0.02
8040	0.017	0.018	0.018	0.02	9:57:56	10/4/2011 9:57	0.02
8100	0.018	0.018	0.019	0.02	9:58:56	10/4/2011 9:58	0.02
8160	0.02	0.02	0.02	0.022	9:59:56	10/4/2011 9:59	0.022
8220	0.017	0.017	0.018	0.019	10:00:56	10/4/2011 10:00	0.02
8280	0.017	0.017	0.017	0.018	10:01:56	10/4/2011 10:01	0.018
8340	0.016	0.016	0.016	0.017	10:02:56	10/4/2011 10:02	0.017
8400	0.016	0.016	0.017	0.018	10:03:56	10/4/2011 10:03	0.018
8460	0.016	0.017	0.017	0.018	10:04:56	10/4/2011 10:04	0.019
8520	0.017	0.017	0.018	0.019	10:05:56	10/4/2011 10:05	0.02
8580	0.015	0.015	0.016	0.016	10:06:56	10/4/2011 10:06	0.016
8640	0.015	0.015	0.015	0.016	10:07:56	10/4/2011 10:07	0.016
8700	0.016	0.016	0.017	0.017	10:08:56	10/4/2011 10:08	0.017
8760	0.017	0.017	0.017	0.018	10:09:56	10/4/2011 10:09	0.018
8820	0.017	0.018	0.018	0.019	10:10:56	10/4/2011 10:10	0.019
8880	0.017	0.017	0.017	0.018	10:11:56	10/4/2011 10:11	0.018
8940	0.017	0.017	0.018	0.019	10:12:56	10/4/2011 10:12	0.02
9000	0.017	0.018	0.018	0.019	10:13:56	10/4/2011 10:13	0.019
9060	0.019	0.019	0.02	0.02	10:14:56	10/4/2011 10:14	0.02
9120	0.018	0.019	0.019	0.019	10:15:56	10/4/2011 10:15	0.02
9180	0.019	0.019	0.019	0.02	10:16:56	10/4/2011 10:16	0.021
9240	0.018	0.018	0.019	0.019	10:17:56	10/4/2011 10:17	0.019
9300	0.018	0.018	0.019	0.02	10:18:56	10/4/2011 10:18	0.02
9360	0.017	0.018	0.018	0.02	10:19:56	10/4/2011 10:19	0.02
9420	0.016	0.016	0.016	0.017	10:20:56	10/4/2011 10:20	0.017
9480	0.018	0.018	0.019	0.019	10:21:56	10/4/2011 10:21	0.019
9540	0.016	0.016	0.016	0.016	10:22:56	10/4/2011 10:22	0.016
9600	0.016	0.016	0.016	0.017	10:23:56	10/4/2011 10:23	0.017
9660	0.016	0.017	0.017	0.018	10:24:56	10/4/2011 10:24	0.018
9720	0.017	0.017	0.018	0.019	10:25:56	10/4/2011 10:25	0.019
9780	0.016	0.016	0.016	0.017	10:26:56	10/4/2011 10:26	0.017
9840	0.015	0.015	0.016	0.016	10:27:56	10/4/2011 10:27	0.016
9900	0.015	0.015	0.016	0.016	10:28:56	10/4/2011 10:28	0.017
9960	0.015	0.015	0.015	0.015	10:29:56	10/4/2011 10:29	0.015
10020	0.014	0.015	0.015	0.015	10:30:56	10/4/2011 10:30	0.015
10080	0.014	0.014	0.015	0.015	10:31:56	10/4/2011 10:31	0.015
10140	0.015	0.015	0.015	0.016	10:32:56	10/4/2011 10:32	0.016
10200	0.015	0.016	0.016	0.017	10:33:56	10/4/2011 10:33	0.017

10260	0.016	0.016	0.016	0.017	10:34:56	10/4/2011 10:34	0.017
10320	0.021	0.021	0.021	0.022	10:35:56	10/4/2011 10:35	0.022
10380	0.018	0.019	0.019	0.021	10:36:56	10/4/2011 10:36	0.021
10440	0.015	0.015	0.015	0.016	10:37:56	10/4/2011 10:37	0.016
10500	0.015	0.016	0.016	0.017	10:38:56	10/4/2011 10:38	0.017
10560	0.02	0.02	0.022	0.025	10:39:56	10/4/2011 10:39	0.025
10620	0.016	0.016	0.017	0.019	10:40:56	10/4/2011 10:40	0.019
10680	0.016	0.016	0.016	0.017	10:41:56	10/4/2011 10:41	0.017
10740	0.015	0.016	0.016	0.016	10:42:56	10/4/2011 10:42	0.016
10800	0.017	0.017	0.018	0.018	10:43:56	10/4/2011 10:43	0.018
10860	0.017	0.018	0.018	0.019	10:44:56	10/4/2011 10:44	0.019
10920	0.017	0.017	0.017	0.018	10:45:56	10/4/2011 10:45	0.018
10980	0.016	0.016	0.016	0.017	10:46:56	10/4/2011 10:46	0.017
11040	0.015	0.015	0.016	0.016	10:47:56	10/4/2011 10:47	0.016
11100	0.016	0.016	0.017	0.018	10:48:56	10/4/2011 10:48	0.018
11160	0.016	0.016	0.017	0.017	10:49:56	10/4/2011 10:49	0.017
11220	0.017	0.017	0.017	0.019	10:50:56	10/4/2011 10:50	0.02
11280	0.018	0.019	0.019	0.021	10:51:56	10/4/2011 10:51	0.021
11340	0.021	0.021	0.021	0.022	10:52:56	10/4/2011 10:52	0.022
11400	0.018	0.018	0.019	0.021	10:53:56	10/4/2011 10:53	0.021
11460	0.019	0.019	0.02	0.022	10:54:56	10/4/2011 10:54	0.022
11520	0.017	0.017	0.017	0.019	10:55:56	10/4/2011 10:55	0.02
11580	0.017	0.017	0.017	0.018	10:56:56	10/4/2011 10:56	0.019
11640	0.017	0.017	0.018	0.019	10:57:56	10/4/2011 10:57	0.019
11700	0.016	0.016	0.017	0.018	10:58:56	10/4/2011 10:58	0.018
11760	0.016	0.016	0.017	0.018	10:59:56	10/4/2011 10:59	0.018
11820	0.015	0.016	0.016	0.017	11:00:56	10/4/2011 11:00	0.017
11880	0.015	0.015	0.016	0.016	11:01:56	10/4/2011 11:01	0.016
11940	0.018	0.018	0.019	0.022	11:02:56	10/4/2011 11:02	0.022
12000	0.017	0.017	0.018	0.019	11:03:56	10/4/2011 11:03	0.019
12060	0.016	0.016	0.017	0.017	11:04:56	10/4/2011 11:04	0.018
12120	0.033	0.033	0.034	0.035	11:05:56	10/4/2011 11:05	0.036
12180	0.019	0.019	0.02	0.021	11:06:56	10/4/2011 11:06	0.021
12240	0.02	0.02	0.02	0.021	11:07:56	10/4/2011 11:07	0.022
12300	0.015	0.015	0.016	0.017	11:08:56	10/4/2011 11:08	0.017
12360	0.015	0.015	0.015	0.016	11:09:56	10/4/2011 11:09	0.016
12420	0.015	0.015	0.015	0.016	11:10:56	10/4/2011 11:10	0.016
12480	0.016	0.016	0.017	0.018	11:11:56	10/4/2011 11:11	0.018
12540	0.016	0.016	0.016	0.017	11:12:56	10/4/2011 11:12	0.017
12600	0.017	0.017	0.018	0.019	11:13:56	10/4/2011 11:13	0.019
12660	0.015	0.015	0.016	0.016	11:14:56	10/4/2011 11:14	0.017
12720	0.015	0.015	0.016	0.016	11:15:56	10/4/2011 11:15	0.016
12780	0.016	0.016	0.016	0.017	11:16:56	10/4/2011 11:16	0.018
12840	0.019	0.02	0.022	0.027	11:17:56	10/4/2011 11:17	0.029
12900	0.014	0.015	0.015	0.016	11:18:56	10/4/2011 11:18	0.016
12960	0.015	0.016	0.017	0.019	11:19:56	10/4/2011 11:19	0.019
13020	0.014	0.014	0.015	0.017	11:20:56	10/4/2011 11:20	0.017
13080	0.014	0.014	0.015	0.016	11:21:56	10/4/2011 11:21	0.016
13140	0.015	0.016	0.016	0.017	11:22:56	10/4/2011 11:22	0.017
13200	0.013	0.013	0.014	0.014	11:23:56	10/4/2011 11:23	0.014
13260	0.014	0.015	0.015	0.017	11:24:56	10/4/2011 11:24	0.017
13320	0.014	0.014	0.015	0.017	11:25:56	10/4/2011 11:25	0.017
13380	0.013	0.014	0.015	0.018	11:26:56	10/4/2011 11:26	0.018
13440	0.013	0.014	0.015	0.018	11:27:56	10/4/2011 11:27	0.018
13500	0.012	0.013	0.013	0.015	11:28:56	10/4/2011 11:28	0.016
13560	0.013	0.014	0.015	0.017	11:29:56	10/4/2011 11:29	0.017
13620	0.016	0.017	0.019	0.025	11:30:56	10/4/2011 11:30	0.026
13680	0.013	0.014	0.015	0.017	11:31:56	10/4/2011 11:31	0.017
13740	0.014	0.014	0.015	0.019	11:32:56	10/4/2011 11:32	0.02
13800	0.017	0.018	0.02	0.027	11:33:56	10/4/2011 11:33	0.029
13860	0.013	0.013	0.015	0.018	11:34:56	10/4/2011 11:34	0.018
13920	0.011	0.011	0.011	0.013	11:35:56	10/4/2011 11:35	0.013
13980	0.013	0.013	0.014	0.015	11:36:56	10/4/2011 11:36	0.015
14040	0.013	0.014	0.014	0.016	11:37:56	10/4/2011 11:37	0.017
14100	0.015	0.016	0.017	0.021	11:38:56	10/4/2011 11:38	0.021
14160	0.014	0.015	0.015	0.017	11:39:56	10/4/2011 11:39	0.017
14220	0.013	0.013	0.013	0.014	11:40:56	10/4/2011 11:40	0.014
14280	0.013	0.013	0.014	0.014	11:41:56	10/4/2011 11:41	0.014
14340	0.013	0.013	0.013	0.014	11:42:56	10/4/2011 11:42	0.014

14400	0.012	0.012	0.013	0.013	11:43:56	10/4/2011 11:43	0.013
14460	0.012	0.013	0.013	0.013	11:44:56	10/4/2011 11:44	0.013
14520	0.013	0.013	0.014	0.015	11:45:56	10/4/2011 11:45	0.016
14580	0.015	0.016	0.017	0.02	11:46:56	10/4/2011 11:46	0.02
14640	0.013	0.014	0.014	0.017	11:47:56	10/4/2011 11:47	0.017
14700	0.013	0.013	0.014	0.015	11:48:56	10/4/2011 11:48	0.015
14760	0.017	0.017	0.017	0.018	11:49:56	10/4/2011 11:49	0.019
14820	0.012	0.012	0.012	0.013	11:50:56	10/4/2011 11:50	0.013
14880	0.012	0.012	0.012	0.013	11:51:56	10/4/2011 11:51	0.013
14940	0.015	0.015	0.016	0.019	11:52:56	10/4/2011 11:52	0.019
15000	0.014	0.014	0.015	0.018	11:53:56	10/4/2011 11:53	0.019
15060	0.012	0.012	0.012	0.014	11:54:56	10/4/2011 11:54	0.014
15120	0.011	0.011	0.011	0.012	11:55:56	10/4/2011 11:55	0.012
15180	0.012	0.012	0.012	0.012	11:56:56	10/4/2011 11:56	0.012
15240	0.011	0.012	0.012	0.013	11:57:56	10/4/2011 11:57	0.013
15300	0.01	0.01	0.01	0.011	11:58:56	10/4/2011 11:58	0.011
15360	0.01	0.01	0.011	0.011	11:59:56	10/4/2011 11:59	0.011
15420	0.011	0.011	0.011	0.012	12:00:56	10/4/2011 12:00	0.012
15480	0.01	0.011	0.011	0.011	12:01:56	10/4/2011 12:01	0.011
15540	0.01	0.01	0.011	0.011	12:02:56	10/4/2011 12:02	0.011
15600	0.01	0.01	0.011	0.011	12:03:56	10/4/2011 12:03	0.011
15660	0.01	0.011	0.011	0.012	12:04:56	10/4/2011 12:04	0.012
15720	0.011	0.011	0.011	0.012	12:05:56	10/4/2011 12:05	0.012
15780	0.013	0.013	0.013	0.015	12:06:56	10/4/2011 12:06	0.015
15840	0.012	0.013	0.013	0.014	12:07:56	10/4/2011 12:07	0.014
15900	0.012	0.012	0.013	0.014	12:08:56	10/4/2011 12:08	0.014
15960	0.013	0.013	0.014	0.015	12:09:56	10/4/2011 12:09	0.015
16020	0.012	0.012	0.012	0.013	12:10:56	10/4/2011 12:10	0.013
16080	0.012	0.012	0.013	0.014	12:11:56	10/4/2011 12:11	0.014
16140	0.011	0.012	0.012	0.013	12:12:56	10/4/2011 12:12	0.013
16200	0.011	0.011	0.012	0.012	12:13:56	10/4/2011 12:13	0.013
16260	0.012	0.012	0.012	0.013	12:14:56	10/4/2011 12:14	0.013
16320	0.012	0.012	0.013	0.014	12:15:56	10/4/2011 12:15	0.014
16380	0.012	0.012	0.012	0.013	12:16:56	10/4/2011 12:16	0.013
16440	0.012	0.012	0.013	0.014	12:17:56	10/4/2011 12:17	0.014
16500	0.012	0.012	0.012	0.013	12:18:56	10/4/2011 12:18	0.013
16560	0.012	0.012	0.013	0.013	12:19:56	10/4/2011 12:19	0.014
16620	0.013	0.013	0.014	0.015	12:20:56	10/4/2011 12:20	0.016
16680	0.013	0.013	0.014	0.016	12:21:56	10/4/2011 12:21	0.016
16740	0.012	0.013	0.013	0.015	12:22:56	10/4/2011 12:22	0.015
16800	0.012	0.012	0.013	0.014	12:23:56	10/4/2011 12:23	0.014
16860	0.011	0.011	0.011	0.012	12:24:56	10/4/2011 12:24	0.012
16920	0.012	0.012	0.012	0.013	12:25:56	10/4/2011 12:25	0.013
16980	0.011	0.011	0.012	0.013	12:26:56	10/4/2011 12:26	0.013
17040	0.01	0.01	0.01	0.011	12:27:56	10/4/2011 12:27	0.011
17100	0.01	0.01	0.01	0.01	12:28:56	10/4/2011 12:28	0.01
17160	0.016	0.016	0.016	0.017	12:29:56	10/4/2011 12:29	0.017
17220	0.013	0.013	0.013	0.014	12:30:56	10/4/2011 12:30	0.014
17280	0.012	0.012	0.012	0.013	12:31:56	10/4/2011 12:31	0.013
17340	0.014	0.014	0.014	0.015	12:32:56	10/4/2011 12:32	0.016
17400	0.011	0.011	0.011	0.012	12:33:56	10/4/2011 12:33	0.012
17460	0.009	0.009	0.009	0.01	12:34:56	10/4/2011 12:34	0.01
17520	0.009	0.009	0.009	0.009	12:35:56	10/4/2011 12:35	0.009
17580	0.009	0.009	0.01	0.01	12:36:56	10/4/2011 12:36	0.01
17640	0.01	0.01	0.01	0.011	12:37:56	10/4/2011 12:37	0.012
17700	0.009	0.009	0.01	0.01	12:38:56	10/4/2011 12:38	0.01
17760	0.009	0.009	0.01	0.01	12:39:56	10/4/2011 12:39	0.01
17820	0.009	0.01	0.01	0.011	12:40:56	10/4/2011 12:40	0.011
17880	0.009	0.009	0.01	0.01	12:41:56	10/4/2011 12:41	0.01
17940	0.009	0.009	0.01	0.01	12:42:56	10/4/2011 12:42	0.01
18000	0.009	0.01	0.01	0.011	12:43:56	10/4/2011 12:43	0.011
18060	0.039	0.039	0.04	0.051	12:44:56	10/4/2011 12:44	0.06
18120	0.01	0.01	0.011	0.012	12:45:56	10/4/2011 12:45	0.012
18180	0.01	0.01	0.01	0.011	12:46:56	10/4/2011 12:46	0.011
18240	0.01	0.01	0.011	0.012	12:47:56	10/4/2011 12:47	0.012
18300	0.01	0.01	0.011	0.011	12:48:56	10/4/2011 12:48	0.012
18360	0.011	0.011	0.011	0.013	12:49:56	10/4/2011 12:49	0.013
18420	0.01	0.01	0.01	0.011	12:50:56	10/4/2011 12:50	0.011
18480	0.009	0.009	0.009	0.009	12:51:56	10/4/2011 12:51	0.009

18540	0.009	0.009	0.01	0.011	12:52:56	10/4/2011 12:52	0.011
18600	0.009	0.009	0.009	0.01	12:53:56	10/4/2011 12:53	0.01
18660	0.009	0.009	0.009	0.01	12:54:56	10/4/2011 12:54	0.01
18720	0.009	0.009	0.01	0.01	12:55:56	10/4/2011 12:55	0.01
18780	0.009	0.009	0.01	0.01	12:56:56	10/4/2011 12:56	0.01
18840	0.009	0.009	0.01	0.01	12:57:56	10/4/2011 12:57	0.01
18900	0.009	0.01	0.01	0.01	12:58:56	10/4/2011 12:58	0.011
18960	0.009	0.009	0.01	0.01	12:59:56	10/4/2011 12:59	0.01
19020	0.009	0.009	0.01	0.01	13:00:56	10/4/2011 13:00	0.01
19080	0.008	0.008	0.008	0.009	13:01:56	10/4/2011 13:01	0.009
19140	0.008	0.008	0.009	0.009	13:02:56	10/4/2011 13:02	0.009
19200	0.011	0.011	0.012	0.013	13:03:56	10/4/2011 13:03	0.014
19260	0.011	0.011	0.012	0.013	13:04:56	10/4/2011 13:04	0.014
19320	0.01	0.01	0.01	0.012	13:05:56	10/4/2011 13:05	0.012
19380	0.009	0.01	0.01	0.011	13:06:56	10/4/2011 13:06	0.011
19440	0.01	0.01	0.011	0.012	13:07:56	10/4/2011 13:07	0.012
19500	0.009	0.01	0.01	0.01	13:08:56	10/4/2011 13:08	0.01
19560	0.01	0.01	0.01	0.011	13:09:56	10/4/2011 13:09	0.011
19620	0.011	0.011	0.011	0.012	13:10:56	10/4/2011 13:10	0.012
19680	0.011	0.011	0.012	0.013	13:11:56	10/4/2011 13:11	0.013
19740	0.011	0.011	0.011	0.012	13:12:56	10/4/2011 13:12	0.012
19800	0.01	0.01	0.01	0.011	13:13:56	10/4/2011 13:13	0.011
19860	0.009	0.009	0.01	0.01	13:14:56	10/4/2011 13:14	0.01
19920	0.01	0.01	0.01	0.01	13:15:56	10/4/2011 13:15	0.011
19980	0.01	0.01	0.01	0.011	13:16:56	10/4/2011 13:16	0.011
20040	0.009	0.009	0.009	0.01	13:17:56	10/4/2011 13:17	0.01
20100	0.011	0.011	0.011	0.012	13:18:56	10/4/2011 13:18	0.012
20160	0.01	0.01	0.011	0.012	13:19:56	10/4/2011 13:19	0.012
20220	0.011	0.011	0.011	0.012	13:20:56	10/4/2011 13:20	0.012
20280	0.011	0.011	0.011	0.012	13:21:56	10/4/2011 13:21	0.012
20340	0.01	0.01	0.011	0.011	13:22:56	10/4/2011 13:22	0.011
20400	0.012	0.012	0.013	0.014	13:23:56	10/4/2011 13:23	0.015
20460	0.011	0.011	0.011	0.012	13:24:56	10/4/2011 13:24	0.012
20520	0.013	0.014	0.014	0.016	13:25:56	10/4/2011 13:25	0.017
20580	0.018	0.018	0.02	0.024	13:26:56	10/4/2011 13:26	0.026
20640	0.014	0.015	0.016	0.019	13:27:56	10/4/2011 13:27	0.02
20700	0.01	0.01	0.011	0.011	13:28:56	10/4/2011 13:28	0.011
20760	0.01	0.01	0.01	0.011	13:29:56	10/4/2011 13:29	0.011
20820	0.011	0.012	0.012	0.013	13:30:56	10/4/2011 13:30	0.014
20880	0.019	0.02	0.023	0.031	13:31:56	10/4/2011 13:31	0.032
20940	0.021	0.023	0.027	0.041	13:32:56	10/4/2011 13:32	0.041
21000	0.012	0.013	0.014	0.016	13:33:56	10/4/2011 13:33	0.017
21060	0.011	0.012	0.012	0.014	13:34:56	10/4/2011 13:34	0.014
21120	0.01	0.01	0.011	0.011	13:35:56	10/4/2011 13:35	0.012
21180	0.01	0.01	0.011	0.011	13:36:56	10/4/2011 13:36	0.011
21240	0.01	0.01	0.011	0.012	13:37:56	10/4/2011 13:37	0.012
21300	0.01	0.011	0.011	0.012	13:38:56	10/4/2011 13:38	0.012
21360	0.01	0.01	0.011	0.011	13:39:56	10/4/2011 13:39	0.012
21420	0.01	0.011	0.011	0.012	13:40:56	10/4/2011 13:40	0.012
21480	0.011	0.011	0.012	0.014	13:41:56	10/4/2011 13:41	0.014
21540	0.01	0.01	0.01	0.011	13:42:56	10/4/2011 13:42	0.011
21600	0.01	0.01	0.011	0.012	13:43:56	10/4/2011 13:43	0.012
21660	0.011	0.011	0.012	0.015	13:44:56	10/4/2011 13:44	0.015
21720	0.013	0.013	0.014	0.017	13:45:56	10/4/2011 13:45	0.017
21780	0.01	0.01	0.01	0.011	13:46:56	10/4/2011 13:46	0.011
21840	0.01	0.01	0.01	0.011	13:47:56	10/4/2011 13:47	0.011
21900	0.011	0.011	0.011	0.012	13:48:56	10/4/2011 13:48	0.012
21960	0.01	0.01	0.01	0.01	13:49:56	10/4/2011 13:49	0.01
22020	0.01	0.01	0.01	0.01	13:50:56	10/4/2011 13:50	0.011
22080	0.013	0.013	0.014	0.015	13:51:56	10/4/2011 13:51	0.016
22140	0.012	0.013	0.013	0.015	13:52:56	10/4/2011 13:52	0.015
22200	0.011	0.011	0.011	0.012	13:53:56	10/4/2011 13:53	0.012
22260	0.01	0.01	0.011	0.011	13:54:56	10/4/2011 13:54	0.011
22320	0.011	0.011	0.011	0.012	13:55:56	10/4/2011 13:55	0.012
22380	0.01	0.011	0.011	0.011	13:56:56	10/4/2011 13:56	0.011
22440	0.011	0.012	0.012	0.013	13:57:56	10/4/2011 13:57	0.013
22500	0.012	0.012	0.012	0.014	13:58:56	10/4/2011 13:58	0.014
22560	0.011	0.011	0.011	0.012	13:59:56	10/4/2011 13:59	0.012
22620	0.01	0.01	0.01	0.011	14:00:56	10/4/2011 14:00	0.011

22680	0.01	0.01	0.011	0.011	14:01:56	10/4/2011 14:01	0.011
22740	0.011	0.011	0.012	0.013	14:02:56	10/4/2011 14:02	0.013
22800	0.01	0.01	0.011	0.012	14:03:56	10/4/2011 14:03	0.012
22860	0.009	0.009	0.01	0.011	14:04:56	10/4/2011 14:04	0.011
22920	0.009	0.009	0.009	0.01	14:05:56	10/4/2011 14:05	0.01
22980	0.01	0.01	0.01	0.011	14:06:56	10/4/2011 14:06	0.011
23040	0.009	0.009	0.01	0.011	14:07:56	10/4/2011 14:07	0.011
23100	0.009	0.01	0.01	0.01	14:08:56	10/4/2011 14:08	0.01
23160	0.009	0.01	0.01	0.01	14:09:56	10/4/2011 14:09	0.011
23220	0.009	0.009	0.01	0.01	14:10:56	10/4/2011 14:10	0.01
23280	0.01	0.01	0.01	0.011	14:11:56	10/4/2011 14:11	0.011
23340	0.009	0.009	0.01	0.01	14:12:56	10/4/2011 14:12	0.01
23400	0.009	0.009	0.009	0.009	14:13:56	10/4/2011 14:13	0.01
23460	0.009	0.009	0.01	0.01	14:14:56	10/4/2011 14:14	0.01
23520	0.009	0.01	0.01	0.01	14:15:56	10/4/2011 14:15	0.01
23580	0.01	0.01	0.01	0.011	14:16:56	10/4/2011 14:16	0.011
23640	0.01	0.01	0.011	0.012	14:17:56	10/4/2011 14:17	0.012
23700	0.009	0.01	0.01	0.011	14:18:56	10/4/2011 14:18	0.011
23760	0.011	0.011	0.011	0.012	14:19:56	10/4/2011 14:19	0.012
23820	0.01	0.01	0.011	0.011	14:20:56	10/4/2011 14:20	0.012
23880	0.011	0.011	0.012	0.013	14:21:56	10/4/2011 14:21	0.014
23940	0.011	0.011	0.011	0.012	14:22:56	10/4/2011 14:22	0.012
24000	0.01	0.011	0.011	0.012	14:23:56	10/4/2011 14:23	0.012
24060	0.01	0.01	0.011	0.012	14:24:56	10/4/2011 14:24	0.012
24120	0.009	0.01	0.01	0.01	14:25:56	10/4/2011 14:25	0.01
24180	0.009	0.009	0.01	0.01	14:26:56	10/4/2011 14:26	0.01
24240	0.01	0.01	0.01	0.011	14:27:56	10/4/2011 14:27	0.011
24300	0.01	0.01	0.01	0.011	14:28:56	10/4/2011 14:28	0.011
24360	0.01	0.01	0.011	0.011	14:29:56	10/4/2011 14:29	0.011
24420	0.01	0.011	0.011	0.012	14:30:56	10/4/2011 14:30	0.012
24480	0.009	0.009	0.009	0.01	14:31:56	10/4/2011 14:31	0.01
24540	0.01	0.01	0.01	0.011	14:32:56	10/4/2011 14:32	0.011
24600	0.01	0.01	0.01	0.011	14:33:56	10/4/2011 14:33	0.011
24660	0.01	0.01	0.011	0.012	14:34:56	10/4/2011 14:34	0.012
24720	0.012	0.012	0.012	0.013	14:35:56	10/4/2011 14:35	0.013
24780	0.01	0.01	0.01	0.011	14:36:56	10/4/2011 14:36	0.011
24840	0.009	0.01	0.01	0.011	14:37:56	10/4/2011 14:37	0.011
24900	0.009	0.01	0.01	0.011	14:38:56	10/4/2011 14:38	0.011
24960	0.009	0.009	0.01	0.01	14:39:56	10/4/2011 14:39	0.011
25020	0.01	0.01	0.011	0.011	14:40:56	10/4/2011 14:40	0.012
25080	0.01	0.01	0.011	0.011	14:41:56	10/4/2011 14:41	0.012
25140	0.01	0.01	0.011	0.012	14:42:56	10/4/2011 14:42	0.013
25200	0.01	0.01	0.011	0.012	14:43:56	10/4/2011 14:43	0.012
25260	0.01	0.01	0.011	0.012	14:44:56	10/4/2011 14:44	0.012
25320	0.01	0.01	0.01	0.011	14:45:56	10/4/2011 14:45	0.011
25380	0.015	0.016	0.018	0.023	14:46:56	10/4/2011 14:46	0.024
25440	0.011	0.011	0.012	0.014	14:47:56	10/4/2011 14:47	0.014
25500	0.011	0.011	0.012	0.013	14:48:56	10/4/2011 14:48	0.013
25560	0.01	0.01	0.01	0.011	14:49:56	10/4/2011 14:49	0.011
25620	0.01	0.01	0.011	0.011	14:50:56	10/4/2011 14:50	0.011
25680	0.01	0.01	0.011	0.012	14:51:56	10/4/2011 14:51	0.012
25740	0.011	0.011	0.012	0.014	14:52:56	10/4/2011 14:52	0.014
25800	0.01	0.01	0.01	0.011	14:53:56	10/4/2011 14:53	0.011

AECOM

Client: National Grid
Location: Lowes Metro
Date: 10/5/11
Field Personnel: T. Dimesky, L. Ferreira

Project: Metropolitan
Project Number:
Weather: 65°F Sunny
Ambient Noise: Construction Nearby

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID (On @ 9:36)	Upwind Dust Trak (On @ 9:36)	Work Area PID	Downwind PID (On @ 9:37)	Downwind Dust Trak (On @ 9:37)	dB Readings[1]	Comments
0936	0.0	0.010	0.0	0.0	0.012	89.9	Begin Work @ 0936
0950	0.0	0.013	0.0	0.0	0.012	91.0	cutting away asphalt slab
1005	0.0	0.012	0.0	0.0	0.030	93.6	chiselling asphalt
1020	0.0	0.013	0.0	0.0	0.012	94.4	removing asphalt & top layer debris
1035	0.0	0.028	0.0	0.0	0.020	95.2	hand augering ~~starter hole~~ through concrete debris
1050	0.0	0.021	0.0	0.0	0.016	96.3	break - discussions w/ manager
1105	0.0	0.021	0.0	0.0	0.016	97.1	~~Commence sonic drill~~
1120	0.0	0.025	0.0	0.0	0.020	97.8	
1135	0.0	0.20	0.0	0.0	0.014	98.6	
1150	0.0	0.45	0.0	0.0	0.551	92.4	Commence sonic drilling SB-22
1205	0.0	0.021	0.0	0.0	0.025	92.7	drilling SB-22
1220	0.0	0.022	0.0	0.1	0.025	92.2	
1235	0.0	0.017	0.0	0.0	0.011	93.0	
1250	0.0	0.013	0.0	0.0	0.017	93.0	
~~1305~~	~~0.0~~	~~0.019~~	~~0.0~~				
1320	0.0	0.019	0.0	0.0	0.021	91.8	
1335	0.0	0.022	0.0	0.0	0.020	93.3	
1350	0.0	0.011	0.0	0.0	0.011	91.5	
1405	0.0	0.010	0.0	0.0	0.013	80.2	demob & end drilling for the day
~~1420~~							
~~1435~~							

Avg 93.4 dB

=========Event #16 information (begin)=========
==========
[Event #16 name:]--[Event #16]2011-10-05 07:08<-->2011-10-05 14:14
[Event start time:]--2011-10-05 07:08:51[Event end time:]--2011-10-05 14:14:51
==========Event #16 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624
Data Points: 426 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)
Measurement Gas : Isobutene
Calibration Time : 2011-10-05 07:08:002011-10-05 07:08:002011-10-05 07:08:00
Drift Value : --- --- ---
Low Alarm Levels : 50.000 50.000 50.000
High Alarm Levels : 100.000 100.000 100.000
Span Value : 100.000 100.000 100.000
Correction Factor : 1.00 1.00 1.00
Over Alarm Levels : 15000.000 15000.000 15000.000
==========Event #16 data informations==========

LINE#	Date/Time	PID-Max(ppm)	PID-Min(ppm)	PID-Avg(ppm)
1	10/5/2011 7:09	1.162	0.197	0.308
2	10/5/2011 7:10	0.206	0.156	0.177
3	10/5/2011 7:11	0.179	0.087	0.118
4	10/5/2011 7:12	0.116	0.043	0.087
5	10/5/2011 7:13	0.135	0.026	0.073
6	10/5/2011 7:14	0.16	0.051	0.077
7	10/5/2011 7:15	0.097	0.07	0.087
8	10/5/2011 7:16	0.126	0.091	0.108
9	10/5/2011 7:17	0.132	0.1	0.116
10	10/5/2011 7:18	0.609	0.079	0.149
11	10/5/2011 7:19	0.144	0	0.022
12	10/5/2011 7:20	0.058	0	0.015
13	10/5/2011 7:21	0.06	0	0.005
14	10/5/2011 7:22	0.041	0.015	0.027
15	10/5/2011 7:23	0.046	0.016	0.027
16	10/5/2011 7:24	0.101	0.01	0.043
17	10/5/2011 7:25	0.075	0.023	0.044
18	10/5/2011 7:26	0.096	0.006	0.059
19	10/5/2011 7:27	0.045	0.019	0.03
20	10/5/2011 7:28	0.05	0.014	0.028
21	10/5/2011 7:29	0.06	0.009	0.032
22	10/5/2011 7:30	0.061	0.004	0.026
23	10/5/2011 7:31	0.064	0	0.018
24	10/5/2011 7:32	0.015	0	0.003
25	10/5/2011 7:33	0.014	0	0.005
26	10/5/2011 7:34	0.055	0	0.023
27	10/5/2011 7:35	0.022	0	0.008
28	10/5/2011 7:36	0.026	0.001	0.01
29	10/5/2011 7:37	0.054	0.001	0.015
30	10/5/2011 7:38	0.028	0.007	0.015
31	10/5/2011 7:39	0.084	0.002	0.022
32	10/5/2011 7:40	0.045	0.011	0.023
33	10/5/2011 7:41	0.037	0.015	0.025
34	10/5/2011 7:42	0.042	0.019	0.029
35	10/5/2011 7:43	0.044	0.023	0.034
36	10/5/2011 7:44	0.097	0.013	0.045
37	10/5/2011 7:45	0.058	0.031	0.044
38	10/5/2011 7:46	0.094	0.031	0.05
39	10/5/2011 7:47	0.064	0.035	0.049
40	10/5/2011 7:48	0.07	0.045	0.056
41	10/5/2011 7:49	0.077	0.044	0.063
42	10/5/2011 7:50	0.073	0.038	0.056
43	10/5/2011 7:51	0.084	0.047	0.063
44	10/5/2011 7:52	0.108	0.044	0.063
45	10/5/2011 7:53	0.113	0.029	0.073
46	10/5/2011 7:54	0.108	0.033	0.066
47	10/5/2011 7:55	0.093	0.055	0.067
48	10/5/2011 7:56	0.113	0.043	0.076

49	10/5/2011 7:57	0.12	0.048	0.072
50	10/5/2011 7:58	0.127	0.042	0.079
51	10/5/2011 7:59	0.13	0.065	0.079
52	10/5/2011 8:00	0.096	0.068	0.081
53	10/5/2011 8:01	0.136	0.063	0.083
54	10/5/2011 8:02	0.133	0.065	0.082
55	10/5/2011 8:03	0.13	0.06	0.082
56	10/5/2011 8:04	0.114	0.045	0.081
57	10/5/2011 8:05	0.118	0.064	0.084
58	10/5/2011 8:06	0.129	0.054	0.089
59	10/5/2011 8:07	0.128	0.065	0.084
60	10/5/2011 8:08	0.13	0.071	0.091
61	10/5/2011 8:09	0.119	0.061	0.083
62	10/5/2011 8:10	0.098	0.076	0.086
63	10/5/2011 8:11	0.142	0.068	0.09
64	10/5/2011 8:12	0.103	0.081	0.091
65	10/5/2011 8:13	0.107	0.086	0.096
66	10/5/2011 8:14	0.11	0.084	0.096
67	10/5/2011 8:15	0.153	0.092	0.105
68	10/5/2011 8:16	0.157	0.086	0.109
69	10/5/2011 8:17	0.149	0.075	0.103
70	10/5/2011 8:18	0.136	0.083	0.103
71	10/5/2011 8:19	0.141	0.067	0.097
72	10/5/2011 8:20	0.14	0.073	0.095
73	10/5/2011 8:21	0.143	0.062	0.093
74	10/5/2011 8:22	0.139	0.069	0.094
75	10/5/2011 8:23	0.143	0.07	0.096
76	10/5/2011 8:24	0.135	0.073	0.099
77	10/5/2011 8:25	0.141	0.063	0.1
78	10/5/2011 8:26	0.14	0.071	0.101
79	10/5/2011 8:27	0.127	0.087	0.102
80	10/5/2011 8:28	0.109	0.088	0.099
81	10/5/2011 8:29	0.144	0.091	0.106
82	10/5/2011 8:30	0.144	0.078	0.111
83	10/5/2011 8:31	0.149	0.081	0.102
84	10/5/2011 8:32	0.141	0.078	0.109
85	10/5/2011 8:33	0.136	0.082	0.102
86	10/5/2011 8:34	0.13	0.069	0.091
87	10/5/2011 8:35	0.123	0.062	0.078
88	10/5/2011 8:36	0.125	0.06	0.082
89	10/5/2011 8:37	0.114	0.057	0.077
90	10/5/2011 8:38	0.081	0.063	0.072
91	10/5/2011 8:39	0.111	0.056	0.082
92	10/5/2011 8:40	0.114	0.052	0.077
93	10/5/2011 8:41	0.112	0.063	0.079
94	10/5/2011 8:42	0.123	0.065	0.08
95	10/5/2011 8:43	0.122	0.06	0.087
96	10/5/2011 8:44	0.131	0.063	0.087
97	10/5/2011 8:45	0.123	0.05	0.087
98	10/5/2011 8:46	0.128	0.068	0.093
99	10/5/2011 8:47	0.119	0.069	0.083
100	10/5/2011 8:48	0.121	0.052	0.08
101	10/5/2011 8:49	0.116	0.062	0.081
102	10/5/2011 8:50	0.111	0.055	0.081
103	10/5/2011 8:51	0.124	0.055	0.082
104	10/5/2011 8:52	0.117	0.059	0.08
105	10/5/2011 8:53	0.116	0.05	0.079
106	10/5/2011 8:54	0.11	0.057	0.078
107	10/5/2011 8:55	0.116	0.054	0.083
108	10/5/2011 8:56	0.127	0.061	0.083
109	10/5/2011 8:57	0.132	0.049	0.087
110	10/5/2011 8:58	0.114	0.062	0.083
111	10/5/2011 8:59	0.127	0.065	0.082
112	10/5/2011 9:00	0.126	0.07	0.087
113	10/5/2011 9:01	0.115	0.068	0.081
114	10/5/2011 9:02	0.123	0.067	0.084
115	10/5/2011 9:03	0.118	0.072	0.09
116	10/5/2011 9:04	0.121	0.065	0.088
117	10/5/2011 9:05	0.124	0.059	0.089

118	10/5/2011 9:06	0.117	0.061	0.087
119	10/5/2011 9:07	0.116	0.064	0.09
120	10/5/2011 9:08	0.106	0.04	0.067
121	10/5/2011 9:09	0.1	0.036	0.056
122	10/5/2011 9:10	0.091	0.03	0.055
123	10/5/2011 9:11	0.089	0.034	0.053
124	10/5/2011 9:12	0.094	0.04	0.058
125	10/5/2011 9:13	0.093	0.038	0.058
126	10/5/2011 9:14	0.096	0.042	0.063
127	10/5/2011 9:15	0.101	0.042	0.066
128	10/5/2011 9:16	0.107	0.052	0.079
129	10/5/2011 9:17	0.111	0.055	0.079
130	10/5/2011 9:18	0.115	0.048	0.074
131	10/5/2011 9:19	0.102	0.053	0.078
132	10/5/2011 9:20	0.107	0.051	0.077
133	10/5/2011 9:21	0.11	0.052	0.074
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136	10/5/2011 9:24	0.099	0.055	0.071
137	10/5/2011 9:25	0.102	0.036	0.066
138	10/5/2011 9:26	0.1	0.036	0.061
139	10/5/2011 9:27	0.082	0.036	0.052
140	10/5/2011 9:28	0.084	0.026	0.052
141	10/5/2011 9:29	0.078	0.02	0.046
142	10/5/2011 9:30	0.074	0.019	0.039
143	10/5/2011 9:31	0.071	0	0.019
144	10/5/2011 9:32	0	0	0
145	10/5/2011 9:33	0	0	0
146	10/5/2011 9:34	0	0	0
147	10/5/2011 9:35	0	0	0
148	10/5/2011 9:36	0	0	0
149	10/5/2011 9:37	0	0	0
150	10/5/2011 9:38	0	0	0
151	10/5/2011 9:39	0	0	0
152	10/5/2011 9:40	0	0	0
153	10/5/2011 9:41	0	0	0
154	10/5/2011 9:42	0	0	0
155	10/5/2011 9:43	0.034	0	0.004
156	10/5/2011 9:44	0	0	0
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169	10/5/2011 9:57	0	0	0
170	10/5/2011 9:58	0	0	0
171	10/5/2011 9:59	0	0	0
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416	10/5/2011 14:04	0	0	0
417	10/5/2011 14:05	0	0	0
418	10/5/2011 14:06	0	0	0
419	10/5/2011 14:07	0	0	0
420	10/5/2011 14:08	0	0	0
421	10/5/2011 14:09	0	0	0
422	10/5/2011 14:10	0	0	0
423	10/5/2011 14:11	0	0	0
424	10/5/2011 14:12	0	0	0
425	10/5/2011 14:13	0	0	0
426	10/5/2011 14:14	0	0	0

==========Event #16 information (end)==========

=========Event #10 information (begin)=========
==========
[Event #10 name:]--[Event #10]2011-10-05 07:17<-->2011-10-05 14:24
[Event start time:]--2011-10-05 07:17:35[Event end time:]--2011-10-05 14:24:35
==========Event #10 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367
Data Points: 427 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID(ppb)
Measurement Gas : Isobutene
Calibration Time : 2011-10-05 07:17:00
Drift Value : ---
Low Alarm Levels : 25847
High Alarm Levels : 51694
Span Value : 100000
Correction Factor : 1.00
Over Alarm Levels : 15000000
==========Event #10 data informations==========

LINE#	Date/Time	PID(ppm)	PID(ppb)
1	10/5/2011 7:18	0.259	259
2	10/5/2011 7:19	0.133	133
3	10/5/2011 7:20	0.091	91
4	10/5/2011 7:21	0.021	21
5	10/5/2011 7:22	0.002	2
6	10/5/2011 7:23	0	0
7	10/5/2011 7:24	0	0
8	10/5/2011 7:25	0	0
9	10/5/2011 7:26	0	0
10	10/5/2011 7:27	0	0
11	10/5/2011 7:28	0	0
12	10/5/2011 7:29	0	0
13	10/5/2011 7:30	0	0
14	10/5/2011 7:31	0	0
15	10/5/2011 7:32	0	0
16	10/5/2011 7:33	0	0
17	10/5/2011 7:34	0	0
18	10/5/2011 7:35	0	0
19	10/5/2011 7:36	0	0
20	10/5/2011 7:37	0	0
21	10/5/2011 7:38	0	0
22	10/5/2011 7:39	0	0
23	10/5/2011 7:40	0	0
24	10/5/2011 7:41	0	0
25	10/5/2011 7:42	0	0
26	10/5/2011 7:43	0	0
27	10/5/2011 7:44	0	0
28	10/5/2011 7:45	0	0
29	10/5/2011 7:46	0	0
30	10/5/2011 7:47	0	0
31	10/5/2011 7:48	0	0
32	10/5/2011 7:49	0	0
33	10/5/2011 7:50	0	0
34	10/5/2011 7:51	0	0
35	10/5/2011 7:52	0	0
36	10/5/2011 7:53	0	0
37	10/5/2011 7:54	0	0
38	10/5/2011 7:55	0.003	3
39	10/5/2011 7:56	0.01	10
40	10/5/2011 7:57	0.016	16
41	10/5/2011 7:58	0.024	24
42	10/5/2011 7:59	0.029	29
43	10/5/2011 8:00	0.034	34
44	10/5/2011 8:01	0.041	41
45	10/5/2011 8:02	0.046	46
46	10/5/2011 8:03	0.052	52
47	10/5/2011 8:04	0.058	58
48	10/5/2011 8:05	0.063	63

49	10/5/2011 8:06	0.068	68
50	10/5/2011 8:07	0.073	73
51	10/5/2011 8:08	0.078	78
52	10/5/2011 8:09	0.083	83
53	10/5/2011 8:10	0.088	88
54	10/5/2011 8:11	0.093	93
55	10/5/2011 8:12	0.098	98
56	10/5/2011 8:13	0.103	103
57	10/5/2011 8:14	0.108	108
58	10/5/2011 8:15	0.113	113
59	10/5/2011 8:16	0.117	117
60	10/5/2011 8:17	0.122	122
61	10/5/2011 8:18	0.127	127
62	10/5/2011 8:19	0.131	131
63	10/5/2011 8:20	0.135	135
64	10/5/2011 8:21	0.14	140
65	10/5/2011 8:22	0.144	144
66	10/5/2011 8:23	0.147	147
67	10/5/2011 8:24	0.15	150
68	10/5/2011 8:25	0.155	155
69	10/5/2011 8:26	0.166	166
70	10/5/2011 8:27	0.173	173
71	10/5/2011 8:28	0.175	175
72	10/5/2011 8:29	0.174	174
73	10/5/2011 8:30	0.174	174
74	10/5/2011 8:31	0.174	174
75	10/5/2011 8:32	0.177	177
76	10/5/2011 8:33	0.177	177
77	10/5/2011 8:34	0.179	179
78	10/5/2011 8:35	0.183	183
79	10/5/2011 8:36	0.187	187
80	10/5/2011 8:37	0.191	191
81	10/5/2011 8:38	0.195	195
82	10/5/2011 8:39	0.2	200
83	10/5/2011 8:40	0.204	204
84	10/5/2011 8:41	0.208	208
85	10/5/2011 8:42	0.212	212
86	10/5/2011 8:43	0.214	214
87	10/5/2011 8:44	0.217	217
88	10/5/2011 8:45	0.219	219
89	10/5/2011 8:46	0.222	222
90	10/5/2011 8:47	0.224	224
91	10/5/2011 8:48	0.225	225
92	10/5/2011 8:49	0.225	225
93	10/5/2011 8:50	0.226	226
94	10/5/2011 8:51	0.228	228
95	10/5/2011 8:52	0.229	229
96	10/5/2011 8:53	0.232	232
97	10/5/2011 8:54	0.234	234
98	10/5/2011 8:55	0.237	237
99	10/5/2011 8:56	0.241	241
100	10/5/2011 8:57	0.245	245
101	10/5/2011 8:58	0.247	247
102	10/5/2011 8:59	0.251	251
103	10/5/2011 9:00	0.252	252
104	10/5/2011 9:01	0.256	256
105	10/5/2011 9:02	0.257	257
106	10/5/2011 9:03	0.259	259
107	10/5/2011 9:04	0.261	261
108	10/5/2011 9:05	0.264	264
109	10/5/2011 9:06	0.266	266
110	10/5/2011 9:07	0.267	267
111	10/5/2011 9:08	0.27	270
112	10/5/2011 9:09	0.272	272
113	10/5/2011 9:10	0.273	273
114	10/5/2011 9:11	0.276	276
115	10/5/2011 9:12	0.278	278
116	10/5/2011 9:13	0.279	279
117	10/5/2011 9:14	0.281	281

118	10/5/2011 9:15	0.283	283
119	10/5/2011 9:16	0.285	285
120	10/5/2011 9:17	0.287	287
121	10/5/2011 9:18	0.288	288
122	10/5/2011 9:19	0.275	275
123	10/5/2011 9:20	0.26	260
124	10/5/2011 9:21	0.261	261
125	10/5/2011 9:22	0.262	262
126	10/5/2011 9:23	0.267	267
127	10/5/2011 9:24	0.275	275
128	10/5/2011 9:25	0.281	281
129	10/5/2011 9:26	0.281	281
130	10/5/2011 9:27	0.285	285
131	10/5/2011 9:28	0.284	284
132	10/5/2011 9:29	0.283	283
133	10/5/2011 9:30	0.282	282
134	10/5/2011 9:31	0.282	282
135	10/5/2011 9:32	0.285	285
136	10/5/2011 9:33	0.289	289
137	10/5/2011 9:34	0.289	289
138	10/5/2011 9:35	0.288	288
139	10/5/2011 9:36	0.289	289
140	10/5/2011 9:37	0.287	287
141	10/5/2011 9:38	0.283	283
142	10/5/2011 9:39	0.279	279
143	10/5/2011 9:40	0.277	277
144	10/5/2011 9:41	0.272	272
145	10/5/2011 9:42	0.197	197
146	10/5/2011 9:43	0.031	31
147	10/5/2011 9:44	0.006	6
148	10/5/2011 9:45	0.005	5
149	10/5/2011 9:46	0.009	9
150	10/5/2011 9:47	0.001	1
151	10/5/2011 9:48	0.001	1
152	10/5/2011 9:49	0	0
153	10/5/2011 9:50	0	0
154	10/5/2011 9:51	0	0
155	10/5/2011 9:52	0	0
156	10/5/2011 9:53	0	0
157	10/5/2011 9:54	0.129	129
158	10/5/2011 9:55	0.093	93
159	10/5/2011 9:56	0	0
160	10/5/2011 9:57	0.088	88
161	10/5/2011 9:58	0.072	72
162	10/5/2011 9:59	0	0
163	10/5/2011 10:00	0	0
164	10/5/2011 10:01	0	0
165	10/5/2011 10:02	0	0
166	10/5/2011 10:03	0	0
167	10/5/2011 10:04	0	0
168	10/5/2011 10:05	0	0
169	10/5/2011 10:06	0	0
170	10/5/2011 10:07	0	0
171	10/5/2011 10:08	0	0
172	10/5/2011 10:09	0	0
173	10/5/2011 10:10	0	0
174	10/5/2011 10:11	0	0
175	10/5/2011 10:12	0	0
176	10/5/2011 10:13	0	0
177	10/5/2011 10:14	0	0
178	10/5/2011 10:15	0	0
179	10/5/2011 10:16	0	0
180	10/5/2011 10:17	0	0
181	10/5/2011 10:18	0	0
182	10/5/2011 10:19	0	0
183	10/5/2011 10:20	0	0
184	10/5/2011 10:21	0	0
185	10/5/2011 10:22	0	0
186	10/5/2011 10:23	0	0

187	10/5/2011 10:24	0	0
188	10/5/2011 10:25	0	0
189	10/5/2011 10:26	0	0
190	10/5/2011 10:27	0	0
191	10/5/2011 10:28	0	0
192	10/5/2011 10:29	0	0
193	10/5/2011 10:30	0.002	2
194	10/5/2011 10:31	0	0
195	10/5/2011 10:32	0	0
196	10/5/2011 10:33	0	0
197	10/5/2011 10:34	0	0
198	10/5/2011 10:35	0	0
199	10/5/2011 10:36	0	0
200	10/5/2011 10:37	0	0
201	10/5/2011 10:38	0	0
202	10/5/2011 10:39	0	0
203	10/5/2011 10:40	0	0
204	10/5/2011 10:41	0	0
205	10/5/2011 10:42	0	0
206	10/5/2011 10:43	0	0
207	10/5/2011 10:44	0	0
208	10/5/2011 10:45	0	0
209	10/5/2011 10:46	0	0
210	10/5/2011 10:47	0	0
211	10/5/2011 10:48	0	0
212	10/5/2011 10:49	0	0
213	10/5/2011 10:50	0	0
214	10/5/2011 10:51	0.002	2
215	10/5/2011 10:52	0	0
216	10/5/2011 10:53	0	0
217	10/5/2011 10:54	0	0
218	10/5/2011 10:55	0	0
219	10/5/2011 10:56	0	0
220	10/5/2011 10:57	0	0
221	10/5/2011 10:58	0	0
222	10/5/2011 10:59	0	0
223	10/5/2011 11:00	0	0
224	10/5/2011 11:01	0	0
225	10/5/2011 11:02	0	0
226	10/5/2011 11:03	0	0
227	10/5/2011 11:04	0.002	2
228	10/5/2011 11:05	0	0
229	10/5/2011 11:06	0	0
230	10/5/2011 11:07	0	0
231	10/5/2011 11:08	0	0
232	10/5/2011 11:09	0	0
233	10/5/2011 11:10	0	0
234	10/5/2011 11:11	0	0
235	10/5/2011 11:12	0.002	2
236	10/5/2011 11:13	0	0
237	10/5/2011 11:14	0	0
238	10/5/2011 11:15	0	0
239	10/5/2011 11:16	0	0
240	10/5/2011 11:17	0	0
241	10/5/2011 11:18	0	0
242	10/5/2011 11:19	0	0
243	10/5/2011 11:20	0	0
244	10/5/2011 11:21	0	0
245	10/5/2011 11:22	0	0
246	10/5/2011 11:23	0	0
247	10/5/2011 11:24	0	0
248	10/5/2011 11:25	0	0
249	10/5/2011 11:26	0	0
250	10/5/2011 11:27	0	0
251	10/5/2011 11:28	0	0
252	10/5/2011 11:29	0	0
253	10/5/2011 11:30	0	0
254	10/5/2011 11:31	0	0
255	10/5/2011 11:32	0	0

256	10/5/2011 11:33	0	0
257	10/5/2011 11:34	0	0
258	10/5/2011 11:35	0.003	3
259	10/5/2011 11:36	0	0
260	10/5/2011 11:37	0	0
261	10/5/2011 11:38	0	0
262	10/5/2011 11:39	0	0
263	10/5/2011 11:40	0	0
264	10/5/2011 11:41	0	0
265	10/5/2011 11:42	0	0
266	10/5/2011 11:43	0	0
267	10/5/2011 11:44	0	0
268	10/5/2011 11:45	0	0
269	10/5/2011 11:46	0	0
270	10/5/2011 11:47	0	0
271	10/5/2011 11:48	0	0
272	10/5/2011 11:49	0	0
273	10/5/2011 11:50	0	0
274	10/5/2011 11:51	0	0
275	10/5/2011 11:52	0	0
276	10/5/2011 11:53	0	0
277	10/5/2011 11:54	0	0
278	10/5/2011 11:55	0.014	14
279	10/5/2011 11:56	0	0
280	10/5/2011 11:57	0	0
281	10/5/2011 11:58	0	0
282	10/5/2011 11:59	0	0
283	10/5/2011 12:00	0	0
284	10/5/2011 12:01	0	0
285	10/5/2011 12:02	0	0
286	10/5/2011 12:03	0	0
287	10/5/2011 12:04	0.009	9
288	10/5/2011 12:05	0.004	4
289	10/5/2011 12:06	0.011	11
290	10/5/2011 12:07	0.012	12
291	10/5/2011 12:08	0.024	24
292	10/5/2011 12:09	0.001	1
293	10/5/2011 12:10	0	0
294	10/5/2011 12:11	0.001	1
295	10/5/2011 12:12	0.001	1
296	10/5/2011 12:13	0	0
297	10/5/2011 12:14	0	0
298	10/5/2011 12:15	0.001	1
299	10/5/2011 12:16	0.001	1
300	10/5/2011 12:17	0.02	20
301	10/5/2011 12:18	0.002	2
302	10/5/2011 12:19	0.005	5
303	10/5/2011 12:20	0	0
304	10/5/2011 12:21	0.009	9
305	10/5/2011 12:22	0.025	25
306	10/5/2011 12:23	0.011	11
307	10/5/2011 12:24	0	0
308	10/5/2011 12:25	0.003	3
309	10/5/2011 12:26	0.003	3
310	10/5/2011 12:27	0	0
311	10/5/2011 12:28	0.056	56
312	10/5/2011 12:29	0.045	45
313	10/5/2011 12:30	0.001	1
314	10/5/2011 12:31	0.013	13
315	10/5/2011 12:32	0.005	5
316	10/5/2011 12:33	0.041	41
317	10/5/2011 12:34	0.004	4
318	10/5/2011 12:35	0.007	7
319	10/5/2011 12:36	0	0
320	10/5/2011 12:37	0	0
321	10/5/2011 12:38	0.031	31
322	10/5/2011 12:39	0.006	6
323	10/5/2011 12:40	0.006	6
324	10/5/2011 12:41	0.003	3

325	10/5/2011 12:42	0.001	1
326	10/5/2011 12:43	0	0
327	10/5/2011 12:44	0	0
328	10/5/2011 12:45	0.001	1
329	10/5/2011 12:46	0	0
330	10/5/2011 12:47	0	0
331	10/5/2011 12:48	0.002	2
332	10/5/2011 12:49	0.009	9
333	10/5/2011 12:50	0.011	11
334	10/5/2011 12:51	0.009	9
335	10/5/2011 12:52	0.031	31
336	10/5/2011 12:53	0.012	12
337	10/5/2011 12:54	0	0
338	10/5/2011 12:55	0	0
339	10/5/2011 12:56	0.012	12
340	10/5/2011 12:57	0	0
341	10/5/2011 12:58	0	0
342	10/5/2011 12:59	0	0
343	10/5/2011 13:00	0	0
344	10/5/2011 13:01	0	0
345	10/5/2011 13:02	0	0
346	10/5/2011 13:03	0	0
347	10/5/2011 13:04	0	0
348	10/5/2011 13:05	0	0
349	10/5/2011 13:06	0	0
350	10/5/2011 13:07	0.001	1
351	10/5/2011 13:08	0	0
352	10/5/2011 13:09	0	0
353	10/5/2011 13:10	0	0
354	10/5/2011 13:11	0.002	2
355	10/5/2011 13:12	0.007	7
356	10/5/2011 13:13	0	0
357	10/5/2011 13:14	0.001	1
358	10/5/2011 13:15	0	0
359	10/5/2011 13:16	0	0
360	10/5/2011 13:17	0	0
361	10/5/2011 13:18	0	0
362	10/5/2011 13:19	0	0
363	10/5/2011 13:20	0	0
364	10/5/2011 13:21	0	0
365	10/5/2011 13:22	0	0
366	10/5/2011 13:23	0	0
367	10/5/2011 13:24	0	0
368	10/5/2011 13:25	0	0
369	10/5/2011 13:26	0	0
370	10/5/2011 13:27	0	0
371	10/5/2011 13:28	0	0
372	10/5/2011 13:29	0	0
373	10/5/2011 13:30	0	0
374	10/5/2011 13:31	0	0
375	10/5/2011 13:32	0	0
376	10/5/2011 13:33	0	0
377	10/5/2011 13:34	0	0
378	10/5/2011 13:35	0	0
379	10/5/2011 13:36	0	0
380	10/5/2011 13:37	0.001	1
381	10/5/2011 13:38	0.004	4
382	10/5/2011 13:39	0	0
383	10/5/2011 13:40	0	0
384	10/5/2011 13:41	0	0
385	10/5/2011 13:42	0	0
386	10/5/2011 13:43	0	0
387	10/5/2011 13:44	0	0
388	10/5/2011 13:45	0.005	5
389	10/5/2011 13:46	0	0
390	10/5/2011 13:47	0.004	4
391	10/5/2011 13:48	0.001	1
392	10/5/2011 13:49	0	0
393	10/5/2011 13:50	0	0

394	10/5/2011 13:51	0.016	16
395	10/5/2011 13:52	0.01	10
396	10/5/2011 13:53	0.014	14
397	10/5/2011 13:54	0	0
398	10/5/2011 13:55	0.006	6
399	10/5/2011 13:56	0.002	2
400	10/5/2011 13:57	0.014	14
401	10/5/2011 13:58	0.024	24
402	10/5/2011 13:59	0.003	3
403	10/5/2011 14:00	0.001	1
404	10/5/2011 14:01	0	0
405	10/5/2011 14:02	0	0
406	10/5/2011 14:03	0	0
407	10/5/2011 14:04	0	0
408	10/5/2011 14:05	0	0
409	10/5/2011 14:06	0	0
410	10/5/2011 14:07	0	0
411	10/5/2011 14:08	0.001	1
412	10/5/2011 14:09	0	0
413	10/5/2011 14:10	0	0
414	10/5/2011 14:11	0	0
415	10/5/2011 14:12	0	0
416	10/5/2011 14:13	0	0
417	10/5/2011 14:14	0	0
418	10/5/2011 14:15	0	0
419	10/5/2011 14:16	0	0
420	10/5/2011 14:17	0	0
421	10/5/2011 14:18	0	0
422	10/5/2011 14:19	0	0
423	10/5/2011 14:20	0	0
424	10/5/2011 14:21	0	0
425	10/5/2011 14:22	0	0
426	10/5/2011 14:23	0	0
427	10/5/2011 14:24	0	0

==========Event #10 information (end)==========

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533101806
Firmware Version	2.8
Calibration Date	5/19/2011
Test Name	MANUAL_004
Test Start Time	9:36:39 AM
Test Start Date	10/5/2011
Test Length [D:H:M]	0:04:28
Test Interval [M:S]	1:00
PM1 Average [mg/n	0.015
PM1 Minimum [mg/	0.006
PM1 Maximum [mg	0.048
PM1 TWA [mg/m3]	0.009
PM2.5 Average [mg	0.016
PM2.5 Minimum [m	0.006
PM2.5 Maximum [m	0.049
PM2.5 TWA [mg/m3	0.009
PM4 Average [mg/n	0.016
PM4 Minimum [mg/	0.007
PM4 Maximum [mg	0.052
PM4 TWA [mg/m3]	0.009
PM10 Average [mg/	0.02
PM10 Minimum [mg	0.008
PM10 Maximum [m	0.077
PM10 TWA [mg/m3	0.011
TOTAL Average [mg	0.022
TOTAL Minimum [m	0.009
TOTAL Maximum [m	0.097
TOTAL TWA [mg/m3	0.012
Photometric User C	1
Size Correction User	1
Flow User Cal	1
Errors	
Number of Samples	268

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	9:36:39 AM	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.011	0.011	0.012	0.014	9:37:39 AM	10/5/2011 9:37	0.015		
120	0.008	0.008	0.009	0.009	9:38:39 AM	10/5/2011 9:38	0.01		
180	0.008	0.008	0.009	0.01	9:39:39 AM	10/5/2011 9:39	0.011		
240	0.009	0.009	0.01	0.011	9:40:39 AM	10/5/2011 9:40	0.011		
300	0.014	0.015	0.015	0.016	9:41:39 AM	10/5/2011 9:41	0.017		
360	0.009	0.009	0.01	0.011	9:42:39 AM	10/5/2011 9:42	0.011		
420	0.009	0.009	0.009	0.01	9:43:39 AM	10/5/2011 9:43	0.01		
480	0.008	0.008	0.009	0.01	9:44:39 AM	10/5/2011 9:44	0.011		
540	0.009	0.009	0.009	0.01	9:45:39 AM	10/5/2011 9:45	0.01		
600	0.017	0.017	0.018	0.021	9:46:39 AM	10/5/2011 9:46	0.022		
660	0.01	0.011	0.011	0.013	9:47:39 AM	10/5/2011 9:47	0.014		
720	0.009	0.009	0.009	0.01	9:48:39 AM	10/5/2011 9:48	0.01		
780	0.011	0.011	0.011	0.013	9:49:39 AM	10/5/2011 9:49	0.013		
840	0.01	0.01	0.01	0.013	9:50:39 AM	10/5/2011 9:50	0.013		
900	0.018	0.018	0.019	0.02	9:51:39 AM	10/5/2011 9:51	0.02		
960	0.026	0.026	0.027	0.028	9:52:39 AM	10/5/2011 9:52	0.028		
1020	0.012	0.012	0.012	0.013	9:53:39 AM	10/5/2011 9:53	0.013		
1080	0.009	0.009	0.01	0.011	9:54:39 AM	10/5/2011 9:54	0.011		
1140	0.008	0.008	0.008	0.009	9:55:39 AM	10/5/2011 9:55	0.009		
1200	0.009	0.009	0.01	0.011	9:56:39 AM	10/5/2011 9:56	0.011		
1260	0.01	0.011	0.011	0.012	9:57:39 AM	10/5/2011 9:57	0.012		
1320	0.012	0.012	0.012	0.014	9:58:39 AM	10/5/2011 9:58	0.014		
1380	0.019	0.019	0.02	0.021	9:59:39 AM	10/5/2011 9:59	0.021		
1440	0.01	0.01	0.01	0.011	10:00:39 AM	10/5/2011 10:00	0.011		
1500	0.014	0.014	0.014	0.015	10:01:39 AM	10/5/2011 10:01	0.015		
1560	0.01	0.01	0.011	0.011	10:02:39 AM	10/5/2011 10:02	0.011		
1620	0.01	0.011	0.011	0.012	10:03:39 AM	10/5/2011 10:03	0.012		
1680	0.009	0.009	0.01	0.011	10:04:39 AM	10/5/2011 10:04	0.011		
1740	0.01	0.011	0.011	0.012	10:05:39 AM	10/5/2011 10:05	0.012		
1800	0.015	0.015	0.016	0.017	10:06:39 AM	10/5/2011 10:06	0.017		
1860	0.018	0.018	0.018	0.019	10:07:39 AM	10/5/2011 10:07	0.019		
1920	0.022	0.022	0.022	0.023	10:08:39 AM	10/5/2011 10:08	0.023		
1980	0.027	0.027	0.027	0.028	10:09:39 AM	10/5/2011 10:09	0.028		

2040	0.016	0.016	0.017	0.018	10:10:39 AM	10/5/2011 10:10	0.018
2100	0.01	0.01	0.011	0.012	10:11:39 AM	10/5/2011 10:11	0.012
2160	0.01	0.01	0.01	0.011	10:12:39 AM	10/5/2011 10:12	0.011
2220	0.011	0.011	0.011	0.012	10:13:39 AM	10/5/2011 10:13	0.012
2280	0.01	0.01	0.01	0.011	10:14:39 AM	10/5/2011 10:14	0.011
2340	0.012	0.012	0.013	0.014	10:15:39 AM	10/5/2011 10:15	0.014
2400	0.011	0.011	0.012	0.012	10:16:39 AM	10/5/2011 10:16	0.012
2460	0.01	0.01	0.011	0.012	10:17:39 AM	10/5/2011 10:17	0.012
2520	0.013	0.013	0.014	0.015	10:18:39 AM	10/5/2011 10:18	0.016
2580	0.011	0.011	0.012	0.012	10:19:39 AM	10/5/2011 10:19	0.012
2640	0.015	0.016	0.017	0.02	10:20:39 AM	10/5/2011 10:20	0.02
2700	0.015	0.015	0.016	0.019	10:21:39 AM	10/5/2011 10:21	0.02
2760	0.013	0.013	0.014	0.016	10:22:39 AM	10/5/2011 10:22	0.016
2820	0.011	0.011	0.012	0.013	10:23:39 AM	10/5/2011 10:23	0.013
2880	0.013	0.013	0.013	0.014	10:24:39 AM	10/5/2011 10:24	0.014
2940	0.024	0.024	0.024	0.025	10:25:39 AM	10/5/2011 10:25	0.025
3000	0.023	0.023	0.024	0.026	10:26:39 AM	10/5/2011 10:26	0.027
3060	0.013	0.013	0.013	0.014	10:27:39 AM	10/5/2011 10:27	0.014
3120	0.017	0.017	0.018	0.02	10:28:39 AM	10/5/2011 10:28	0.02
3180	0.026	0.026	0.027	0.029	10:29:39 AM	10/5/2011 10:29	0.029
3240	0.026	0.026	0.027	0.029	10:30:39 AM	10/5/2011 10:30	0.029
3300	0.025	0.025	0.026	0.027	10:31:39 AM	10/5/2011 10:31	0.027
3360	0.017	0.017	0.017	0.019	10:32:39 AM	10/5/2011 10:32	0.019
3420	0.013	0.013	0.014	0.015	10:33:39 AM	10/5/2011 10:33	0.015
3480	0.012	0.012	0.012	0.013	10:34:39 AM	10/5/2011 10:34	0.013
3540	0.011	0.011	0.012	0.013	10:35:39 AM	10/5/2011 10:35	0.014
3600	0.013	0.013	0.014	0.015	10:36:39 AM	10/5/2011 10:36	0.015
3660	0.012	0.013	0.013	0.014	10:37:39 AM	10/5/2011 10:37	0.014
3720	0.017	0.017	0.018	0.02	10:38:39 AM	10/5/2011 10:38	0.021
3780	0.013	0.013	0.013	0.015	10:39:39 AM	10/5/2011 10:39	0.015
3840	0.028	0.029	0.03	0.037	10:40:39 AM	10/5/2011 10:40	0.038
3900	0.021	0.021	0.022	0.025	10:41:39 AM	10/5/2011 10:41	0.025
3960	0.023	0.023	0.024	0.026	10:42:39 AM	10/5/2011 10:42	0.026
4020	0.024	0.024	0.025	0.027	10:43:39 AM	10/5/2011 10:43	0.027
4080	0.011	0.011	0.011	0.012	10:44:39 AM	10/5/2011 10:44	0.013
4140	0.014	0.015	0.015	0.016	10:45:39 AM	10/5/2011 10:45	0.016
4200	0.017	0.017	0.017	0.018	10:46:39 AM	10/5/2011 10:46	0.018
4260	0.014	0.015	0.015	0.016	10:47:39 AM	10/5/2011 10:47	0.016
4320	0.013	0.013	0.014	0.015	10:48:39 AM	10/5/2011 10:48	0.015
4380	0.014	0.015	0.015	0.016	10:49:39 AM	10/5/2011 10:49	0.016
4440	0.016	0.016	0.016	0.018	10:50:39 AM	10/5/2011 10:50	0.018
4500	0.016	0.016	0.017	0.018	10:51:39 AM	10/5/2011 10:51	0.019
4560	0.018	0.019	0.02	0.023	10:52:39 AM	10/5/2011 10:52	0.023
4620	0.018	0.019	0.019	0.022	10:53:39 AM	10/5/2011 10:53	0.024
4680	0.027	0.027	0.028	0.032	10:54:39 AM	10/5/2011 10:54	0.035
4740	0.02	0.021	0.022	0.027	10:55:39 AM	10/5/2011 10:55	0.031
4800	0.026	0.027	0.028	0.038	10:56:39 AM	10/5/2011 10:56	0.049
4860	0.033	0.033	0.036	0.055	10:57:39 AM	10/5/2011 10:57	0.067
4920	0.011	0.011	0.012	0.015	10:58:39 AM	10/5/2011 10:58	0.017
4980	0.022	0.022	0.024	0.031	10:59:39 AM	10/5/2011 10:59	0.034
5040	0.023	0.024	0.025	0.029	11:00:39 AM	10/5/2011 11:00	0.032
5100	0.019	0.019	0.02	0.023	11:01:39 AM	10/5/2011 11:01	0.026
5160	0.019	0.019	0.02	0.023	11:02:39 AM	10/5/2011 11:02	0.024
5220	0.021	0.021	0.022	0.028	11:03:39 AM	10/5/2011 11:03	0.032
5280	0.018	0.018	0.019	0.022	11:04:39 AM	10/5/2011 11:04	0.025
5340	0.011	0.011	0.011	0.014	11:05:39 AM	10/5/2011 11:05	0.015
5400	0.01	0.01	0.011	0.013	11:06:39 AM	10/5/2011 11:06	0.014
5460	0.018	0.018	0.019	0.024	11:07:39 AM	10/5/2011 11:07	0.026
5520	0.008	0.008	0.008	0.01	11:08:39 AM	10/5/2011 11:08	0.01
5580	0.009	0.009	0.009	0.01	11:09:39 AM	10/5/2011 11:09	0.011
5640	0.011	0.011	0.012	0.014	11:10:39 AM	10/5/2011 11:10	0.015
5700	0.017	0.017	0.018	0.02	11:11:39 AM	10/5/2011 11:11	0.023
5760	0.018	0.019	0.019	0.024	11:12:39 AM	10/5/2011 11:12	0.028
5820	0.018	0.019	0.02	0.026	11:13:39 AM	10/5/2011 11:13	0.029
5880	0.016	0.016	0.017	0.021	11:14:39 AM	10/5/2011 11:14	0.023
5940	0.01	0.011	0.011	0.014	11:15:39 AM	10/5/2011 11:15	0.016
6000	0.022	0.022	0.023	0.028	11:16:39 AM	10/5/2011 11:16	0.032
6060	0.009	0.009	0.009	0.011	11:17:39 AM	10/5/2011 11:17	0.012
6120	0.014	0.014	0.014	0.018	11:18:39 AM	10/5/2011 11:18	0.02
6180	0.011	0.012	0.012	0.014	11:19:39 AM	10/5/2011 11:19	0.014

6240	0.022	0.022	0.023	0.026	11:20:39 AM	10/5/2011 11:20	0.028
6300	0.019	0.019	0.02	0.025	11:21:39 AM	10/5/2011 11:21	0.028
6360	0.01	0.01	0.011	0.014	11:22:39 AM	10/5/2011 11:22	0.014
6420	0.016	0.017	0.018	0.025	11:23:39 AM	10/5/2011 11:23	0.029
6480	0.014	0.014	0.015	0.019	11:24:39 AM	10/5/2011 11:24	0.024
6540	0.012	0.012	0.013	0.016	11:25:39 AM	10/5/2011 11:25	0.018
6600	0.018	0.018	0.019	0.023	11:26:39 AM	10/5/2011 11:26	0.025
6660	0.022	0.022	0.023	0.026	11:27:39 AM	10/5/2011 11:27	0.027
6720	0.029	0.029	0.031	0.035	11:28:39 AM	10/5/2011 11:28	0.039
6780	0.014	0.014	0.015	0.018	11:29:39 AM	10/5/2011 11:29	0.019
6840	0.013	0.013	0.013	0.017	11:30:39 AM	10/5/2011 11:30	0.018
6900	0.017	0.017	0.018	0.023	11:31:39 AM	10/5/2011 11:31	0.025
6960	0.018	0.019	0.019	0.024	11:32:39 AM	10/5/2011 11:32	0.026
7020	0.017	0.017	0.018	0.022	11:33:39 AM	10/5/2011 11:33	0.024
7080	0.016	0.016	0.017	0.019	11:34:39 AM	10/5/2011 11:34	0.021
7140	0.014	0.015	0.015	0.018	11:35:39 AM	10/5/2011 11:35	0.021
7200	0.008	0.008	0.008	0.011	11:36:39 AM	10/5/2011 11:36	0.012
7260	0.01	0.011	0.011	0.014	11:37:39 AM	10/5/2011 11:37	0.015
7320	0.011	0.011	0.012	0.016	11:38:39 AM	10/5/2011 11:38	0.016
7380	0.011	0.011	0.011	0.014	11:39:39 AM	10/5/2011 11:39	0.015
7440	0.017	0.017	0.018	0.022	11:40:39 AM	10/5/2011 11:40	0.026
7500	0.017	0.018	0.018	0.023	11:41:39 AM	10/5/2011 11:41	0.027
7560	0.016	0.016	0.017	0.02	11:42:39 AM	10/5/2011 11:42	0.022
7620	0.01	0.01	0.011	0.013	11:43:39 AM	10/5/2011 11:43	0.014
7680	0.02	0.02	0.021	0.025	11:44:39 AM	10/5/2011 11:44	0.031
7740	0.025	0.026	0.027	0.035	11:45:39 AM	10/5/2011 11:45	0.045
7800	0.03	0.03	0.031	0.038	11:46:39 AM	10/5/2011 11:46	0.045
7860	0.028	0.029	0.03	0.037	11:47:39 AM	10/5/2011 11:47	0.047
7920	0.015	0.015	0.016	0.02	11:48:39 AM	10/5/2011 11:48	0.024
7980	0.019	0.019	0.021	0.026	11:49:39 AM	10/5/2011 11:49	0.029
8040	0.021	0.022	0.024	0.033	11:50:39 AM	10/5/2011 11:50	0.041
8100	0.018	0.019	0.019	0.024	11:51:39 AM	10/5/2011 11:51	0.029
8160	0.019	0.019	0.02	0.022	11:52:39 AM	10/5/2011 11:52	0.025
8220	0.018	0.018	0.018	0.021	11:53:39 AM	10/5/2011 11:53	0.024
8280	0.027	0.027	0.029	0.036	11:54:39 AM	10/5/2011 11:54	0.043
8340	0.045	0.046	0.049	0.066	11:55:39 AM	10/5/2011 11:55	0.083
8400	0.02	0.02	0.021	0.026	11:56:39 AM	10/5/2011 11:56	0.032
8460	0.032	0.032	0.034	0.043	11:57:39 AM	10/5/2011 11:57	0.054
8520	0.024	0.024	0.025	0.034	11:58:39 AM	10/5/2011 11:58	0.039
8580	0.019	0.019	0.02	0.025	11:59:39 AM	10/5/2011 11:59	0.03
8640	0.015	0.016	0.017	0.022	12:00:39 PM	10/5/2011 12:00	0.025
8700	0.015	0.015	0.016	0.02	12:01:39 PM	10/5/2011 12:01	0.022
8760	0.012	0.013	0.013	0.016	12:02:39 PM	10/5/2011 12:02	0.018
8820	0.013	0.013	0.014	0.018	12:03:39 PM	10/5/2011 12:03	0.02
8880	0.014	0.015	0.016	0.02	12:04:39 PM	10/5/2011 12:04	0.022
8940	0.009	0.01	0.01	0.012	12:05:39 PM	10/5/2011 12:05	0.012
9000	0.01	0.01	0.01	0.013	12:06:39 PM	10/5/2011 12:06	0.015
9060	0.013	0.014	0.014	0.018	12:07:39 PM	10/5/2011 12:07	0.021
9120	0.013	0.014	0.014	0.016	12:08:39 PM	10/5/2011 12:08	0.019
9180	0.01	0.011	0.011	0.014	12:09:39 PM	10/5/2011 12:09	0.015
9240	0.014	0.014	0.015	0.018	12:10:39 PM	10/5/2011 12:10	0.022
9300	0.01	0.01	0.011	0.012	12:11:39 PM	10/5/2011 12:11	0.014
9360	0.013	0.013	0.014	0.017	12:12:39 PM	10/5/2011 12:12	0.019
9420	0.014	0.014	0.015	0.018	12:13:39 PM	10/5/2011 12:13	0.019
9480	0.01	0.01	0.01	0.012	12:14:39 PM	10/5/2011 12:14	0.014
9540	0.014	0.015	0.015	0.021	12:15:39 PM	10/5/2011 12:15	0.024
9600	0.013	0.013	0.014	0.018	12:16:39 PM	10/5/2011 12:16	0.022
9660	0.021	0.021	0.022	0.031	12:17:39 PM	10/5/2011 12:17	0.04
9720	0.025	0.026	0.027	0.04	12:18:39 PM	10/5/2011 12:18	0.05
9780	0.022	0.022	0.024	0.033	12:19:39 PM	10/5/2011 12:19	0.038
9840	0.016	0.017	0.018	0.023	12:20:39 PM	10/5/2011 12:20	0.028
9900	0.015	0.015	0.016	0.021	12:21:39 PM	10/5/2011 12:21	0.028
9960	0.012	0.012	0.013	0.017	12:22:39 PM	10/5/2011 12:22	0.019
10020	0.008	0.008	0.008	0.01	12:23:39 PM	10/5/2011 12:23	0.012
10080	0.015	0.016	0.016	0.021	12:24:39 PM	10/5/2011 12:24	0.024
10140	0.011	0.011	0.011	0.014	12:25:39 PM	10/5/2011 12:25	0.016
10200	0.016	0.016	0.017	0.024	12:26:39 PM	10/5/2011 12:26	0.029
10260	0.018	0.018	0.019	0.027	12:27:39 PM	10/5/2011 12:27	0.034
10320	0.011	0.011	0.011	0.014	12:28:39 PM	10/5/2011 12:28	0.016
10380	0.015	0.016	0.017	0.02	12:29:39 PM	10/5/2011 12:29	0.022

10440	0.017	0.018	0.019	0.023	12:30:39 PM	10/5/2011 12:30	0.028
10500	0.012	0.013	0.014	0.017	12:31:39 PM	10/5/2011 12:31	0.018
10560	0.009	0.009	0.009	0.011	12:32:39 PM	10/5/2011 12:32	0.013
10620	0.011	0.011	0.012	0.015	12:33:39 PM	10/5/2011 12:33	0.017
10680	0.009	0.009	0.01	0.011	12:34:39 PM	10/5/2011 12:34	0.012
10740	0.011	0.011	0.011	0.015	12:35:39 PM	10/5/2011 12:35	0.016
10800	0.012	0.012	0.013	0.015	12:36:39 PM	10/5/2011 12:36	0.017
10860	0.007	0.007	0.007	0.008	12:37:39 PM	10/5/2011 12:37	0.01
10920	0.008	0.008	0.009	0.01	12:38:39 PM	10/5/2011 12:38	0.011
10980	0.015	0.015	0.016	0.022	12:39:39 PM	10/5/2011 12:39	0.026
11040	0.011	0.011	0.012	0.015	12:40:39 PM	10/5/2011 12:40	0.018
11100	0.009	0.009	0.01	0.012	12:41:39 PM	10/5/2011 12:41	0.013
11160	0.017	0.017	0.017	0.02	12:42:39 PM	10/5/2011 12:42	0.023
11220	0.013	0.013	0.013	0.016	12:43:39 PM	10/5/2011 12:43	0.018
11280	0.014	0.014	0.015	0.02	12:44:39 PM	10/5/2011 12:44	0.022
11340	0.014	0.014	0.016	0.019	12:45:39 PM	10/5/2011 12:45	0.023
11400	0.011	0.011	0.012	0.015	12:46:39 PM	10/5/2011 12:46	0.019
11460	0.009	0.009	0.01	0.011	12:47:39 PM	10/5/2011 12:47	0.013
11520	0.01	0.011	0.011	0.012	12:48:39 PM	10/5/2011 12:48	0.013
11580	0.01	0.011	0.011	0.012	12:49:39 PM	10/5/2011 12:49	0.014
11640	0.01	0.011	0.011	0.012	12:50:39 PM	10/5/2011 12:50	0.013
11700	0.018	0.018	0.019	0.023	12:51:39 PM	10/5/2011 12:51	0.025
11760	0.016	0.016	0.017	0.022	12:52:39 PM	10/5/2011 12:52	0.025
11820	0.01	0.01	0.01	0.012	12:53:39 PM	10/5/2011 12:53	0.013
11880	0.02	0.021	0.021	0.027	12:54:39 PM	10/5/2011 12:54	0.028
11940	0.016	0.017	0.018	0.023	12:55:39 PM	10/5/2011 12:55	0.027
12000	0.01	0.01	0.011	0.014	12:56:39 PM	10/5/2011 12:56	0.015
12060	0.018	0.019	0.02	0.029	12:57:39 PM	10/5/2011 12:57	0.037
12120	0.012	0.012	0.013	0.016	12:58:39 PM	10/5/2011 12:58	0.018
12180	0.021	0.021	0.022	0.025	12:59:39 PM	10/5/2011 12:59	0.027
12240	0.02	0.02	0.021	0.025	1:00:39 PM	10/5/2011 13:00	0.03
12300	0.012	0.012	0.012	0.014	1:01:39 PM	10/5/2011 13:01	0.015
12360	0.017	0.017	0.018	0.022	1:02:39 PM	10/5/2011 13:02	0.024
12420	0.011	0.012	0.012	0.014	1:03:39 PM	10/5/2011 13:03	0.015
12480	0.017	0.017	0.018	0.021	1:04:39 PM	10/5/2011 13:04	0.024
12540	0.015	0.015	0.016	0.018	1:05:39 PM	10/5/2011 13:05	0.023
12600	0.015	0.015	0.016	0.021	1:06:39 PM	10/5/2011 13:06	0.024
12660	0.013	0.013	0.014	0.018	1:07:39 PM	10/5/2011 13:07	0.021
12720	0.014	0.014	0.015	0.019	1:08:39 PM	10/5/2011 13:08	0.021
12780	0.016	0.016	0.017	0.022	1:09:39 PM	10/5/2011 13:09	0.026
12840	0.015	0.015	0.016	0.02	1:10:39 PM	10/5/2011 13:10	0.023
12900	0.018	0.018	0.019	0.024	1:11:39 PM	10/5/2011 13:11	0.029
12960	0.026	0.027	0.029	0.043	1:12:39 PM	10/5/2011 13:12	0.053
13020	0.048	0.049	0.052	0.077	1:13:39 PM	10/5/2011 13:13	0.097
13080	0.023	0.024	0.026	0.037	1:14:39 PM	10/5/2011 13:14	0.048
13140	0.011	0.011	0.012	0.015	1:15:39 PM	10/5/2011 13:15	0.017
13200	0.014	0.014	0.015	0.019	1:16:39 PM	10/5/2011 13:16	0.023
13260	0.013	0.013	0.014	0.018	1:17:39 PM	10/5/2011 13:17	0.023
13320	0.017	0.018	0.018	0.021	1:18:39 PM	10/5/2011 13:18	0.023
13380	0.01	0.01	0.01	0.013	1:19:39 PM	10/5/2011 13:19	0.013
13440	0.019	0.019	0.02	0.024	1:20:39 PM	10/5/2011 13:20	0.029
13500	0.014	0.015	0.015	0.021	1:21:39 PM	10/5/2011 13:21	0.026
13560	0.017	0.017	0.018	0.022	1:22:39 PM	10/5/2011 13:22	0.027
13620	0.008	0.008	0.009	0.01	1:23:39 PM	10/5/2011 13:23	0.012
13680	0.008	0.008	0.009	0.011	1:24:39 PM	10/5/2011 13:24	0.012
13740	0.012	0.012	0.013	0.016	1:25:39 PM	10/5/2011 13:25	0.02
13800	0.016	0.017	0.018	0.024	1:26:39 PM	10/5/2011 13:26	0.029
13860	0.018	0.018	0.02	0.024	1:27:39 PM	10/5/2011 13:27	0.028
13920	0.016	0.017	0.018	0.022	1:28:39 PM	10/5/2011 13:28	0.027
13980	0.011	0.011	0.012	0.014	1:29:39 PM	10/5/2011 13:29	0.016
14040	0.019	0.02	0.02	0.024	1:30:39 PM	10/5/2011 13:30	0.026
14100	0.023	0.023	0.024	0.029	1:31:39 PM	10/5/2011 13:31	0.034
14160	0.016	0.016	0.016	0.02	1:32:39 PM	10/5/2011 13:32	0.022
14220	0.016	0.016	0.016	0.019	1:33:39 PM	10/5/2011 13:33	0.022
14280	0.024	0.024	0.025	0.031	1:34:39 PM	10/5/2011 13:34	0.034
14340	0.018	0.018	0.019	0.024	1:35:39 PM	10/5/2011 13:35	0.028
14400	0.018	0.018	0.019	0.023	1:36:39 PM	10/5/2011 13:36	0.03
14460	0.039	0.039	0.041	0.051	1:37:39 PM	10/5/2011 13:37	0.062
14520	0.034	0.034	0.036	0.046	1:38:39 PM	10/5/2011 13:38	0.052
14580	0.033	0.034	0.035	0.043	1:39:39 PM	10/5/2011 13:39	0.049

14640	0.023	0.024	0.025	0.031	1:40:39 PM	10/5/2011 13:40	0.032
14700	0.01	0.011	0.011	0.013	1:41:39 PM	10/5/2011 13:41	0.015
14760	0.012	0.012	0.012	0.015	1:42:39 PM	10/5/2011 13:42	0.017
14820	0.017	0.018	0.018	0.023	1:43:39 PM	10/5/2011 13:43	0.027
14880	0.016	0.017	0.017	0.02	1:44:39 PM	10/5/2011 13:44	0.021
14940	0.01	0.01	0.011	0.012	1:45:39 PM	10/5/2011 13:45	0.012
15000	0.008	0.008	0.008	0.01	1:46:39 PM	10/5/2011 13:46	0.01
15060	0.026	0.027	0.028	0.035	1:47:39 PM	10/5/2011 13:47	0.044
15120	0.01	0.01	0.011	0.012	1:48:39 PM	10/5/2011 13:48	0.014
15180	0.012	0.012	0.013	0.015	1:49:39 PM	10/5/2011 13:49	0.017
15240	0.027	0.028	0.028	0.034	1:50:39 PM	10/5/2011 13:50	0.04
15300	0.011	0.011	0.011	0.014	1:51:39 PM	10/5/2011 13:51	0.015
15360	0.007	0.008	0.008	0.009	1:52:39 PM	10/5/2011 13:52	0.01
15420	0.012	0.012	0.013	0.015	1:53:39 PM	10/5/2011 13:53	0.016
15480	0.012	0.012	0.013	0.016	1:54:39 PM	10/5/2011 13:54	0.018
15540	0.01	0.01	0.011	0.014	1:55:39 PM	10/5/2011 13:55	0.016
15600	0.01	0.01	0.011	0.013	1:56:39 PM	10/5/2011 13:56	0.014
15660	0.012	0.012	0.013	0.015	1:57:39 PM	10/5/2011 13:57	0.02
15720	0.011	0.011	0.011	0.013	1:58:39 PM	10/5/2011 13:58	0.016
15780	0.017	0.018	0.019	0.024	1:59:39 PM	10/5/2011 13:59	0.027
15840	0.006	0.006	0.007	0.009	2:00:39 PM	10/5/2011 14:00	0.01
15900	0.007	0.007	0.008	0.009	2:01:39 PM	10/5/2011 14:01	0.01
15960	0.007	0.007	0.008	0.009	2:02:39 PM	10/5/2011 14:02	0.011
16020	0.01	0.01	0.011	0.014	2:03:39 PM	10/5/2011 14:03	0.017
16080	0.015	0.015	0.016	0.019	2:04:39 PM	10/5/2011 14:04	0.022

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533112903
Firmware Version	2.8
Calibration Date	7/18/2011
Test Name	MANUAL_004
Test Start Time	9:37:40
Test Start Date	10/5/2011
Test Length [D:H:M]	0:04:28
Test Interval [M:S]	1:00
PM1 Average [mg/m3]	0.017
PM1 Minimum [mg/m3]	0.008
PM1 Maximum [mg/m3]	0.571
PM1 TWA [mg/m3]	0.009
PM2.5 Average [mg/m3]	0.017
PM2.5 Minimum [mg/m3]	0.008
PM2.5 Maximum [mg/m3]	0.572
PM2.5 TWA [mg/m3]	0.01
PM4 Average [mg/m3]	0.018
PM4 Minimum [mg/m3]	0.009
PM4 Maximum [mg/m3]	0.574
PM4 TWA [mg/m3]	0.01
PM10 Average [mg/m3]	0.021
PM10 Minimum [mg/m3]	0.009
PM10 Maximum [mg/m3]	0.58
PM10 TWA [mg/m3]	0.012
TOTAL Average [mg/m3]	0.022
TOTAL Minimum [mg/m3]	0.009
TOTAL Maximum [mg/m3]	0.582
TOTAL TWA [mg/m3]	0.012
Photometric User Cal	1
Size Correction User Cal	1
Flow User Cal	1
Errors	
Number of Samples	268

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	9:37:40	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.018	0.019	0.021	0.053	9:38:40	10/5/2011 9:38	0.089		
120	0.01	0.01	0.011	0.014	9:39:40	10/5/2011 9:39	0.015		
180	0.009	0.01	0.01	0.011	9:40:40	10/5/2011 9:40	0.011		
240	0.01	0.01	0.011	0.013	9:41:40	10/5/2011 9:41	0.013		
300	0.009	0.009	0.01	0.012	9:42:40	10/5/2011 9:42	0.013		
360	0.008	0.008	0.009	0.01	9:43:40	10/5/2011 9:43	0.01		
420	0.008	0.009	0.009	0.011	9:44:40	10/5/2011 9:44	0.012		
480	0.009	0.01	0.01	0.013	9:45:40	10/5/2011 9:45	0.014		
540	0.011	0.012	0.012	0.015	9:46:40	10/5/2011 9:46	0.016		
600	0.009	0.009	0.009	0.011	9:47:40	10/5/2011 9:47	0.012		
660	0.009	0.009	0.01	0.011	9:48:40	10/5/2011 9:48	0.012		
720	0.008	0.009	0.009	0.011	9:49:40	10/5/2011 9:49	0.011		
780	0.009	0.009	0.01	0.012	9:50:40	10/5/2011 9:50	0.012		
840	0.016	0.016	0.017	0.02	9:51:40	10/5/2011 9:51	0.021		
900	0.012	0.012	0.013	0.015	9:52:40	10/5/2011 9:52	0.015		
960	0.009	0.009	0.01	0.011	9:53:40	10/5/2011 9:53	0.011		
1020	0.009	0.009	0.01	0.011	9:54:40	10/5/2011 9:54	0.011		
1080	0.008	0.009	0.009	0.011	9:55:40	10/5/2011 9:55	0.011		
1140	0.011	0.011	0.012	0.013	9:56:40	10/5/2011 9:56	0.013		
1200	0.011	0.011	0.012	0.015	9:57:40	10/5/2011 9:57	0.015		
1260	0.011	0.011	0.012	0.013	9:58:40	10/5/2011 9:58	0.013		
1320	0.013	0.014	0.015	0.017	9:59:40	10/5/2011 9:59	0.018		
1380	0.012	0.012	0.013	0.015	10:00:40	10/5/2011 10:00	0.015		
1440	0.049	0.052	0.06	0.086	10:01:40	10/5/2011 10:01	0.092		
1500	0.019	0.02	0.023	0.034	10:02:40	10/5/2011 10:02	0.034		
1560	0.012	0.013	0.013	0.016	10:03:40	10/5/2011 10:03	0.016		
1620	0.011	0.011	0.012	0.014	10:04:40	10/5/2011 10:04	0.014		
1680	0.01	0.01	0.011	0.012	10:05:40	10/5/2011 10:05	0.012		
1740	0.013	0.013	0.014	0.016	10:06:40	10/5/2011 10:06	0.016		
1800	0.017	0.018	0.018	0.021	10:07:40	10/5/2011 10:07	0.022		
1860	0.024	0.024	0.025	0.027	10:08:40	10/5/2011 10:08	0.027		
1920	0.02	0.02	0.021	0.022	10:09:40	10/5/2011 10:09	0.022		

1980	0.011	0.012	0.013	0.014	10:10:40	10/5/2011 10:10	0.014
2040	0.01	0.01	0.011	0.012	10:11:40	10/5/2011 10:11	0.013
2100	0.01	0.011	0.011	0.012	10:12:40	10/5/2011 10:12	0.013
2160	0.01	0.01	0.01	0.011	10:13:40	10/5/2011 10:13	0.011
2220	0.012	0.013	0.013	0.015	10:14:40	10/5/2011 10:14	0.016
2280	0.01	0.01	0.011	0.013	10:15:40	10/5/2011 10:15	0.013
2340	0.011	0.011	0.012	0.015	10:16:40	10/5/2011 10:16	0.015
2400	0.011	0.012	0.013	0.016	10:17:40	10/5/2011 10:17	0.016
2460	0.009	0.009	0.01	0.011	10:18:40	10/5/2011 10:18	0.012
2520	0.012	0.012	0.013	0.016	10:19:40	10/5/2011 10:19	0.018
2580	0.012	0.013	0.014	0.016	10:20:40	10/5/2011 10:20	0.016
2640	0.013	0.014	0.015	0.018	10:21:40	10/5/2011 10:21	0.018
2700	0.012	0.012	0.013	0.015	10:22:40	10/5/2011 10:22	0.016
2760	0.011	0.011	0.012	0.013	10:23:40	10/5/2011 10:23	0.013
2820	0.014	0.015	0.015	0.017	10:24:40	10/5/2011 10:24	0.019
2880	0.019	0.019	0.02	0.021	10:25:40	10/5/2011 10:25	0.021
2940	0.015	0.016	0.017	0.018	10:26:40	10/5/2011 10:26	0.018
3000	0.012	0.012	0.013	0.014	10:27:40	10/5/2011 10:27	0.014
3060	0.018	0.019	0.02	0.022	10:28:40	10/5/2011 10:28	0.023
3120	0.023	0.024	0.025	0.028	10:29:40	10/5/2011 10:29	0.028
3180	0.022	0.023	0.024	0.026	10:30:40	10/5/2011 10:30	0.027
3240	0.017	0.017	0.018	0.021	10:31:40	10/5/2011 10:31	0.021
3300	0.022	0.023	0.023	0.025	10:32:40	10/5/2011 10:32	0.025
3360	0.011	0.011	0.012	0.013	10:33:40	10/5/2011 10:33	0.013
3420	0.011	0.011	0.012	0.013	10:34:40	10/5/2011 10:34	0.014
3480	0.013	0.014	0.015	0.017	10:35:40	10/5/2011 10:35	0.018
3540	0.013	0.014	0.015	0.018	10:36:40	10/5/2011 10:36	0.018
3600	0.016	0.016	0.017	0.02	10:37:40	10/5/2011 10:37	0.02
3660	0.013	0.014	0.015	0.017	10:38:40	10/5/2011 10:38	0.017
3720	0.018	0.019	0.021	0.026	10:39:40	10/5/2011 10:39	0.026
3780	0.018	0.019	0.021	0.025	10:40:40	10/5/2011 10:40	0.026
3840	0.018	0.019	0.02	0.022	10:41:40	10/5/2011 10:41	0.022
3900	0.019	0.02	0.021	0.024	10:42:40	10/5/2011 10:42	0.025
3960	0.016	0.016	0.017	0.019	10:43:40	10/5/2011 10:43	0.019
4020	0.01	0.011	0.011	0.012	10:44:40	10/5/2011 10:44	0.012
4080	0.012	0.012	0.013	0.015	10:45:40	10/5/2011 10:45	0.015
4140	0.016	0.016	0.017	0.019	10:46:40	10/5/2011 10:46	0.019
4200	0.013	0.013	0.014	0.015	10:47:40	10/5/2011 10:47	0.015
4260	0.013	0.014	0.014	0.016	10:48:40	10/5/2011 10:48	0.016
4320	0.013	0.013	0.014	0.015	10:49:40	10/5/2011 10:49	0.015
4380	0.018	0.019	0.02	0.024	10:50:40	10/5/2011 10:50	0.025
4440	0.017	0.018	0.019	0.025	10:51:40	10/5/2011 10:51	0.027
4500	0.012	0.013	0.014	0.017	10:52:40	10/5/2011 10:52	0.018
4560	0.016	0.016	0.017	0.019	10:53:40	10/5/2011 10:53	0.019
4620	0.015	0.015	0.016	0.019	10:54:40	10/5/2011 10:54	0.021
4680	0.015	0.016	0.017	0.022	10:55:40	10/5/2011 10:55	0.023
4740	0.02	0.021	0.023	0.034	10:56:40	10/5/2011 10:56	0.037
4800	0.01	0.011	0.012	0.015	10:57:40	10/5/2011 10:57	0.016
4860	0.017	0.018	0.02	0.027	10:58:40	10/5/2011 10:58	0.028
4920	0.017	0.018	0.02	0.023	10:59:40	10/5/2011 10:59	0.024
4980	0.021	0.022	0.022	0.025	11:00:40	10/5/2011 11:00	0.025
5040	0.013	0.013	0.014	0.015	11:01:40	10/5/2011 11:01	0.016
5100	0.015	0.015	0.016	0.019	11:02:40	10/5/2011 11:02	0.019
5160	0.017	0.017	0.018	0.021	11:03:40	10/5/2011 11:03	0.021
5220	0.009	0.009	0.01	0.01	11:04:40	10/5/2011 11:04	0.01
5280	0.009	0.009	0.01	0.011	11:05:40	10/5/2011 11:05	0.011
5340	0.014	0.014	0.015	0.018	11:06:40	10/5/2011 11:06	0.018
5400	0.009	0.009	0.01	0.011	11:07:40	10/5/2011 11:07	0.011
5460	0.008	0.009	0.009	0.011	11:08:40	10/5/2011 11:08	0.011
5520	0.015	0.016	0.017	0.02	11:09:40	10/5/2011 11:09	0.02
5580	0.017	0.017	0.018	0.021	11:10:40	10/5/2011 11:10	0.022
5640	0.013	0.014	0.015	0.019	11:11:40	10/5/2011 11:11	0.02
5700	0.018	0.019	0.02	0.024	11:12:40	10/5/2011 11:12	0.024
5760	0.016	0.017	0.019	0.024	11:13:40	10/5/2011 11:13	0.025
5820	0.014	0.015	0.016	0.019	11:14:40	10/5/2011 11:14	0.02
5880	0.014	0.014	0.015	0.016	11:15:40	10/5/2011 11:15	0.017
5940	0.011	0.011	0.012	0.013	11:16:40	10/5/2011 11:16	0.014
6000	0.013	0.014	0.015	0.017	11:17:40	10/5/2011 11:17	0.017
6060	0.013	0.014	0.015	0.017	11:18:40	10/5/2011 11:18	0.017

6120	0.018	0.018	0.019	0.021	11:19:40	10/5/2011 11:19	0.021
6180	0.014	0.015	0.016	0.018	11:20:40	10/5/2011 11:20	0.019
6240	0.009	0.01	0.01	0.012	11:21:40	10/5/2011 11:21	0.012
6300	0.011	0.011	0.012	0.013	11:22:40	10/5/2011 11:22	0.014
6360	0.013	0.013	0.014	0.017	11:23:40	10/5/2011 11:23	0.017
6420	0.011	0.012	0.012	0.015	11:24:40	10/5/2011 11:24	0.016
6480	0.014	0.014	0.015	0.017	11:25:40	10/5/2011 11:25	0.017
6540	0.013	0.013	0.014	0.015	11:26:40	10/5/2011 11:26	0.016
6600	0.02	0.02	0.021	0.024	11:27:40	10/5/2011 11:27	0.025
6660	0.017	0.018	0.019	0.021	11:28:40	10/5/2011 11:28	0.022
6720	0.012	0.013	0.014	0.017	11:29:40	10/5/2011 11:29	0.017
6780	0.014	0.015	0.016	0.019	11:30:40	10/5/2011 11:30	0.021
6840	0.015	0.016	0.017	0.021	11:31:40	10/5/2011 11:31	0.023
6900	0.011	0.012	0.012	0.014	11:32:40	10/5/2011 11:32	0.014
6960	0.017	0.017	0.018	0.02	11:33:40	10/5/2011 11:33	0.02
7020	0.018	0.018	0.019	0.023	11:34:40	10/5/2011 11:34	0.026
7080	0.009	0.009	0.01	0.011	11:35:40	10/5/2011 11:35	0.012
7140	0.009	0.01	0.01	0.012	11:36:40	10/5/2011 11:36	0.013
7200	0.009	0.009	0.01	0.011	11:37:40	10/5/2011 11:37	0.013
7260	0.009	0.009	0.01	0.012	11:38:40	10/5/2011 11:38	0.012
7320	0.013	0.013	0.014	0.017	11:39:40	10/5/2011 11:39	0.018
7380	0.012	0.012	0.013	0.015	11:40:40	10/5/2011 11:40	0.016
7440	0.011	0.012	0.013	0.015	11:41:40	10/5/2011 11:41	0.015
7500	0.01	0.01	0.011	0.013	11:42:40	10/5/2011 11:42	0.014
7560	0.014	0.015	0.016	0.018	11:43:40	10/5/2011 11:43	0.018
7620	0.023	0.024	0.025	0.03	11:44:40	10/5/2011 11:44	0.03
7680	0.025	0.025	0.027	0.031	11:45:40	10/5/2011 11:45	0.032
7740	0.571	0.572	0.574	0.58	11:46:40	10/5/2011 11:46	0.582
7800	0.194	0.194	0.196	0.202	11:47:40	10/5/2011 11:47	0.206
7860	0.01	0.011	0.011	0.012	11:48:40	10/5/2011 11:48	0.013
7920	0.011	0.011	0.012	0.015	11:49:40	10/5/2011 11:49	0.016
7980	0.012	0.012	0.013	0.016	11:50:40	10/5/2011 11:50	0.017
8040	0.017	0.018	0.019	0.022	11:51:40	10/5/2011 11:51	0.023
8100	0.017	0.017	0.019	0.023	11:52:40	10/5/2011 11:52	0.023
8160	0.014	0.015	0.016	0.019	11:53:40	10/5/2011 11:53	0.02
8220	0.023	0.024	0.027	0.034	11:54:40	10/5/2011 11:54	0.035
8280	0.022	0.023	0.025	0.034	11:55:40	10/5/2011 11:55	0.034
8340	0.017	0.017	0.019	0.024	11:56:40	10/5/2011 11:56	0.026
8400	0.016	0.017	0.018	0.022	11:57:40	10/5/2011 11:57	0.023
8460	0.02	0.02	0.022	0.027	11:58:40	10/5/2011 11:58	0.027
8520	0.016	0.016	0.018	0.022	11:59:40	10/5/2011 11:59	0.022
8580	0.022	0.023	0.024	0.03	12:00:40	10/5/2011 12:00	0.031
8640	0.025	0.025	0.026	0.03	12:01:40	10/5/2011 12:01	0.03
8700	0.014	0.015	0.016	0.019	12:02:40	10/5/2011 12:02	0.02
8760	0.013	0.014	0.015	0.017	12:03:40	10/5/2011 12:03	0.017
8820	0.014	0.014	0.015	0.019	12:04:40	10/5/2011 12:04	0.02
8880	0.011	0.011	0.011	0.012	12:05:40	10/5/2011 12:05	0.012
8940	0.016	0.016	0.017	0.02	12:06:40	10/5/2011 12:06	0.02
9000	0.021	0.021	0.022	0.024	12:07:40	10/5/2011 12:07	0.025
9060	0.021	0.022	0.024	0.027	12:08:40	10/5/2011 12:08	0.028
9120	0.017	0.017	0.018	0.02	12:09:40	10/5/2011 12:09	0.021
9180	0.015	0.015	0.016	0.018	12:10:40	10/5/2011 12:10	0.019
9240	0.016	0.016	0.017	0.018	12:11:40	10/5/2011 12:11	0.019
9300	0.019	0.02	0.02	0.022	12:12:40	10/5/2011 12:12	0.022
9360	0.015	0.015	0.016	0.017	12:13:40	10/5/2011 12:13	0.018
9420	0.011	0.012	0.012	0.014	12:14:40	10/5/2011 12:14	0.014
9480	0.013	0.013	0.014	0.017	12:15:40	10/5/2011 12:15	0.017
9540	0.018	0.019	0.02	0.026	12:16:40	10/5/2011 12:16	0.028
9600	0.02	0.02	0.022	0.027	12:17:40	10/5/2011 12:17	0.028
9660	0.015	0.016	0.018	0.023	12:18:40	10/5/2011 12:18	0.024
9720	0.017	0.017	0.019	0.024	12:19:40	10/5/2011 12:19	0.025
9780	0.014	0.014	0.015	0.019	12:20:40	10/5/2011 12:20	0.021
9840	0.011	0.011	0.012	0.014	12:21:40	10/5/2011 12:21	0.014
9900	0.008	0.009	0.009	0.01	12:22:40	10/5/2011 12:22	0.01
9960	0.011	0.011	0.012	0.013	12:23:40	10/5/2011 12:23	0.013
10020	0.009	0.009	0.01	0.011	12:24:40	10/5/2011 12:24	0.011
10080	0.01	0.01	0.011	0.012	12:25:40	10/5/2011 12:25	0.012
10140	0.013	0.013	0.015	0.02	12:26:40	10/5/2011 12:26	0.02
10200	0.012	0.012	0.013	0.014	12:27:40	10/5/2011 12:27	0.015

10260	0.023	0.024	0.026	0.032	12:28:40	10/5/2011 12:28	0.033
10320	0.022	0.023	0.025	0.029	12:29:40	10/5/2011 12:29	0.029
10380	0.014	0.014	0.016	0.019	12:30:40	10/5/2011 12:30	0.02
10440	0.016	0.016	0.017	0.02	12:31:40	10/5/2011 12:31	0.02
10500	0.017	0.018	0.018	0.02	12:32:40	10/5/2011 12:32	0.02
10560	0.009	0.009	0.01	0.011	12:33:40	10/5/2011 12:33	0.012
10620	0.012	0.013	0.013	0.016	12:34:40	10/5/2011 12:34	0.017
10680	0.013	0.014	0.014	0.017	12:35:40	10/5/2011 12:35	0.017
10740	0.008	0.008	0.009	0.009	12:36:40	10/5/2011 12:36	0.009
10800	0.008	0.008	0.009	0.01	12:37:40	10/5/2011 12:37	0.01
10860	0.009	0.009	0.009	0.011	12:38:40	10/5/2011 12:38	0.011
10920	0.008	0.009	0.009	0.011	12:39:40	10/5/2011 12:39	0.012
10980	0.011	0.011	0.012	0.014	12:40:40	10/5/2011 12:40	0.015
11040	0.01	0.011	0.011	0.014	12:41:40	10/5/2011 12:41	0.014
11100	0.011	0.012	0.013	0.015	12:42:40	10/5/2011 12:42	0.015
11160	0.012	0.012	0.014	0.016	12:43:40	10/5/2011 12:43	0.016
11220	0.013	0.014	0.015	0.019	12:44:40	10/5/2011 12:44	0.02
11280	0.012	0.013	0.013	0.015	12:45:40	10/5/2011 12:45	0.015
11340	0.013	0.013	0.013	0.014	12:46:40	10/5/2011 12:46	0.014
11400	0.009	0.01	0.01	0.011	12:47:40	10/5/2011 12:47	0.011
11460	0.011	0.011	0.011	0.013	12:48:40	10/5/2011 12:48	0.013
11520	0.018	0.018	0.019	0.026	12:49:40	10/5/2011 12:49	0.029
11580	0.015	0.015	0.016	0.017	12:50:40	10/5/2011 12:50	0.019
11640	0.017	0.017	0.018	0.021	12:51:40	10/5/2011 12:51	0.022
11700	0.011	0.011	0.012	0.013	12:52:40	10/5/2011 12:52	0.013
11760	0.014	0.015	0.015	0.018	12:53:40	10/5/2011 12:53	0.018
11820	0.015	0.016	0.017	0.019	12:54:40	10/5/2011 12:54	0.02
11880	0.013	0.013	0.014	0.018	12:55:40	10/5/2011 12:55	0.018
11940	0.011	0.011	0.013	0.016	12:56:40	10/5/2011 12:56	0.017
12000	0.008	0.009	0.009	0.01	12:57:40	10/5/2011 12:57	0.01
12060	0.015	0.015	0.016	0.018	12:58:40	10/5/2011 12:58	0.018
12120	0.013	0.013	0.014	0.016	12:59:40	10/5/2011 12:59	0.016
12180	0.01	0.01	0.011	0.012	13:00:40	10/5/2011 13:00	0.012
12240	0.011	0.011	0.012	0.013	13:01:40	10/5/2011 13:01	0.014
12300	0.013	0.013	0.014	0.016	13:02:40	10/5/2011 13:02	0.016
12360	0.012	0.012	0.013	0.014	13:03:40	10/5/2011 13:03	0.014
12420	0.013	0.013	0.014	0.018	13:04:40	10/5/2011 13:04	0.019
12480	0.013	0.014	0.015	0.019	13:05:40	10/5/2011 13:05	0.019
12540	0.014	0.015	0.016	0.02	13:06:40	10/5/2011 13:06	0.02
12600	0.011	0.012	0.013	0.015	13:07:40	10/5/2011 13:07	0.015
12660	0.013	0.014	0.015	0.018	13:08:40	10/5/2011 13:08	0.018
12720	0.014	0.015	0.016	0.019	13:09:40	10/5/2011 13:09	0.02
12780	0.012	0.012	0.013	0.016	13:10:40	10/5/2011 13:10	0.016
12840	0.015	0.015	0.016	0.019	13:11:40	10/5/2011 13:11	0.02
12900	0.022	0.024	0.027	0.042	13:12:40	10/5/2011 13:12	0.043
12960	0.022	0.023	0.027	0.043	13:13:40	10/5/2011 13:13	0.047
13020	0.011	0.011	0.012	0.015	13:14:40	10/5/2011 13:14	0.016
13080	0.012	0.012	0.014	0.016	13:15:40	10/5/2011 13:15	0.017
13140	0.012	0.012	0.013	0.015	13:16:40	10/5/2011 13:16	0.017
13200	0.075	0.076	0.077	0.078	13:17:40	10/5/2011 13:17	0.079
13260	0.012	0.012	0.013	0.015	13:18:40	10/5/2011 13:18	0.015
13320	0.011	0.012	0.013	0.017	13:19:40	10/5/2011 13:19	0.017
13380	0.013	0.014	0.015	0.019	13:20:40	10/5/2011 13:20	0.021
13440	0.01	0.01	0.011	0.013	13:21:40	10/5/2011 13:21	0.013
13500	0.011	0.011	0.012	0.013	13:22:40	10/5/2011 13:22	0.014
13560	0.011	0.011	0.012	0.014	13:23:40	10/5/2011 13:23	0.014
13620	0.01	0.011	0.011	0.012	13:24:40	10/5/2011 13:24	0.013
13680	0.012	0.013	0.014	0.018	13:25:40	10/5/2011 13:25	0.019
13740	0.019	0.019	0.021	0.026	13:26:40	10/5/2011 13:26	0.028
13800	0.015	0.015	0.017	0.022	13:27:40	10/5/2011 13:27	0.022
13860	0.012	0.013	0.014	0.018	13:28:40	10/5/2011 13:28	0.019
13920	0.018	0.018	0.019	0.022	13:29:40	10/5/2011 13:29	0.022
13980	0.026	0.027	0.028	0.034	13:30:40	10/5/2011 13:30	0.035
14040	0.017	0.017	0.018	0.021	13:31:40	10/5/2011 13:31	0.021
14100	0.013	0.013	0.014	0.015	13:32:40	10/5/2011 13:32	0.015
14160	0.016	0.016	0.017	0.02	13:33:40	10/5/2011 13:33	0.02
14220	0.016	0.017	0.018	0.021	13:34:40	10/5/2011 13:34	0.021
14280	0.015	0.016	0.017	0.021	13:35:40	10/5/2011 13:35	0.021
14340	0.021	0.021	0.022	0.025	13:36:40	10/5/2011 13:36	0.026

14400	0.031	0.032	0.034	0.044	13:37:40	10/5/2011 13:37	0.047
14460	0.019	0.019	0.02	0.023	13:38:40	10/5/2011 13:38	0.024
14520	0.023	0.023	0.025	0.03	13:39:40	10/5/2011 13:39	0.031
14580	0.011	0.011	0.012	0.014	13:40:40	10/5/2011 13:40	0.015
14640	0.009	0.009	0.009	0.01	13:41:40	10/5/2011 13:41	0.01
14700	0.011	0.011	0.012	0.014	13:42:40	10/5/2011 13:42	0.014
14760	0.015	0.015	0.016	0.018	13:43:40	10/5/2011 13:43	0.018
14820	0.008	0.008	0.009	0.009	13:44:40	10/5/2011 13:44	0.009
14880	0.008	0.009	0.009	0.01	13:45:40	10/5/2011 13:45	0.01
14940	0.011	0.012	0.012	0.014	13:46:40	10/5/2011 13:46	0.014
15000	0.012	0.012	0.013	0.015	13:47:40	10/5/2011 13:47	0.016
15060	0.009	0.009	0.009	0.01	13:48:40	10/5/2011 13:48	0.01
15120	0.017	0.017	0.018	0.021	13:49:40	10/5/2011 13:49	0.022
15180	0.015	0.016	0.016	0.019	13:50:40	10/5/2011 13:50	0.019
15240	0.008	0.009	0.009	0.01	13:51:40	10/5/2011 13:51	0.01
15300	0.01	0.011	0.012	0.013	13:52:40	10/5/2011 13:52	0.013
15360	0.012	0.013	0.014	0.016	13:53:40	10/5/2011 13:53	0.016
15420	0.008	0.009	0.009	0.01	13:54:40	10/5/2011 13:54	0.01
15480	0.009	0.009	0.01	0.012	13:55:40	10/5/2011 13:55	0.012
15540	0.01	0.011	0.012	0.015	13:56:40	10/5/2011 13:56	0.015
15600	0.009	0.01	0.01	0.012	13:57:40	10/5/2011 13:57	0.012
15660	0.017	0.018	0.019	0.022	13:58:40	10/5/2011 13:58	0.022
15720	0.008	0.009	0.009	0.011	13:59:40	10/5/2011 13:59	0.011
15780	0.008	0.008	0.009	0.01	14:00:40	10/5/2011 14:00	0.01
15840	0.008	0.008	0.009	0.01	14:01:40	10/5/2011 14:01	0.01
15900	0.01	0.01	0.011	0.014	14:02:40	10/5/2011 14:02	0.014
15960	0.01	0.011	0.011	0.014	14:03:40	10/5/2011 14:03	0.015
16020	0.011	0.012	0.013	0.019	14:04:40	10/5/2011 14:04	0.022
16080	0.011	0.012	0.013	0.018	14:05:40	10/5/2011 14:05	0.019

AECOM

Client: National Grid
Location: Metro Loves
Date: 10/6/11
Field Personnel: T. Dimesky, L. Ferreira

Project: Metropolitan MGP
Project Number:
Weather: Sunny 65°F
Ambient Noise: Construction Nearby

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
0745	0.0	0.020	0.0	0.0	0.027	86.9	mob
0800	0.0	0.016	0.0	0.0	0.014	90.4	resume SB-22 drilling
0815	0.0	0.013	0.0	0.0	0.023	88.1	"
0830	0.0	0.011	0.0	0.0	0.018	86.3	"
0845	0.0	0.021	0.0	0.0	0.031	85.6	"
0900	0.0	0.027	0.0	0.0	0.037	85.2	"
0915	0.0	0.018	0.0	0.0	0.029	88.1	"
0930	0.0	0.014	0.0	0.0	0.024	89.6	"
0945	0.0	0.016	0.0	0.0	0.023	88.1	"
1000	0.0	0.024	0.0	0.0	0.034	88.3	"
1015	0.0	0.024	0.0	0.0	0.021	88.2	"
1030	0.0	0.025	0.0	0.0	0.031	89.7	"
1045	0.0	0.028	0.0	0.0	0.031	80.3	complete drilling SB-22
1100	0.0	0.025	0.0	0.0	0.036	89.1	SB-22 well installation
1115	0.0	0.014	0.0	0.0	0.023	80.5	" "
1120	0.0	0.014	0.0	0.0	0.028	79.8	break
1145	0.0	0.014	0.0	0.0	0.022	77.2	break
1200	0.0	0.014	0.0	0.0	0.026	80.4	plugging borehole
1215	0.0	0.007	0.0	0.0	0.014	85.6	well construction
1230	0.0	0.007	0.0	0.0	0.009	89.2	↓
1300	0.0	0.005	0.0	0.0	0.013	84.0	↓
1330	0.0	0.016	0.0	0.0	0.014	86.9	"
1345	0.0	0.001	0.0	0.0	0.011	86.3	"

=========Event #20 information (begin)=========
==========
[Event #20 name:]--[Event #20]2011-10-06 07:55<-->2011-10-06 10:26
[Event start time:]--2011-10-06 07:55:18[Event end time:]--2011-10-06 10:26:18
==========Event #20 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624
Data Points: 151 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)
Measurement Gas : Isobutene
Calibration Time : 2011-10-06 06:38:002011-10-06 06:38:002011-10-06 06:38:00
Drift Value : --- --- ---
Low Alarm Levels : 50.000 50.000 50.000
High Alarm Levels : 100.000 100.000 100.000
Span Value : 100.000 100.000 100.000
Correction Factor : 1.00 1.00 1.00
Over Alarm Levels : 15000.000 15000.000 15000.000
==========Event #20 data informations==========

LINE#	Date/Time	PID-Max(ppm)	PID-Min(ppm)	PID-Avg(ppm)
1	10/6/2011 7:56	0	0	0
2	10/6/2011 7:57	0	0	0
3	10/6/2011 7:58	0	0	0
4	10/6/2011 7:59	0	0	0
5	10/6/2011 8:00	0	0	0
6	10/6/2011 8:01	0	0	0
7	10/6/2011 8:02	0	0	0
8	10/6/2011 8:03	0	0	0
9	10/6/2011 8:04	0	0	0
10	10/6/2011 8:05	0	0	0
11	10/6/2011 8:06	0	0	0
12	10/6/2011 8:07	0	0	0
13	10/6/2011 8:08	0	0	0
14	10/6/2011 8:09	0	0	0
15	10/6/2011 8:10	0	0	0
16	10/6/2011 8:11	0	0	0
17	10/6/2011 8:12	0	0	0
18	10/6/2011 8:13	0	0	0
19	10/6/2011 8:14	0	0	0
20	10/6/2011 8:15	0	0	0
21	10/6/2011 8:16	0	0	0
22	10/6/2011 8:17	0	0	0
23	10/6/2011 8:18	0	0	0
24	10/6/2011 8:19	0	0	0
25	10/6/2011 8:20	0	0	0
26	10/6/2011 8:21	0	0	0
27	10/6/2011 8:22	0	0	0
28	10/6/2011 8:23	0	0	0
29	10/6/2011 8:24	0	0	0
30	10/6/2011 8:25	0	0	0
31	10/6/2011 8:26	0	0	0
32	10/6/2011 8:27	0	0	0
33	10/6/2011 8:28	0	0	0
34	10/6/2011 8:29	0	0	0
35	10/6/2011 8:30	0	0	0
36	10/6/2011 8:31	0	0	0
37	10/6/2011 8:32	0	0	0
38	10/6/2011 8:33	0	0	0
39	10/6/2011 8:34	0	0	0
40	10/6/2011 8:35	0	0	0
41	10/6/2011 8:36	0	0	0
42	10/6/2011 8:37	0	0	0
43	10/6/2011 8:38	0	0	0
44	10/6/2011 8:39	0	0	0
45	10/6/2011 8:40	0	0	0
46	10/6/2011 8:41	0	0	0
47	10/6/2011 8:42	0	0	0
48	10/6/2011 8:43	0	0	0

49	10/6/2011 8:44	0	0	0
50	10/6/2011 8:45	0	0	0
51	10/6/2011 8:46	0	0	0
52	10/6/2011 8:47	0	0	0
53	10/6/2011 8:48	0	0	0
54	10/6/2011 8:49	0	0	0
55	10/6/2011 8:50	0	0	0
56	10/6/2011 8:51	0	0	0
57	10/6/2011 8:52	0	0	0
58	10/6/2011 8:53	0	0	0
59	10/6/2011 8:54	0	0	0
60	10/6/2011 8:55	0	0	0
61	10/6/2011 8:56	0	0	0
62	10/6/2011 8:57	0	0	0
63	10/6/2011 8:58	0	0	0
64	10/6/2011 8:59	0	0	0
65	10/6/2011 9:00	0	0	0
66	10/6/2011 9:01	0	0	0
67	10/6/2011 9:02	0	0	0
68	10/6/2011 9:03	0	0	0
69	10/6/2011 9:04	0	0	0
70	10/6/2011 9:05	0	0	0
71	10/6/2011 9:06	0	0	0
72	10/6/2011 9:07	0	0	0
73	10/6/2011 9:08	0	0	0
74	10/6/2011 9:09	0	0	0
75	10/6/2011 9:10	0	0	0
76	10/6/2011 9:11	0	0	0
77	10/6/2011 9:12	0	0	0
78	10/6/2011 9:13	0	0	0
79	10/6/2011 9:14	0	0	0
80	10/6/2011 9:15	0	0	0
81	10/6/2011 9:16	0	0	0
82	10/6/2011 9:17	0	0	0
83	10/6/2011 9:18	0	0	0
84	10/6/2011 9:19	0	0	0
85	10/6/2011 9:20	0	0	0
86	10/6/2011 9:21	0	0	0
87	10/6/2011 9:22	0	0	0
88	10/6/2011 9:23	0	0	0
89	10/6/2011 9:24	0	0	0
90	10/6/2011 9:25	0	0	0
91	10/6/2011 9:26	0	0	0
92	10/6/2011 9:27	0	0	0
93	10/6/2011 9:28	0	0	0
94	10/6/2011 9:29	0	0	0
95	10/6/2011 9:30	0	0	0
96	10/6/2011 9:31	0	0	0
97	10/6/2011 9:32	0	0	0
98	10/6/2011 9:33	0	0	0
99	10/6/2011 9:34	0	0	0
100	10/6/2011 9:35	0	0	0
101	10/6/2011 9:36	0	0	0
102	10/6/2011 9:37	0	0	0
103	10/6/2011 9:38	0	0	0
104	10/6/2011 9:39	0	0	0
105	10/6/2011 9:40	0	0	0
106	10/6/2011 9:41	0	0	0
107	10/6/2011 9:42	0	0	0
108	10/6/2011 9:43	0	0	0
109	10/6/2011 9:44	0	0	0
110	10/6/2011 9:45	0	0	0
111	10/6/2011 9:46	0	0	0
112	10/6/2011 9:47	0	0	0
113	10/6/2011 9:48	0	0	0
114	10/6/2011 9:49	0	0	0
115	10/6/2011 9:50	0	0	0
116	10/6/2011 9:51	0	0	0
117	10/6/2011 9:52	0	0	0

118	10/6/2011 9:53	0	0	0
119	10/6/2011 9:54	0	0	0
120	10/6/2011 9:55	0	0	0
121	10/6/2011 9:56	0	0	0
122	10/6/2011 9:57	0	0	0
123	10/6/2011 9:58	0	0	0
124	10/6/2011 9:59	0	0	0
125	10/6/2011 10:00	0	0	0
126	10/6/2011 10:01	0	0	0
127	10/6/2011 10:02	0	0	0
128	10/6/2011 10:03	0	0	0
129	10/6/2011 10:04	0	0	0
130	10/6/2011 10:05	0	0	0
131	10/6/2011 10:06	0	0	0
132	10/6/2011 10:07	0	0	0
133	10/6/2011 10:08	0	0	0
134	10/6/2011 10:09	0	0	0
135	10/6/2011 10:10	0	0	0
136	10/6/2011 10:11	0	0	0
137	10/6/2011 10:12	0	0	0
138	10/6/2011 10:13	0	0	0
139	10/6/2011 10:14	0	0	0
140	10/6/2011 10:15	0	0	0
141	10/6/2011 10:16	0	0	0
142	10/6/2011 10:17	0	0	0
143	10/6/2011 10:18	0	0	0
144	10/6/2011 10:19	0	0	0
145	10/6/2011 10:20	0	0	0
146	10/6/2011 10:21	0	0	0
147	10/6/2011 10:22	0	0	0
148	10/6/2011 10:23	0	0	0
149	10/6/2011 10:24	0	0	0
150	10/6/2011 10:25	0	0	0
151	10/6/2011 10:26	0	0	0

==========Event #20 information (end)==========

=========Event #24 information (begin)=========

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[Event #24 name:]--[Event #24]2011-10-06 10:32<-->2011-10-06 14:45

[Event start time:]--2011-10-06 10:32:51[Event end time:]--2011-10-06 14:45:51

==========Event #24 head information==========

Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624

Data Points: 253 Sample Period: 60 s Datalog Mode: Automatic

SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode

==========

Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)

Measurement Gas : Isobutene

Calibration Time : 2011-10-06 06:38:002011-10-06 06:38:002011-10-06 06:38:00

Drift Value : --- --- ---

Low Alarm Levels : 50.000 50.000 50.000

High Alarm Levels : 100.000 100.000 100.000

Span Value : 100.000 100.000 100.000

Correction Factor : 1.00 1.00 1.00

Over Alarm Levels : 15000.000 15000.000 15000.000

==========Event #24 data informations==========

LINE#	Date/Time	PID-Max(ppm)	PID-Min(ppm)	PID-Avg(ppm)
1	10/6/2011 10:33	0.044	0.004	0.02
2	10/6/2011 10:34	0.049	0.005	0.022
3	10/6/2011 10:35	0.052	0.01	0.02
4	10/6/2011 10:36	0.079	0.015	0.04
5	10/6/2011 10:37	0.064	0.015	0.035
6	10/6/2011 10:38	0.078	0.043	0.064
7	10/6/2011 10:39	0.071	0.026	0.05
8	10/6/2011 10:40	0.064	0.021	0.053
9	10/6/2011 10:41	0.058	0.026	0.046
10	10/6/2011 10:42	0.053	0.011	0.042
11	10/6/2011 10:43	0.053	0.009	0.032

12	10/6/2011 10:44	0.061	0.013	0.032
13	10/6/2011 10:45	0.05	0.008	0.031
14	10/6/2011 10:46	0.05	0.006	0.024
15	10/6/2011 10:47	0.055	0.018	0.035
16	10/6/2011 10:48	0.06	0.014	0.035
17	10/6/2011 10:49	0.056	0.018	0.033
18	10/6/2011 10:50	0.052	0.016	0.03
19	10/6/2011 10:51	0.052	0.018	0.036
20	10/6/2011 10:52	0.052	0.009	0.028
21	10/6/2011 10:53	0.043	0.011	0.025
22	10/6/2011 10:54	0.043	0.005	0.02
23	10/6/2011 10:55	0.043	0.007	0.022
24	10/6/2011 10:56	0.057	0.009	0.032
25	10/6/2011 10:57	0.04	0.009	0.021
26	10/6/2011 10:58	0.042	0.007	0.024
27	10/6/2011 10:59	0.043	0.005	0.023
28	10/6/2011 11:00	0.042	0.009	0.022
29	10/6/2011 11:01	0.041	0.01	0.024
30	10/6/2011 11:02	0.051	0.018	0.032
31	10/6/2011 11:03	0.049	0.016	0.031
32	10/6/2011 11:04	0.038	0.007	0.018
33	10/6/2011 11:05	0.035	0.007	0.018
34	10/6/2011 11:06	0.039	0.006	0.019
35	10/6/2011 11:07	0.034	0.007	0.019
36	10/6/2011 11:08	0.092	0.009	0.027
37	10/6/2011 11:09	0.045	0.006	0.025
38	10/6/2011 11:10	0.04	0.003	0.022
39	10/6/2011 11:11	0.026	0	0.014
40	10/6/2011 11:12	0.057	0.003	0.018
41	10/6/2011 11:13	0.061	0.011	0.031
42	10/6/2011 11:14	0.052	0.012	0.029
43	10/6/2011 11:15	0.04	0.017	0.027
44	10/6/2011 11:16	0.043	0.006	0.023
45	10/6/2011 11:17	0.021	0	0.005
46	10/6/2011 11:18	0.02	0	0.008
47	10/6/2011 11:19	0.02	0	0.006
48	10/6/2011 11:20	0.02	0	0.005
49	10/6/2011 11:21	0.02	0	0.006
50	10/6/2011 11:22	0.068	0.001	0.016
51	10/6/2011 11:23	0.024	0.002	0.012
52	10/6/2011 11:24	0.026	0	0.01
53	10/6/2011 11:25	0.026	0	0.011
54	10/6/2011 11:26	0.025	0.001	0.011
55	10/6/2011 11:27	0.026	0.002	0.014
56	10/6/2011 11:28	0.033	0.005	0.018
57	10/6/2011 11:29	0.029	0.007	0.016
58	10/6/2011 11:30	0.033	0.007	0.019
59	10/6/2011 11:31	0.032	0.01	0.021
60	10/6/2011 11:32	0.034	0.009	0.019
61	10/6/2011 11:33	0.034	0.009	0.023
62	10/6/2011 11:34	0.038	0.015	0.024
63	10/6/2011 11:35	0.035	0.014	0.024
64	10/6/2011 11:36	0.034	0.009	0.021
65	10/6/2011 11:37	0.03	0.006	0.019
66	10/6/2011 11:38	0.03	0.011	0.021
67	10/6/2011 11:39	0.031	0.015	0.022
68	10/6/2011 11:40	0.031	0.006	0.018
69	10/6/2011 11:41	0.026	0.003	0.012
70	10/6/2011 11:42	0.018	0	0.006
71	10/6/2011 11:43	0.009	0	0.003
72	10/6/2011 11:44	0.017	0	0.006
73	10/6/2011 11:45	0.016	0	0.005
74	10/6/2011 11:46	0.012	0	0.003
75	10/6/2011 11:47	0.021	0	0.008
76	10/6/2011 11:48	0.023	0	0.006
77	10/6/2011 11:49	0.012	0	0.003
78	10/6/2011 11:50	0.009	0	0.002
79	10/6/2011 11:51	0.011	0	0.002
80	10/6/2011 11:52	0.109	0	0.021

81	10/6/2011 11:53	0.019	0	0.007
82	10/6/2011 11:54	0.013	0	0.003
83	10/6/2011 11:55	0.006	0	0.001
84	10/6/2011 11:56	0.018	0	0.006
85	10/6/2011 11:57	0.033	0	0.015
86	10/6/2011 11:58	0.014	0	0.005
87	10/6/2011 11:59	0.008	0	0.002
88	10/6/2011 12:00	0.006	0	0.001
89	10/6/2011 12:01	0.026	0	0.006
90	10/6/2011 12:02	0.016	0	0.002
91	10/6/2011 12:03	0.006	0	0.001
92	10/6/2011 12:04	0.013	0	0.004
93	10/6/2011 12:05	0.007	0	0.001
94	10/6/2011 12:06	0.002	0	0
95	10/6/2011 12:07	0.004	0	0
96	10/6/2011 12:08	0.006	0	0
97	10/6/2011 12:09	0.01	0	0.001
98	10/6/2011 12:10	0.014	0	0.004
99	10/6/2011 12:11	0.008	0	0.001
100	10/6/2011 12:12	0.007	0	0.001
101	10/6/2011 12:13	0.005	0	0
102	10/6/2011 12:14	0.001	0	0
103	10/6/2011 12:15	0.001	0	0
104	10/6/2011 12:16	0	0	0
105	10/6/2011 12:17	0.002	0	0
106	10/6/2011 12:18	0.082	0	0.012
107	10/6/2011 12:19	0.126	0	0.03
108	10/6/2011 12:20	0.012	0	0
109	10/6/2011 12:21	0	0	0
110	10/6/2011 12:22	0	0	0
111	10/6/2011 12:23	0	0	0
112	10/6/2011 12:24	0.044	0	0.006
113	10/6/2011 12:25	0.046	0	0.014
114	10/6/2011 12:26	0	0	0
115	10/6/2011 12:27	0.012	0	0.001
116	10/6/2011 12:28	0.045	0	0.003
117	10/6/2011 12:29	0.056	0	0.004
118	10/6/2011 12:30	0.004	0	0
119	10/6/2011 12:31	0	0	0
120	10/6/2011 12:32	0	0	0
121	10/6/2011 12:33	0	0	0
122	10/6/2011 12:34	0	0	0
123	10/6/2011 12:35	0	0	0
124	10/6/2011 12:36	0	0	0
125	10/6/2011 12:37	0	0	0
126	10/6/2011 12:38	0.013	0	0.001
127	10/6/2011 12:39	0	0	0
128	10/6/2011 12:40	0	0	0
129	10/6/2011 12:41	0	0	0
130	10/6/2011 12:42	0.204	0	0.026
131	10/6/2011 12:43	0	0	0
132	10/6/2011 12:44	0	0	0
133	10/6/2011 12:45	0	0	0
134	10/6/2011 12:46	0	0	0
135	10/6/2011 12:47	0	0	0
136	10/6/2011 12:48	0	0	0
137	10/6/2011 12:49	0	0	0
138	10/6/2011 12:50	0.028	0	0.002
139	10/6/2011 12:51	0.001	0	0
140	10/6/2011 12:52	0.002	0	0
141	10/6/2011 12:53	0	0	0
142	10/6/2011 12:54	0.004	0	0
143	10/6/2011 12:55	0.006	0	0
144	10/6/2011 12:56	0.015	0	0.001
145	10/6/2011 12:57	0	0	0
146	10/6/2011 12:58	0.006	0	0
147	10/6/2011 12:59	0.012	0	0.001
148	10/6/2011 13:00	0	0	0
149	10/6/2011 13:01	0	0	0

150	10/6/2011 13:02	0.01	0	0
151	10/6/2011 13:03	0.017	0	0.002
152	10/6/2011 13:04	0.015	0	0.002
153	10/6/2011 13:05	0.011	0	0.003
154	10/6/2011 13:06	0.012	0	0.002
155	10/6/2011 13:07	0	0	0
156	10/6/2011 13:08	0	0	0
157	10/6/2011 13:09	0.208	0	0.029
158	10/6/2011 13:10	0.034	0	0.001
159	10/6/2011 13:11	0.001	0	0
160	10/6/2011 13:12	0	0	0
161	10/6/2011 13:13	0	0	0
162	10/6/2011 13:14	0	0	0
163	10/6/2011 13:15	0	0	0
164	10/6/2011 13:16	0	0	0
165	10/6/2011 13:17	0	0	0
166	10/6/2011 13:18	0	0	0
167	10/6/2011 13:19	0	0	0
168	10/6/2011 13:20	0	0	0
169	10/6/2011 13:21	0	0	0
170	10/6/2011 13:22	0	0	0
171	10/6/2011 13:23	0.005	0	0
172	10/6/2011 13:24	0.011	0	0.001
173	10/6/2011 13:25	0.012	0	0.002
174	10/6/2011 13:26	0	0	0
175	10/6/2011 13:27	0	0	0
176	10/6/2011 13:28	0	0	0
177	10/6/2011 13:29	0	0	0
178	10/6/2011 13:30	0	0	0
179	10/6/2011 13:31	0	0	0
180	10/6/2011 13:32	0.003	0	0
181	10/6/2011 13:33	0.003	0	0
182	10/6/2011 13:34	0.012	0	0.001
183	10/6/2011 13:35	0.018	0	0.003
184	10/6/2011 13:36	0	0	0
185	10/6/2011 13:37	0	0	0
186	10/6/2011 13:38	0	0	0
187	10/6/2011 13:39	0	0	0
188	10/6/2011 13:40	0.001	0	0
189	10/6/2011 13:41	0.008	0	0.001
190	10/6/2011 13:42	0.009	0	0.001
191	10/6/2011 13:43	0	0	0
192	10/6/2011 13:44	0	0	0
193	10/6/2011 13:45	0	0	0
194	10/6/2011 13:46	0	0	0
195	10/6/2011 13:47	0	0	0
196	10/6/2011 13:48	0	0	0
197	10/6/2011 13:49	0	0	0
198	10/6/2011 13:50	0	0	0
199	10/6/2011 13:51	0	0	0
200	10/6/2011 13:52	0	0	0
201	10/6/2011 13:53	0	0	0
202	10/6/2011 13:54	0	0	0
203	10/6/2011 13:55	0	0	0
204	10/6/2011 13:56	0	0	0
205	10/6/2011 13:57	0	0	0
206	10/6/2011 13:58	0	0	0
207	10/6/2011 13:59	0.019	0	0.004
208	10/6/2011 14:00	0.021	0	0.006
209	10/6/2011 14:01	0.01	0	0.001
210	10/6/2011 14:02	0.001	0	0
211	10/6/2011 14:03	0.004	0	0
212	10/6/2011 14:04	0.001	0	0
213	10/6/2011 14:05	0.008	0	0.001
214	10/6/2011 14:06	0.107	0	0.006
215	10/6/2011 14:07	0.075	0	0.002
216	10/6/2011 14:08	0.001	0	0
217	10/6/2011 14:09	0.001	0	0
218	10/6/2011 14:10	0.001	0	0

219	10/6/2011 14:11	0	0	0
220	10/6/2011 14:12	0	0	0
221	10/6/2011 14:13	0	0	0
222	10/6/2011 14:14	0	0	0
223	10/6/2011 14:15	0	0	0
224	10/6/2011 14:16	0	0	0
225	10/6/2011 14:17	0	0	0
226	10/6/2011 14:18	0	0	0
227	10/6/2011 14:19	0	0	0
228	10/6/2011 14:20	0	0	0
229	10/6/2011 14:21	0	0	0
230	10/6/2011 14:22	0.01	0	0
231	10/6/2011 14:23	0	0	0
232	10/6/2011 14:24	0	0	0
233	10/6/2011 14:25	0	0	0
234	10/6/2011 14:26	0.001	0	0
235	10/6/2011 14:27	0.005	0	0
236	10/6/2011 14:28	0	0	0
237	10/6/2011 14:29	0	0	0
238	10/6/2011 14:30	0	0	0
239	10/6/2011 14:31	0	0	0
240	10/6/2011 14:32	0	0	0
241	10/6/2011 14:33	0.007	0	0
242	10/6/2011 14:34	0	0	0
243	10/6/2011 14:35	0	0	0
244	10/6/2011 14:36	0	0	0
245	10/6/2011 14:37	0	0	0
246	10/6/2011 14:38	0	0	0
247	10/6/2011 14:39	0	0	0
248	10/6/2011 14:40	0	0	0
249	10/6/2011 14:41	0	0	0
250	10/6/2011 14:42	0	0	0
251	10/6/2011 14:43	0	0	0
252	10/6/2011 14:44	0	0	0
253	10/6/2011 14:45	0	0	0

==========Event #24 information (end)==========

=========Event #13 information (begin)=========
==========
[Event #13 name:]--[Event #13]2011-10-06 07:44<-->2011-10-06 14:55
[Event start time:]--2011-10-06 07:44:08[Event end time:]--2011-10-06 14:55:08
==========Event #13 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367
Data Points: 431 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID(ppb)
Measurement Gas : Isobutene
Calibration Time : 2011-10-06 06:50:00
Drift Value : ---
Low Alarm Levels : 25847
High Alarm Levels : 51694
Span Value : 100000
Correction Factor : 1.00
Over Alarm Levels : 15000000
==========Event #13 data informations==========

LINE#	Date/Time	PID(ppm)	PID(ppb)
1	10/6/2011 7:45	0	0
2	10/6/2011 7:46	0	0
3	10/6/2011 7:47	0	0
4	10/6/2011 7:48	0	0
5	10/6/2011 7:49	0	0
6	10/6/2011 7:50	0	0
7	10/6/2011 7:51	0	0
8	10/6/2011 7:52	0	0
9	10/6/2011 7:53	0	0
10	10/6/2011 7:54	0	0
11	10/6/2011 7:55	0	0
12	10/6/2011 7:56	0	0
13	10/6/2011 7:57	0	0
14	10/6/2011 7:58	0	0
15	10/6/2011 7:59	0	0
16	10/6/2011 8:00	0	0
17	10/6/2011 8:01	0	0
18	10/6/2011 8:02	0	0
19	10/6/2011 8:03	0	0
20	10/6/2011 8:04	0	0
21	10/6/2011 8:05	0	0
22	10/6/2011 8:06	0	0
23	10/6/2011 8:07	0	0
24	10/6/2011 8:08	0	0
25	10/6/2011 8:09	0	0
26	10/6/2011 8:10	0	0
27	10/6/2011 8:11	0	0
28	10/6/2011 8:12	0	0
29	10/6/2011 8:13	0	0
30	10/6/2011 8:14	0	0
31	10/6/2011 8:15	0	0
32	10/6/2011 8:16	0	0
33	10/6/2011 8:17	0	0
34	10/6/2011 8:18	0	0
35	10/6/2011 8:19	0	0
36	10/6/2011 8:20	0	0
37	10/6/2011 8:21	0	0
38	10/6/2011 8:22	0	0
39	10/6/2011 8:23	0	0
40	10/6/2011 8:24	0	0
41	10/6/2011 8:25	0	0
42	10/6/2011 8:26	0	0
43	10/6/2011 8:27	0	0
44	10/6/2011 8:28	0	0
45	10/6/2011 8:29	0	0
46	10/6/2011 8:30	0	0
47	10/6/2011 8:31	0	0
48	10/6/2011 8:32	0	0

49	10/6/2011 8:33	0	0
50	10/6/2011 8:34	0	0
51	10/6/2011 8:35	0	0
52	10/6/2011 8:36	0	0
53	10/6/2011 8:37	0	0
54	10/6/2011 8:38	0	0
55	10/6/2011 8:39	0	0
56	10/6/2011 8:40	0	0
57	10/6/2011 8:41	0	0
58	10/6/2011 8:42	0	0
59	10/6/2011 8:43	0	0
60	10/6/2011 8:44	0	0
61	10/6/2011 8:45	0	0
62	10/6/2011 8:46	0	0
63	10/6/2011 8:47	0	0
64	10/6/2011 8:48	0	0
65	10/6/2011 8:49	0	0
66	10/6/2011 8:50	0	0
67	10/6/2011 8:51	0	0
68	10/6/2011 8:52	0	0
69	10/6/2011 8:53	0	0
70	10/6/2011 8:54	0	0
71	10/6/2011 8:55	0	0
72	10/6/2011 8:56	0	0
73	10/6/2011 8:57	0	0
74	10/6/2011 8:58	0	0
75	10/6/2011 8:59	0	0
76	10/6/2011 9:00	0	0
77	10/6/2011 9:01	0	0
78	10/6/2011 9:02	0	0
79	10/6/2011 9:03	0	0
80	10/6/2011 9:04	0	0
81	10/6/2011 9:05	0	0
82	10/6/2011 9:06	0	0
83	10/6/2011 9:07	0	0
84	10/6/2011 9:08	0	0
85	10/6/2011 9:09	0	0
86	10/6/2011 9:10	0	0
87	10/6/2011 9:11	0	0
88	10/6/2011 9:12	0	0
89	10/6/2011 9:13	0	0
90	10/6/2011 9:14	0	0
91	10/6/2011 9:15	0	0
92	10/6/2011 9:16	0	0
93	10/6/2011 9:17	0	0
94	10/6/2011 9:18	0	0
95	10/6/2011 9:19	0	0
96	10/6/2011 9:20	0	0
97	10/6/2011 9:21	0	0
98	10/6/2011 9:22	0	0
99	10/6/2011 9:23	0	0
100	10/6/2011 9:24	0	0
101	10/6/2011 9:25	0	0
102	10/6/2011 9:26	0	0
103	10/6/2011 9:27	0	0
104	10/6/2011 9:28	0	0
105	10/6/2011 9:29	0	0
106	10/6/2011 9:30	0	0
107	10/6/2011 9:31	0	0
108	10/6/2011 9:32	0	0
109	10/6/2011 9:33	0	0
110	10/6/2011 9:34	0	0
111	10/6/2011 9:35	0	0
112	10/6/2011 9:36	0	0
113	10/6/2011 9:37	0	0
114	10/6/2011 9:38	0	0
115	10/6/2011 9:39	0	0
116	10/6/2011 9:40	0	0
117	10/6/2011 9:41	0.001	1

118	10/6/2011 9:42	0	0
119	10/6/2011 9:43	0	0
120	10/6/2011 9:44	0	0
121	10/6/2011 9:45	0	0
122	10/6/2011 9:46	0	0
123	10/6/2011 9:47	0	0
124	10/6/2011 9:48	0	0
125	10/6/2011 9:49	0	0
126	10/6/2011 9:50	0	0
127	10/6/2011 9:51	0	0
128	10/6/2011 9:52	0	0
129	10/6/2011 9:53	0	0
130	10/6/2011 9:54	0	0
131	10/6/2011 9:55	0	0
132	10/6/2011 9:56	0	0
133	10/6/2011 9:57	0	0
134	10/6/2011 9:58	0	0
135	10/6/2011 9:59	0	0
136	10/6/2011 10:00	0	0
137	10/6/2011 10:01	0	0
138	10/6/2011 10:02	0	0
139	10/6/2011 10:03	0	0
140	10/6/2011 10:04	0	0
141	10/6/2011 10:05	0	0
142	10/6/2011 10:06	0	0
143	10/6/2011 10:07	0	0
144	10/6/2011 10:08	0.003	3
145	10/6/2011 10:09	0	0
146	10/6/2011 10:10	0	0
147	10/6/2011 10:11	0	0
148	10/6/2011 10:12	0	0
149	10/6/2011 10:13	0	0
150	10/6/2011 10:14	0	0
151	10/6/2011 10:15	0	0
152	10/6/2011 10:16	0	0
153	10/6/2011 10:17	0	0
154	10/6/2011 10:18	0	0
155	10/6/2011 10:19	0	0
156	10/6/2011 10:20	0	0
157	10/6/2011 10:21	0	0
158	10/6/2011 10:22	0	0
159	10/6/2011 10:23	0	0
160	10/6/2011 10:24	0	0
161	10/6/2011 10:25	0	0
162	10/6/2011 10:26	0	0
163	10/6/2011 10:27	0	0
164	10/6/2011 10:28	0	0
165	10/6/2011 10:29	0	0
166	10/6/2011 10:30	0	0
167	10/6/2011 10:31	0	0
168	10/6/2011 10:32	0	0
169	10/6/2011 10:33	0	0
170	10/6/2011 10:34	0	0
171	10/6/2011 10:35	0	0
172	10/6/2011 10:36	0	0
173	10/6/2011 10:37	0	0
174	10/6/2011 10:38	0	0
175	10/6/2011 10:39	0	0
176	10/6/2011 10:40	0	0
177	10/6/2011 10:41	0	0
178	10/6/2011 10:42	0	0
179	10/6/2011 10:43	0	0
180	10/6/2011 10:44	0	0
181	10/6/2011 10:45	0	0
182	10/6/2011 10:46	0	0
183	10/6/2011 10:47	0	0
184	10/6/2011 10:48	0	0
185	10/6/2011 10:49	0	0
186	10/6/2011 10:50	0	0

187	10/6/2011 10:51	0	0
188	10/6/2011 10:52	0	0
189	10/6/2011 10:53	0	0
190	10/6/2011 10:54	0	0
191	10/6/2011 10:55	0	0
192	10/6/2011 10:56	0	0
193	10/6/2011 10:57	0	0
194	10/6/2011 10:58	0	0
195	10/6/2011 10:59	0	0
196	10/6/2011 11:00	0	0
197	10/6/2011 11:01	0	0
198	10/6/2011 11:02	0	0
199	10/6/2011 11:03	0	0
200	10/6/2011 11:04	0	0
201	10/6/2011 11:05	0	0
202	10/6/2011 11:06	0	0
203	10/6/2011 11:07	0	0
204	10/6/2011 11:08	0	0
205	10/6/2011 11:09	0	0
206	10/6/2011 11:10	0	0
207	10/6/2011 11:11	0	0
208	10/6/2011 11:12	0	0
209	10/6/2011 11:13	0	0
210	10/6/2011 11:14	0	0
211	10/6/2011 11:15	0	0
212	10/6/2011 11:16	0	0
213	10/6/2011 11:17	0	0
214	10/6/2011 11:18	0	0
215	10/6/2011 11:19	0	0
216	10/6/2011 11:20	0	0
217	10/6/2011 11:21	0	0
218	10/6/2011 11:22	0	0
219	10/6/2011 11:23	0	0
220	10/6/2011 11:24	0	0
221	10/6/2011 11:25	0	0
222	10/6/2011 11:26	0	0
223	10/6/2011 11:27	0	0
224	10/6/2011 11:28	0	0
225	10/6/2011 11:29	0	0
226	10/6/2011 11:30	0	0
227	10/6/2011 11:31	0	0
228	10/6/2011 11:32	0	0
229	10/6/2011 11:33	0	0
230	10/6/2011 11:34	0	0
231	10/6/2011 11:35	0	0
232	10/6/2011 11:36	0.007	7
233	10/6/2011 11:37	0	0
234	10/6/2011 11:38	0	0
235	10/6/2011 11:39	0	0
236	10/6/2011 11:40	0	0
237	10/6/2011 11:41	0	0
238	10/6/2011 11:42	0	0
239	10/6/2011 11:43	0	0
240	10/6/2011 11:44	0	0
241	10/6/2011 11:45	0	0
242	10/6/2011 11:46	0	0
243	10/6/2011 11:47	0	0
244	10/6/2011 11:48	0	0
245	10/6/2011 11:49	0	0
246	10/6/2011 11:50	0	0
247	10/6/2011 11:51	0	0
248	10/6/2011 11:52	0	0
249	10/6/2011 11:53	0	0
250	10/6/2011 11:54	0	0
251	10/6/2011 11:55	0	0
252	10/6/2011 11:56	0	0
253	10/6/2011 11:57	0	0
254	10/6/2011 11:58	0	0
255	10/6/2011 11:59	0	0

256	10/6/2011 12:00	0	0
257	10/6/2011 12:01	0	0
258	10/6/2011 12:02	0	0
259	10/6/2011 12:03	0	0
260	10/6/2011 12:04	0	0
261	10/6/2011 12:05	0	0
262	10/6/2011 12:06	0	0
263	10/6/2011 12:07	0	0
264	10/6/2011 12:08	0	0
265	10/6/2011 12:09	0	0
266	10/6/2011 12:10	0	0
267	10/6/2011 12:11	0	0
268	10/6/2011 12:12	0	0
269	10/6/2011 12:13	0	0
270	10/6/2011 12:14	0	0
271	10/6/2011 12:15	0	0
272	10/6/2011 12:16	0	0
273	10/6/2011 12:17	0	0
274	10/6/2011 12:18	0	0
275	10/6/2011 12:19	0	0
276	10/6/2011 12:20	0	0
277	10/6/2011 12:21	0	0
278	10/6/2011 12:22	0	0
279	10/6/2011 12:23	0	0
280	10/6/2011 12:24	0	0
281	10/6/2011 12:25	0	0
282	10/6/2011 12:26	0	0
283	10/6/2011 12:27	0	0
284	10/6/2011 12:28	0	0
285	10/6/2011 12:29	0	0
286	10/6/2011 12:30	0	0
287	10/6/2011 12:31	0	0
288	10/6/2011 12:32	0	0
289	10/6/2011 12:33	0	0
290	10/6/2011 12:34	0	0
291	10/6/2011 12:35	0	0
292	10/6/2011 12:36	0	0
293	10/6/2011 12:37	0	0
294	10/6/2011 12:38	0	0
295	10/6/2011 12:39	0	0
296	10/6/2011 12:40	0	0
297	10/6/2011 12:41	0	0
298	10/6/2011 12:42	0	0
299	10/6/2011 12:43	0	0
300	10/6/2011 12:44	0	0
301	10/6/2011 12:45	0	0
302	10/6/2011 12:46	0	0
303	10/6/2011 12:47	0	0
304	10/6/2011 12:48	0	0
305	10/6/2011 12:49	0	0
306	10/6/2011 12:50	0.008	8
307	10/6/2011 12:51	0	0
308	10/6/2011 12:52	0	0
309	10/6/2011 12:53	0	0
310	10/6/2011 12:54	0.013	13
311	10/6/2011 12:55	0	0
312	10/6/2011 12:56	0	0
313	10/6/2011 12:57	0	0
314	10/6/2011 12:58	0	0
315	10/6/2011 12:59	0	0
316	10/6/2011 13:00	0	0
317	10/6/2011 13:01	0	0
318	10/6/2011 13:02	0	0
319	10/6/2011 13:03	0	0
320	10/6/2011 13:04	0	0
321	10/6/2011 13:05	0	0
322	10/6/2011 13:06	0	0
323	10/6/2011 13:07	0.002	2
324	10/6/2011 13:08	0	0

325	10/6/2011 13:09	0	0
326	10/6/2011 13:10	0	0
327	10/6/2011 13:11	0	0
328	10/6/2011 13:12	0	0
329	10/6/2011 13:13	0	0
330	10/6/2011 13:14	0	0
331	10/6/2011 13:15	0	0
332	10/6/2011 13:16	0	0
333	10/6/2011 13:17	0	0
334	10/6/2011 13:18	0	0
335	10/6/2011 13:19	0	0
336	10/6/2011 13:20	0	0
337	10/6/2011 13:21	0	0
338	10/6/2011 13:22	0	0
339	10/6/2011 13:23	0	0
340	10/6/2011 13:24	0	0
341	10/6/2011 13:25	0	0
342	10/6/2011 13:26	0	0
343	10/6/2011 13:27	0	0
344	10/6/2011 13:28	0	0
345	10/6/2011 13:29	0	0
346	10/6/2011 13:30	0	0
347	10/6/2011 13:31	0	0
348	10/6/2011 13:32	0	0
349	10/6/2011 13:33	0	0
350	10/6/2011 13:34	0	0
351	10/6/2011 13:35	0	0
352	10/6/2011 13:36	0	0
353	10/6/2011 13:37	0	0
354	10/6/2011 13:38	0	0
355	10/6/2011 13:39	0	0
356	10/6/2011 13:40	0	0
357	10/6/2011 13:41	0	0
358	10/6/2011 13:42	0	0
359	10/6/2011 13:43	0	0
360	10/6/2011 13:44	0	0
361	10/6/2011 13:45	0	0
362	10/6/2011 13:46	0	0
363	10/6/2011 13:47	0	0
364	10/6/2011 13:48	0	0
365	10/6/2011 13:49	0	0
366	10/6/2011 13:50	0	0
367	10/6/2011 13:51	0	0
368	10/6/2011 13:52	0	0
369	10/6/2011 13:53	0	0
370	10/6/2011 13:54	0	0
371	10/6/2011 13:55	0	0
372	10/6/2011 13:56	0	0
373	10/6/2011 13:57	0	0
374	10/6/2011 13:58	0	0
375	10/6/2011 13:59	0	0
376	10/6/2011 14:00	0	0
377	10/6/2011 14:01	0	0
378	10/6/2011 14:02	0	0
379	10/6/2011 14:03	0	0
380	10/6/2011 14:04	0	0
381	10/6/2011 14:05	0	0
382	10/6/2011 14:06	0	0
383	10/6/2011 14:07	0	0
384	10/6/2011 14:08	0	0
385	10/6/2011 14:09	0	0
386	10/6/2011 14:10	0	0
387	10/6/2011 14:11	0	0
388	10/6/2011 14:12	0	0
389	10/6/2011 14:13	0	0
390	10/6/2011 14:14	0	0
391	10/6/2011 14:15	0	0
392	10/6/2011 14:16	0	0
393	10/6/2011 14:17	0	0

394	10/6/2011 14:18	0	0
395	10/6/2011 14:19	0	0
396	10/6/2011 14:20	0	0
397	10/6/2011 14:21	0	0
398	10/6/2011 14:22	0	0
399	10/6/2011 14:23	0	0
400	10/6/2011 14:24	0	0
401	10/6/2011 14:25	0	0
402	10/6/2011 14:26	0	0
403	10/6/2011 14:27	0	0
404	10/6/2011 14:28	0	0
405	10/6/2011 14:29	0	0
406	10/6/2011 14:30	0	0
407	10/6/2011 14:31	0	0
408	10/6/2011 14:32	0	0
409	10/6/2011 14:33	0	0
410	10/6/2011 14:34	0	0
411	10/6/2011 14:35	0	0
412	10/6/2011 14:36	0	0
413	10/6/2011 14:37	0	0
414	10/6/2011 14:38	0	0
415	10/6/2011 14:39	0	0
416	10/6/2011 14:40	0	0
417	10/6/2011 14:41	0	0
418	10/6/2011 14:42	0	0
419	10/6/2011 14:43	0	0
420	10/6/2011 14:44	0	0
421	10/6/2011 14:45	0	0
422	10/6/2011 14:46	0	0
423	10/6/2011 14:47	0	0
424	10/6/2011 14:48	0	0
425	10/6/2011 14:49	0.001	1
426	10/6/2011 14:50	0	0
427	10/6/2011 14:51	0	0
428	10/6/2011 14:52	0	0
429	10/6/2011 14:53	0	0
430	10/6/2011 14:54	0	0
431	10/6/2011 14:55	0	0

==========Event #13 information (end)==========

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533101806
Firmware Version	2.8
Calibration Date	5/19/2011
Test Name	MANUAL_005
Test Start Time	7:44:49 AM
Test Start Date	10/6/2011
Test Length [D:H:M	0:06:51
Test Interval [M:S]	1:00
PM1 Average [mg/r	0.016
PM1 Minimum [mg	0.001
PM1 Maximum [mg	0.059
PM1 TWA [mg/m3]	0.013
PM2.5 Average [mg	0.016
PM2.5 Minimum [m	0.001
PM2.5 Maximum [r	0.062
PM2.5 TWA [mg/m	0.014
PM4 Average [mg/r	0.017
PM4 Minimum [mg	0.001
PM4 Maximum [mg	0.067
PM4 TWA [mg/m3]	0.014
PM10 Average [mg,	0.018
PM10 Minimum [m	0.001
PM10 Maximum [m	0.075
PM10 TWA [mg/m3	0.016
TOTAL Average [mg	0.019
TOTAL Minimum [m	0.001
TOTAL Maximum [r	0.076
TOTAL TWA [mg/m	0.016
Photometric User C	1
Size Correction Use	1
Flow User Cal	1
Errors	
Number of Samples	411

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	7:44:49 AM	Time/date	TOTAL [mg/m3]	Alarms	Errors
60	0.021	0.022	0.023	0.026	7:45:49 AM	10/6/2011 7:45	0.027		
120	0.016	0.016	0.016	0.019	7:46:49 AM	10/6/2011 7:46	0.02		
180	0.018	0.018	0.019	0.022	7:47:49 AM	10/6/2011 7:47	0.024		
240	0.019	0.02	0.02	0.022	7:48:49 AM	10/6/2011 7:48	0.022		
300	0.036	0.037	0.038	0.039	7:49:49 AM	10/6/2011 7:49	0.04		
360	0.025	0.025	0.026	0.028	7:50:49 AM	10/6/2011 7:50	0.029		
420	0.013	0.013	0.014	0.014	7:51:49 AM	10/6/2011 7:51	0.014		
480	0.012	0.012	0.013	0.013	7:52:49 AM	10/6/2011 7:52	0.013		
540	0.012	0.012	0.012	0.013	7:53:49 AM	10/6/2011 7:53	0.013		
600	0.016	0.016	0.017	0.018	7:54:49 AM	10/6/2011 7:54	0.018		
660	0.013	0.013	0.014	0.014	7:55:49 AM	10/6/2011 7:55	0.014		
720	0.013	0.013	0.013	0.015	7:56:49 AM	10/6/2011 7:56	0.015		
780	0.012	0.013	0.013	0.013	7:57:49 AM	10/6/2011 7:57	0.013		
840	0.014	0.015	0.015	0.015	7:58:49 AM	10/6/2011 7:58	0.016		
900	0.014	0.015	0.015	0.016	7:59:49 AM	10/6/2011 7:59	0.016		
960	0.015	0.015	0.016	0.016	8:00:49 AM	10/6/2011 8:00	0.016		
1020	0.012	0.012	0.013	0.013	8:01:49 AM	10/6/2011 8:01	0.013		
1080	0.013	0.013	0.013	0.014	8:02:49 AM	10/6/2011 8:02	0.014		
1140	0.013	0.014	0.014	0.014	8:03:49 AM	10/6/2011 8:03	0.014		
1200	0.013	0.014	0.014	0.014	8:04:49 AM	10/6/2011 8:04	0.014		
1260	0.012	0.012	0.012	0.012	8:05:49 AM	10/6/2011 8:05	0.013		
1320	0.012	0.012	0.013	0.013	8:06:49 AM	10/6/2011 8:06	0.013		
1380	0.014	0.014	0.014	0.014	8:07:49 AM	10/6/2011 8:07	0.015		
1440	0.012	0.012	0.012	0.013	8:08:49 AM	10/6/2011 8:08	0.013		
1500	0.017	0.017	0.017	0.018	8:09:49 AM	10/6/2011 8:09	0.018		
1560	0.014	0.014	0.014	0.015	8:10:49 AM	10/6/2011 8:10	0.015		
1620	0.013	0.013	0.014	0.014	8:11:49 AM	10/6/2011 8:11	0.014		
1680	0.015	0.015	0.015	0.016	8:12:49 AM	10/6/2011 8:12	0.016		
1740	0.015	0.015	0.015	0.016	8:13:49 AM	10/6/2011 8:13	0.016		
1800	0.019	0.019	0.019	0.02	8:14:49 AM	10/6/2011 8:14	0.02		
1860	0.016	0.016	0.017	0.017	8:15:49 AM	10/6/2011 8:15	0.017		
1920	0.014	0.014	0.014	0.015	8:16:49 AM	10/6/2011 8:16	0.015		

1980	0.014	0.014	0.014	0.015	8:17:49 AM	10/6/2011 8:17	0.015
2040	0.013	0.013	0.013	0.014	8:18:49 AM	10/6/2011 8:18	0.014
2100	0.01	0.01	0.011	0.011	8:19:49 AM	10/6/2011 8:19	0.011
2160	0.01	0.01	0.01	0.011	8:20:49 AM	10/6/2011 8:20	0.011
2220	0.009	0.009	0.009	0.009	8:21:49 AM	10/6/2011 8:21	0.009
2280	0.009	0.01	0.01	0.01	8:22:49 AM	10/6/2011 8:22	0.01
2340	0.009	0.01	0.01	0.01	8:23:49 AM	10/6/2011 8:23	0.01
2400	0.01	0.01	0.01	0.011	8:24:49 AM	10/6/2011 8:24	0.011
2460	0.011	0.011	0.011	0.012	8:25:49 AM	10/6/2011 8:25	0.012
2520	0.011	0.011	0.012	0.012	8:26:49 AM	10/6/2011 8:26	0.012
2580	0.011	0.011	0.011	0.012	8:27:49 AM	10/6/2011 8:27	0.012
2640	0.012	0.012	0.012	0.012	8:28:49 AM	10/6/2011 8:28	0.012
2700	0.008	0.008	0.009	0.009	8:29:49 AM	10/6/2011 8:29	0.009
2760	0.008	0.008	0.008	0.008	8:30:49 AM	10/6/2011 8:30	0.008
2820	0.008	0.008	0.008	0.008	8:31:49 AM	10/6/2011 8:31	0.008
2880	0.01	0.01	0.01	0.01	8:32:49 AM	10/6/2011 8:32	0.01
2940	0.012	0.012	0.012	0.013	8:33:49 AM	10/6/2011 8:33	0.014
3000	0.01	0.01	0.011	0.011	8:34:49 AM	10/6/2011 8:34	0.011
3060	0.012	0.013	0.013	0.015	8:35:49 AM	10/6/2011 8:35	0.015
3120	0.011	0.011	0.012	0.013	8:36:49 AM	10/6/2011 8:36	0.013
3180	0.016	0.016	0.017	0.019	8:37:49 AM	10/6/2011 8:37	0.019
3240	0.014	0.014	0.015	0.016	8:38:49 AM	10/6/2011 8:38	0.016
3300	0.02	0.021	0.021	0.022	8:39:49 AM	10/6/2011 8:39	0.022
3360	0.022	0.022	0.023	0.024	8:40:49 AM	10/6/2011 8:40	0.024
3420	0.019	0.019	0.02	0.02	8:41:49 AM	10/6/2011 8:41	0.021
3480	0.018	0.018	0.019	0.02	8:42:49 AM	10/6/2011 8:42	0.02
3540	0.015	0.015	0.015	0.016	8:43:49 AM	10/6/2011 8:43	0.016
3600	0.014	0.015	0.015	0.015	8:44:49 AM	10/6/2011 8:44	0.015
3660	0.018	0.018	0.019	0.02	8:45:49 AM	10/6/2011 8:45	0.021
3720	0.017	0.017	0.017	0.019	8:46:49 AM	10/6/2011 8:46	0.019
3780	0.02	0.021	0.021	0.022	8:47:49 AM	10/6/2011 8:47	0.023
3840	0.018	0.018	0.018	0.019	8:48:49 AM	10/6/2011 8:48	0.019
3900	0.037	0.037	0.038	0.038	8:49:49 AM	10/6/2011 8:49	0.038
3960	0.025	0.025	0.025	0.026	8:50:49 AM	10/6/2011 8:50	0.026
4020	0.035	0.035	0.036	0.038	8:51:49 AM	10/6/2011 8:51	0.038
4080	0.027	0.027	0.028	0.029	8:52:49 AM	10/6/2011 8:52	0.03
4140	0.019	0.02	0.02	0.021	8:53:49 AM	10/6/2011 8:53	0.022
4200	0.025	0.026	0.027	0.028	8:54:49 AM	10/6/2011 8:54	0.028
4260	0.022	0.022	0.023	0.024	8:55:49 AM	10/6/2011 8:55	0.024
4320	0.024	0.024	0.025	0.026	8:56:49 AM	10/6/2011 8:56	0.026
4380	0.022	0.022	0.023	0.024	8:57:49 AM	10/6/2011 8:57	0.024
4440	0.019	0.019	0.019	0.02	8:58:49 AM	10/6/2011 8:58	0.021
4500	0.014	0.014	0.015	0.016	8:59:49 AM	10/6/2011 8:59	0.016
4560	0.021	0.021	0.022	0.023	9:00:49 AM	10/6/2011 9:00	0.023
4620	0.02	0.02	0.021	0.022	9:01:49 AM	10/6/2011 9:01	0.022
4680	0.02	0.021	0.021	0.022	9:02:49 AM	10/6/2011 9:02	0.022
4740	0.025	0.026	0.027	0.028	9:03:49 AM	10/6/2011 9:03	0.029
4800	0.028	0.028	0.029	0.031	9:04:49 AM	10/6/2011 9:04	0.031
4860	0.034	0.034	0.035	0.036	9:05:49 AM	10/6/2011 9:05	0.037
4920	0.021	0.021	0.021	0.022	9:06:49 AM	10/6/2011 9:06	0.023
4980	0.01	0.01	0.01	0.01	9:07:49 AM	10/6/2011 9:07	0.01
5040	0.018	0.019	0.019	0.02	9:08:49 AM	10/6/2011 9:08	0.02
5100	0.03	0.03	0.03	0.031	9:09:49 AM	10/6/2011 9:09	0.031
5160	0.021	0.022	0.023	0.024	9:10:49 AM	10/6/2011 9:10	0.024
5220	0.014	0.014	0.014	0.014	9:11:49 AM	10/6/2011 9:11	0.014
5280	0.018	0.018	0.018	0.019	9:12:49 AM	10/6/2011 9:12	0.019
5340	0.017	0.017	0.017	0.018	9:13:49 AM	10/6/2011 9:13	0.018
5400	0.015	0.015	0.016	0.016	9:14:49 AM	10/6/2011 9:14	0.016
5460	0.017	0.018	0.018	0.019	9:15:49 AM	10/6/2011 9:15	0.019
5520	0.015	0.015	0.015	0.016	9:16:49 AM	10/6/2011 9:16	0.016
5580	0.014	0.014	0.014	0.015	9:17:49 AM	10/6/2011 9:17	0.015
5640	0.02	0.021	0.021	0.022	9:18:49 AM	10/6/2011 9:18	0.022
5700	0.028	0.028	0.029	0.03	9:19:49 AM	10/6/2011 9:19	0.031
5760	0.021	0.021	0.022	0.023	9:20:49 AM	10/6/2011 9:20	0.023
5820	0.019	0.02	0.02	0.02	9:21:49 AM	10/6/2011 9:21	0.021
5880	0.016	0.017	0.017	0.017	9:22:49 AM	10/6/2011 9:22	0.018
5940	0.019	0.019	0.02	0.021	9:23:49 AM	10/6/2011 9:23	0.021
6000	0.018	0.019	0.019	0.02	9:24:49 AM	10/6/2011 9:24	0.02
6060	0.017	0.017	0.017	0.018	9:25:49 AM	10/6/2011 9:25	0.018

6120	0.018	0.019	0.019	0.02	9:26:49 AM	10/6/2011 9:26	0.02
6180	0.018	0.018	0.018	0.019	9:27:49 AM	10/6/2011 9:27	0.019
6240	0.016	0.016	0.016	0.017	9:28:49 AM	10/6/2011 9:28	0.017
6300	0.014	0.014	0.015	0.015	9:29:49 AM	10/6/2011 9:29	0.015
6360	0.014	0.014	0.014	0.015	9:30:49 AM	10/6/2011 9:30	0.015
6420	0.015	0.015	0.016	0.016	9:31:49 AM	10/6/2011 9:31	0.016
6480	0.011	0.011	0.011	0.011	9:32:49 AM	10/6/2011 9:32	0.011
6540	0.017	0.017	0.017	0.018	9:33:49 AM	10/6/2011 9:33	0.018
6600	0.018	0.018	0.019	0.019	9:34:49 AM	10/6/2011 9:34	0.02
6660	0.02	0.02	0.021	0.021	9:35:49 AM	10/6/2011 9:35	0.021
6720	0.013	0.013	0.013	0.014	9:36:49 AM	10/6/2011 9:36	0.014
6780	0.012	0.012	0.012	0.013	9:37:49 AM	10/6/2011 9:37	0.013
6840	0.013	0.013	0.013	0.013	9:38:49 AM	10/6/2011 9:38	0.014
6900	0.016	0.017	0.017	0.017	9:39:49 AM	10/6/2011 9:39	0.017
6960	0.013	0.014	0.014	0.014	9:40:49 AM	10/6/2011 9:40	0.014
7020	0.015	0.015	0.016	0.016	9:41:49 AM	10/6/2011 9:41	0.016
7080	0.014	0.014	0.014	0.014	9:42:49 AM	10/6/2011 9:42	0.014
7140	0.013	0.013	0.013	0.014	9:43:49 AM	10/6/2011 9:43	0.014
7200	0.013	0.013	0.013	0.014	9:44:49 AM	10/6/2011 9:44	0.015
7260	0.015	0.015	0.016	0.017	9:45:49 AM	10/6/2011 9:45	0.018
7320	0.019	0.019	0.019	0.02	9:46:49 AM	10/6/2011 9:46	0.02
7380	0.014	0.014	0.014	0.015	9:47:49 AM	10/6/2011 9:47	0.015
7440	0.013	0.013	0.013	0.014	9:48:49 AM	10/6/2011 9:48	0.014
7500	0.013	0.013	0.013	0.014	9:49:49 AM	10/6/2011 9:49	0.014
7560	0.013	0.013	0.013	0.014	9:50:49 AM	10/6/2011 9:50	0.014
7620	0.014	0.014	0.014	0.015	9:51:49 AM	10/6/2011 9:51	0.015
7680	0.013	0.013	0.013	0.014	9:52:49 AM	10/6/2011 9:52	0.014
7740	0.013	0.013	0.014	0.015	9:53:49 AM	10/6/2011 9:53	0.015
7800	0.015	0.015	0.016	0.016	9:54:49 AM	10/6/2011 9:54	0.016
7860	0.014	0.015	0.015	0.016	9:55:49 AM	10/6/2011 9:55	0.016
7920	0.015	0.015	0.016	0.017	9:56:49 AM	10/6/2011 9:56	0.017
7980	0.019	0.019	0.02	0.021	9:57:49 AM	10/6/2011 9:57	0.021
8040	0.02	0.02	0.021	0.022	9:58:49 AM	10/6/2011 9:58	0.022
8100	0.019	0.019	0.02	0.021	9:59:49 AM	10/6/2011 9:59	0.021
8160	0.02	0.021	0.021	0.023	10:00:49 AM	10/6/2011 10:00	0.023
8220	0.022	0.022	0.023	0.024	10:01:49 AM	10/6/2011 10:01	0.024
8280	0.023	0.024	0.024	0.025	10:02:49 AM	10/6/2011 10:02	0.026
8340	0.024	0.025	0.025	0.026	10:03:49 AM	10/6/2011 10:03	0.026
8400	0.026	0.026	0.027	0.028	10:04:49 AM	10/6/2011 10:04	0.028
8460	0.022	0.023	0.023	0.024	10:05:49 AM	10/6/2011 10:05	0.025
8520	0.016	0.017	0.017	0.018	10:06:49 AM	10/6/2011 10:06	0.018
8580	0.02	0.021	0.022	0.023	10:07:49 AM	10/6/2011 10:07	0.023
8640	0.021	0.021	0.022	0.023	10:08:49 AM	10/6/2011 10:08	0.023
8700	0.022	0.023	0.023	0.025	10:09:49 AM	10/6/2011 10:09	0.025
8760	0.017	0.018	0.018	0.019	10:10:49 AM	10/6/2011 10:10	0.019
8820	0.016	0.016	0.017	0.018	10:11:49 AM	10/6/2011 10:11	0.018
8880	0.018	0.018	0.018	0.019	10:12:49 AM	10/6/2011 10:12	0.019
8940	0.019	0.019	0.02	0.02	10:13:49 AM	10/6/2011 10:13	0.021
9000	0.022	0.022	0.022	0.023	10:14:49 AM	10/6/2011 10:14	0.023
9060	0.021	0.022	0.022	0.024	10:15:49 AM	10/6/2011 10:15	0.024
9120	0.024	0.024	0.025	0.027	10:16:49 AM	10/6/2011 10:16	0.028
9180	0.022	0.022	0.022	0.024	10:17:49 AM	10/6/2011 10:17	0.024
9240	0.022	0.022	0.023	0.026	10:18:49 AM	10/6/2011 10:18	0.026
9300	0.024	0.025	0.025	0.028	10:19:49 AM	10/6/2011 10:19	0.029
9360	0.028	0.028	0.029	0.031	10:20:49 AM	10/6/2011 10:20	0.032
9420	0.03	0.03	0.032	0.035	10:21:49 AM	10/6/2011 10:21	0.037
9480	0.024	0.025	0.025	0.028	10:22:49 AM	10/6/2011 10:22	0.029
9540	0.022	0.022	0.023	0.024	10:23:49 AM	10/6/2011 10:23	0.024
9600	0.024	0.024	0.024	0.026	10:24:49 AM	10/6/2011 10:24	0.026
9660	0.025	0.025	0.026	0.027	10:25:49 AM	10/6/2011 10:25	0.028
9720	0.024	0.024	0.025	0.026	10:26:49 AM	10/6/2011 10:26	0.026
9780	0.026	0.026	0.027	0.029	10:27:49 AM	10/6/2011 10:27	0.03
9840	0.022	0.022	0.023	0.024	10:28:49 AM	10/6/2011 10:28	0.025
9900	0.021	0.021	0.021	0.022	10:29:49 AM	10/6/2011 10:29	0.022
9960	0.021	0.021	0.021	0.023	10:30:49 AM	10/6/2011 10:30	0.024
10020	0.02	0.02	0.021	0.022	10:31:49 AM	10/6/2011 10:31	0.022
10080	0.023	0.023	0.023	0.024	10:32:49 AM	10/6/2011 10:32	0.025
10140	0.025	0.026	0.026	0.027	10:33:49 AM	10/6/2011 10:33	0.028
10200	0.027	0.027	0.028	0.029	10:34:49 AM	10/6/2011 10:34	0.03

10260	0.024	0.025	0.025	0.026	10:35:49 AM	10/6/2011 10:35	0.026
10320	0.025	0.026	0.026	0.027	10:36:49 AM	10/6/2011 10:36	0.028
10380	0.043	0.043	0.044	0.045	10:37:49 AM	10/6/2011 10:37	0.045
10440	0.037	0.038	0.038	0.039	10:38:49 AM	10/6/2011 10:38	0.039
10500	0.036	0.036	0.037	0.039	10:39:49 AM	10/6/2011 10:39	0.039
10560	0.028	0.028	0.028	0.03	10:40:49 AM	10/6/2011 10:40	0.03
10620	0.033	0.033	0.034	0.036	10:41:49 AM	10/6/2011 10:41	0.036
10680	0.03	0.031	0.031	0.032	10:42:49 AM	10/6/2011 10:42	0.033
10740	0.024	0.025	0.025	0.027	10:43:49 AM	10/6/2011 10:43	0.027
10800	0.023	0.023	0.023	0.025	10:44:49 AM	10/6/2011 10:44	0.025
10860	0.029	0.029	0.03	0.031	10:45:49 AM	10/6/2011 10:45	0.031
10920	0.034	0.035	0.035	0.037	10:46:49 AM	10/6/2011 10:46	0.037
10980	0.027	0.027	0.028	0.029	10:47:49 AM	10/6/2011 10:47	0.029
11040	0.025	0.026	0.026	0.027	10:48:49 AM	10/6/2011 10:48	0.027
11100	0.025	0.025	0.026	0.027	10:49:49 AM	10/6/2011 10:49	0.027
11160	0.028	0.028	0.028	0.029	10:50:49 AM	10/6/2011 10:50	0.029
11220	0.028	0.029	0.029	0.03	10:51:49 AM	10/6/2011 10:51	0.031
11280	0.037	0.037	0.038	0.04	10:52:49 AM	10/6/2011 10:52	0.041
11340	0.03	0.031	0.031	0.033	10:53:49 AM	10/6/2011 10:53	0.033
11400	0.025	0.025	0.025	0.027	10:54:49 AM	10/6/2011 10:54	0.027
11460	0.025	0.025	0.026	0.027	10:55:49 AM	10/6/2011 10:55	0.028
11520	0.038	0.04	0.042	0.046	10:56:49 AM	10/6/2011 10:56	0.046
11580	0.033	0.034	0.036	0.039	10:57:49 AM	10/6/2011 10:57	0.039
11640	0.028	0.029	0.03	0.033	10:58:49 AM	10/6/2011 10:58	0.034
11700	0.027	0.028	0.029	0.031	10:59:49 AM	10/6/2011 10:59	0.031
11760	0.029	0.03	0.031	0.034	11:00:49 AM	10/6/2011 11:00	0.034
11820	0.025	0.025	0.026	0.028	11:01:49 AM	10/6/2011 11:01	0.028
11880	0.021	0.022	0.023	0.024	11:02:49 AM	10/6/2011 11:02	0.024
11940	0.021	0.021	0.022	0.023	11:03:49 AM	10/6/2011 11:03	0.023
12000	0.02	0.02	0.021	0.021	11:04:49 AM	10/6/2011 11:04	0.022
12060	0.026	0.026	0.026	0.027	11:05:49 AM	10/6/2011 11:05	0.027
12120	0.034	0.035	0.036	0.037	11:06:49 AM	10/6/2011 11:06	0.037
12180	0.015	0.015	0.016	0.016	11:07:49 AM	10/6/2011 11:07	0.017
12240	0.021	0.021	0.021	0.022	11:08:49 AM	10/6/2011 11:08	0.022
12300	0.022	0.022	0.023	0.024	11:09:49 AM	10/6/2011 11:09	0.024
12360	0.017	0.017	0.018	0.018	11:10:49 AM	10/6/2011 11:10	0.018
12420	0.017	0.017	0.017	0.017	11:11:49 AM	10/6/2011 11:11	0.017
12480	0.02	0.02	0.021	0.021	11:12:49 AM	10/6/2011 11:12	0.021
12540	0.014	0.014	0.014	0.015	11:13:49 AM	10/6/2011 11:13	0.015
12600	0.017	0.017	0.017	0.018	11:14:49 AM	10/6/2011 11:14	0.019
12660	0.02	0.02	0.021	0.022	11:15:49 AM	10/6/2011 11:15	0.022
12720	0.016	0.016	0.017	0.017	11:16:49 AM	10/6/2011 11:16	0.017
12780	0.013	0.013	0.013	0.014	11:17:49 AM	10/6/2011 11:17	0.014
12840	0.012	0.013	0.013	0.014	11:18:49 AM	10/6/2011 11:18	0.015
12900	0.011	0.011	0.011	0.012	11:19:49 AM	10/6/2011 11:19	0.013
12960	0.012	0.012	0.013	0.014	11:20:49 AM	10/6/2011 11:20	0.014
13020	0.014	0.015	0.015	0.016	11:21:49 AM	10/6/2011 11:21	0.016
13080	0.012	0.013	0.013	0.014	11:22:49 AM	10/6/2011 11:22	0.014
13140	0.016	0.016	0.016	0.017	11:23:49 AM	10/6/2011 11:23	0.017
13200	0.017	0.017	0.018	0.018	11:24:49 AM	10/6/2011 11:24	0.018
13260	0.015	0.015	0.015	0.017	11:25:49 AM	10/6/2011 11:25	0.017
13320	0.014	0.014	0.014	0.015	11:26:49 AM	10/6/2011 11:26	0.015
13380	0.015	0.015	0.015	0.017	11:27:49 AM	10/6/2011 11:27	0.017
13440	0.017	0.017	0.017	0.018	11:28:49 AM	10/6/2011 11:28	0.02
13500	0.014	0.014	0.015	0.015	11:29:49 AM	10/6/2011 11:29	0.015
13560	0.016	0.017	0.017	0.018	11:30:49 AM	10/6/2011 11:30	0.018
13620	0.018	0.018	0.019	0.02	11:31:49 AM	10/6/2011 11:31	0.02
13680	0.019	0.02	0.02	0.022	11:32:49 AM	10/6/2011 11:32	0.022
13740	0.019	0.02	0.02	0.021	11:33:49 AM	10/6/2011 11:33	0.021
13800	0.023	0.023	0.024	0.026	11:34:49 AM	10/6/2011 11:34	0.026
13860	0.023	0.023	0.024	0.026	11:35:49 AM	10/6/2011 11:35	0.027
13920	0.021	0.022	0.023	0.026	11:36:49 AM	10/6/2011 11:36	0.027
13980	0.059	0.062	0.067	0.075	11:37:49 AM	10/6/2011 11:37	0.076
14040	0.039	0.041	0.044	0.049	11:38:49 AM	10/6/2011 11:38	0.049
14100	0.02	0.021	0.021	0.024	11:39:49 AM	10/6/2011 11:39	0.024
14160	0.018	0.018	0.019	0.021	11:40:49 AM	10/6/2011 11:40	0.021
14220	0.019	0.02	0.021	0.023	11:41:49 AM	10/6/2011 11:41	0.023
14280	0.04	0.042	0.044	0.05	11:42:49 AM	10/6/2011 11:42	0.052
14340	0.03	0.031	0.032	0.036	11:43:49 AM	10/6/2011 11:43	0.036

14400	0.016	0.017	0.018	0.02	11:44:49 AM	10/6/2011 11:44	0.02
14460	0.014	0.015	0.016	0.018	11:45:49 AM	10/6/2011 11:45	0.018
14520	0.019	0.019	0.02	0.022	11:46:49 AM	10/6/2011 11:46	0.023
14580	0.018	0.019	0.019	0.02	11:47:49 AM	10/6/2011 11:47	0.02
14640	0.014	0.015	0.015	0.017	11:48:49 AM	10/6/2011 11:48	0.017
14700	0.012	0.012	0.012	0.014	11:49:49 AM	10/6/2011 11:49	0.014
14760	0.01	0.01	0.01	0.012	11:50:49 AM	10/6/2011 11:50	0.013
14820	0.021	0.022	0.023	0.025	11:51:49 AM	10/6/2011 11:51	0.026
14880	0.011	0.011	0.011	0.014	11:52:49 AM	10/6/2011 11:52	0.014
14940	0.018	0.019	0.02	0.022	11:53:49 AM	10/6/2011 11:53	0.023
15000	0.016	0.016	0.017	0.019	11:54:49 AM	10/6/2011 11:54	0.019
15060	0.016	0.016	0.017	0.019	11:55:49 AM	10/6/2011 11:55	0.019
15120	0.018	0.019	0.021	0.024	11:56:49 AM	10/6/2011 11:56	0.024
15180	0.023	0.024	0.025	0.027	11:57:49 AM	10/6/2011 11:57	0.027
15240	0.016	0.016	0.017	0.018	11:58:49 AM	10/6/2011 11:58	0.018
15300	0.013	0.013	0.014	0.015	11:59:49 AM	10/6/2011 11:59	0.015
15360	0.013	0.013	0.013	0.014	12:00:49 PM	10/6/2011 12:00	0.014
15420	0.014	0.015	0.015	0.016	12:01:49 PM	10/6/2011 12:01	0.016
15480	0.031	0.032	0.035	0.039	12:02:49 PM	10/6/2011 12:02	0.039
15540	0.018	0.019	0.02	0.022	12:03:49 PM	10/6/2011 12:03	0.022
15600	0.012	0.013	0.013	0.016	12:04:49 PM	10/6/2011 12:04	0.016
15660	0.009	0.009	0.01	0.011	12:05:49 PM	10/6/2011 12:05	0.011
15720	0.007	0.007	0.007	0.009	12:06:49 PM	10/6/2011 12:06	0.009
15780	0.011	0.011	0.012	0.013	12:07:49 PM	10/6/2011 12:07	0.013
15840	0.016	0.016	0.016	0.018	12:08:49 PM	10/6/2011 12:08	0.019
15900	0.013	0.014	0.014	0.015	12:09:49 PM	10/6/2011 12:09	0.015
15960	0.007	0.007	0.008	0.009	12:10:49 PM	10/6/2011 12:10	0.009
16020	0.004	0.004	0.004	0.005	12:11:49 PM	10/6/2011 12:11	0.006
16080	0.007	0.007	0.008	0.009	12:12:49 PM	10/6/2011 12:12	0.009
16140	0.004	0.004	0.004	0.005	12:13:49 PM	10/6/2011 12:13	0.005
16200	0.008	0.008	0.009	0.01	12:14:49 PM	10/6/2011 12:14	0.011
16260	0.006	0.007	0.007	0.008	12:15:49 PM	10/6/2011 12:15	0.008
16320	0.004	0.004	0.004	0.005	12:16:49 PM	10/6/2011 12:16	0.005
16380	0.005	0.005	0.006	0.006	12:17:49 PM	10/6/2011 12:17	0.006
16440	0.005	0.005	0.005	0.006	12:18:49 PM	10/6/2011 12:18	0.006
16500	0.007	0.007	0.007	0.009	12:19:49 PM	10/6/2011 12:19	0.009
16560	0.009	0.009	0.01	0.011	12:20:49 PM	10/6/2011 12:20	0.011
16620	0.007	0.007	0.008	0.008	12:21:49 PM	10/6/2011 12:21	0.008
16680	0.006	0.006	0.007	0.007	12:22:49 PM	10/6/2011 12:22	0.007
16740	0.009	0.009	0.009	0.011	12:23:49 PM	10/6/2011 12:23	0.012
16800	0.007	0.007	0.008	0.01	12:24:49 PM	10/6/2011 12:24	0.011
16860	0.006	0.006	0.006	0.008	12:25:49 PM	10/6/2011 12:25	0.008
16920	0.007	0.007	0.007	0.009	12:26:49 PM	10/6/2011 12:26	0.01
16980	0.011	0.011	0.012	0.015	12:27:49 PM	10/6/2011 12:27	0.016
17040	0.01	0.011	0.011	0.015	12:28:49 PM	10/6/2011 12:28	0.017
17100	0.004	0.004	0.004	0.006	12:29:49 PM	10/6/2011 12:29	0.007
17160	0.004	0.004	0.005	0.005	12:30:49 PM	10/6/2011 12:30	0.005
17220	0.005	0.005	0.005	0.006	12:31:49 PM	10/6/2011 12:31	0.007
17280	0.01	0.01	0.011	0.015	12:32:49 PM	10/6/2011 12:32	0.017
17340	0.004	0.004	0.005	0.006	12:33:49 PM	10/6/2011 12:33	0.007
17400	0.002	0.002	0.003	0.003	12:34:49 PM	10/6/2011 12:34	0.004
17460	0.004	0.004	0.004	0.005	12:35:49 PM	10/6/2011 12:35	0.006
17520	0.013	0.013	0.014	0.019	12:36:49 PM	10/6/2011 12:36	0.025
17580	0.004	0.004	0.004	0.005	12:37:49 PM	10/6/2011 12:37	0.005
17640	0.007	0.008	0.008	0.011	12:38:49 PM	10/6/2011 12:38	0.012
17700	0.008	0.009	0.01	0.013	12:39:49 PM	10/6/2011 12:39	0.013
17760	0.008	0.008	0.009	0.011	12:40:49 PM	10/6/2011 12:40	0.012
17820	0.012	0.012	0.013	0.017	12:41:49 PM	10/6/2011 12:41	0.019
17880	0.01	0.01	0.01	0.013	12:42:49 PM	10/6/2011 12:42	0.016
17940	0.019	0.019	0.02	0.027	12:43:49 PM	10/6/2011 12:43	0.035
18000	0.015	0.015	0.016	0.021	12:44:49 PM	10/6/2011 12:44	0.026
18060	0.01	0.01	0.011	0.014	12:45:49 PM	10/6/2011 12:45	0.016
18120	0.014	0.014	0.016	0.02	12:46:49 PM	10/6/2011 12:46	0.024
18180	0.006	0.006	0.007	0.008	12:47:49 PM	10/6/2011 12:47	0.009
18240	0.006	0.006	0.006	0.007	12:48:49 PM	10/6/2011 12:48	0.009
18300	0.006	0.006	0.007	0.009	12:49:49 PM	10/6/2011 12:49	0.009
18360	0.003	0.003	0.003	0.004	12:50:49 PM	10/6/2011 12:50	0.005
18420	0.004	0.004	0.004	0.005	12:51:49 PM	10/6/2011 12:51	0.005
18480	0.012	0.012	0.013	0.015	12:52:49 PM	10/6/2011 12:52	0.016

18540	0.007	0.007	0.008	0.009	12:53:49 PM	10/6/2011 12:53	0.011
18600	0.005	0.005	0.005	0.007	12:54:49 PM	10/6/2011 12:54	0.007
18660	0.005	0.005	0.006	0.006	12:55:49 PM	10/6/2011 12:55	0.007
18720	0.009	0.009	0.009	0.012	12:56:49 PM	10/6/2011 12:56	0.013
18780	0.004	0.004	0.005	0.006	12:57:49 PM	10/6/2011 12:57	0.006
18840	0.002	0.002	0.002	0.002	12:58:49 PM	10/6/2011 12:58	0.002
18900	0.002	0.002	0.002	0.002	12:59:49 PM	10/6/2011 12:59	0.002
18960	0.005	0.005	0.005	0.007	1:00:49 PM	10/6/2011 13:00	0.008
19020	0.007	0.007	0.007	0.009	1:01:49 PM	10/6/2011 13:01	0.01
19080	0.01	0.01	0.01	0.014	1:02:49 PM	10/6/2011 13:02	0.016
19140	0.007	0.007	0.007	0.009	1:03:49 PM	10/6/2011 13:03	0.01
19200	0.011	0.011	0.011	0.015	1:04:49 PM	10/6/2011 13:04	0.019
19260	0.005	0.005	0.006	0.007	1:05:49 PM	10/6/2011 13:05	0.008
19320	0.005	0.006	0.006	0.008	1:06:49 PM	10/6/2011 13:06	0.011
19380	0.007	0.007	0.007	0.01	1:07:49 PM	10/6/2011 13:07	0.011
19440	0.002	0.002	0.003	0.003	1:08:49 PM	10/6/2011 13:08	0.004
19500	0.005	0.005	0.006	0.007	1:09:49 PM	10/6/2011 13:09	0.009
19560	0.005	0.005	0.005	0.007	1:10:49 PM	10/6/2011 13:10	0.008
19620	0.003	0.003	0.003	0.004	1:11:49 PM	10/6/2011 13:11	0.004
19680	0.003	0.003	0.003	0.004	1:12:49 PM	10/6/2011 13:12	0.005
19740	0.005	0.006	0.006	0.008	1:13:49 PM	10/6/2011 13:13	0.009
19800	0.006	0.006	0.007	0.009	1:14:49 PM	10/6/2011 13:14	0.011
19860	0.006	0.007	0.007	0.009	1:15:49 PM	10/6/2011 13:15	0.01
19920	0.009	0.009	0.009	0.012	1:16:49 PM	10/6/2011 13:16	0.013
19980	0.011	0.012	0.012	0.016	1:17:49 PM	10/6/2011 13:17	0.017
20040	0.004	0.004	0.004	0.005	1:18:49 PM	10/6/2011 13:18	0.005
20100	0.007	0.007	0.008	0.01	1:19:49 PM	10/6/2011 13:19	0.011
20160	0.012	0.012	0.013	0.018	1:20:49 PM	10/6/2011 13:20	0.019
20220	0.024	0.024	0.026	0.03	1:21:49 PM	10/6/2011 13:21	0.032
20280	0.018	0.019	0.019	0.024	1:22:49 PM	10/6/2011 13:22	0.026
20340	0.01	0.01	0.01	0.013	1:23:49 PM	10/6/2011 13:23	0.013
20400	0.015	0.015	0.016	0.018	1:24:49 PM	10/6/2011 13:24	0.019
20460	0.01	0.01	0.011	0.013	1:25:49 PM	10/6/2011 13:25	0.015
20520	0.004	0.004	0.004	0.005	1:26:49 PM	10/6/2011 13:26	0.006
20580	0.001	0.001	0.001	0.001	1:27:49 PM	10/6/2011 13:27	0.002
20640	0.002	0.002	0.002	0.002	1:28:49 PM	10/6/2011 13:28	0.003
20700	0.003	0.003	0.004	0.005	1:29:49 PM	10/6/2011 13:29	0.006
20760	0.02	0.021	0.021	0.026	1:30:49 PM	10/6/2011 13:30	0.029
20820	0.035	0.035	0.036	0.042	1:31:49 PM	10/6/2011 13:31	0.046
20880	0.022	0.022	0.023	0.026	1:32:49 PM	10/6/2011 13:32	0.027
20940	0.015	0.015	0.016	0.018	1:33:49 PM	10/6/2011 13:33	0.019
21000	0.002	0.002	0.002	0.003	1:34:49 PM	10/6/2011 13:34	0.004
21060	0.001	0.001	0.001	0.002	1:35:49 PM	10/6/2011 13:35	0.002
21120	0.001	0.001	0.001	0.001	1:36:49 PM	10/6/2011 13:36	0.002
21180	0.001	0.001	0.001	0.001	1:37:49 PM	10/6/2011 13:37	0.001
21240	0.002	0.002	0.002	0.003	1:38:49 PM	10/6/2011 13:38	0.003
21300	0.005	0.006	0.006	0.008	1:39:49 PM	10/6/2011 13:39	0.008
21360	0.012	0.012	0.012	0.016	1:40:49 PM	10/6/2011 13:40	0.019
21420	0.011	0.012	0.013	0.018	1:41:49 PM	10/6/2011 13:41	0.021
21480	0.007	0.007	0.008	0.01	1:42:49 PM	10/6/2011 13:42	0.012
21540	0.008	0.008	0.009	0.013	1:43:49 PM	10/6/2011 13:43	0.015
21600	0.004	0.005	0.005	0.007	1:44:49 PM	10/6/2011 13:44	0.007
21660	0.008	0.008	0.008	0.011	1:45:49 PM	10/6/2011 13:45	0.012
21720	0.013	0.013	0.014	0.016	1:46:49 PM	10/6/2011 13:46	0.017
21780	0.005	0.005	0.005	0.006	1:47:49 PM	10/6/2011 13:47	0.007
21840	0.015	0.015	0.016	0.019	1:48:49 PM	10/6/2011 13:48	0.021
21900	0.023	0.023	0.024	0.029	1:49:49 PM	10/6/2011 13:49	0.03
21960	0.034	0.035	0.036	0.043	1:50:49 PM	10/6/2011 13:50	0.047
22020	0.034	0.034	0.036	0.045	1:51:49 PM	10/6/2011 13:51	0.05
22080	0.026	0.027	0.028	0.037	1:52:49 PM	10/6/2011 13:52	0.043
22140	0.018	0.019	0.019	0.023	1:53:49 PM	10/6/2011 13:53	0.025
22200	0.013	0.013	0.013	0.018	1:54:49 PM	10/6/2011 13:54	0.02
22260	0.025	0.025	0.026	0.032	1:55:49 PM	10/6/2011 13:55	0.036
22320	0.017	0.017	0.018	0.025	1:56:49 PM	10/6/2011 13:56	0.03
22380	0.018	0.018	0.019	0.025	1:57:49 PM	10/6/2011 13:57	0.03
22440	0.011	0.011	0.012	0.015	1:58:49 PM	10/6/2011 13:58	0.015
22500	0.01	0.01	0.011	0.012	1:59:49 PM	10/6/2011 13:59	0.013
22560	0.014	0.014	0.014	0.016	2:00:49 PM	10/6/2011 14:00	0.016
22620	0.007	0.007	0.007	0.009	2:01:49 PM	10/6/2011 14:01	0.009

22680	0.003	0.004	0.004	0.004	2:02:49 PM	10/6/2011 14:02	0.004
22740	0.004	0.005	0.005	0.007	2:03:49 PM	10/6/2011 14:03	0.008
22800	0.004	0.004	0.004	0.005	2:04:49 PM	10/6/2011 14:04	0.007
22860	0.003	0.003	0.003	0.004	2:05:49 PM	10/6/2011 14:05	0.005
22920	0.002	0.002	0.002	0.004	2:06:49 PM	10/6/2011 14:06	0.004
22980	0.002	0.002	0.003	0.004	2:07:49 PM	10/6/2011 14:07	0.004
23040	0.002	0.002	0.002	0.003	2:08:49 PM	10/6/2011 14:08	0.004
23100	0.007	0.007	0.008	0.01	2:09:49 PM	10/6/2011 14:09	0.012
23160	0.007	0.007	0.007	0.009	2:10:49 PM	10/6/2011 14:10	0.01
23220	0.02	0.02	0.021	0.023	2:11:49 PM	10/6/2011 14:11	0.024
23280	0.008	0.008	0.009	0.01	2:12:49 PM	10/6/2011 14:12	0.012
23340	0.012	0.012	0.012	0.015	2:13:49 PM	10/6/2011 14:13	0.016
23400	0.01	0.01	0.011	0.013	2:14:49 PM	10/6/2011 14:14	0.014
23460	0.014	0.014	0.015	0.017	2:15:49 PM	10/6/2011 14:15	0.02
23520	0.02	0.02	0.021	0.023	2:16:49 PM	10/6/2011 14:16	0.023
23580	0.009	0.009	0.01	0.013	2:17:49 PM	10/6/2011 14:17	0.015
23640	0.01	0.01	0.01	0.012	2:18:49 PM	10/6/2011 14:18	0.015
23700	0.009	0.009	0.009	0.011	2:19:49 PM	10/6/2011 14:19	0.013
23760	0.02	0.021	0.021	0.027	2:20:49 PM	10/6/2011 14:20	0.03
23820	0.025	0.025	0.026	0.033	2:21:49 PM	10/6/2011 14:21	0.039
23880	0.029	0.029	0.031	0.042	2:22:49 PM	10/6/2011 14:22	0.049
23940	0.025	0.025	0.026	0.032	2:23:49 PM	10/6/2011 14:23	0.038
24000	0.012	0.013	0.013	0.017	2:24:49 PM	10/6/2011 14:24	0.019
24060	0.003	0.003	0.004	0.005	2:25:49 PM	10/6/2011 14:25	0.006
24120	0.002	0.003	0.003	0.004	2:26:49 PM	10/6/2011 14:26	0.004
24180	0.017	0.017	0.018	0.023	2:27:49 PM	10/6/2011 14:27	0.026
24240	0.01	0.01	0.011	0.014	2:28:49 PM	10/6/2011 14:28	0.016
24300	0.021	0.021	0.022	0.027	2:29:49 PM	10/6/2011 14:29	0.031
24360	0.01	0.01	0.011	0.013	2:30:49 PM	10/6/2011 14:30	0.015
24420	0.008	0.009	0.009	0.011	2:31:49 PM	10/6/2011 14:31	0.012
24480	0.011	0.011	0.012	0.017	2:32:49 PM	10/6/2011 14:32	0.02
24540	0.032	0.033	0.034	0.042	2:33:49 PM	10/6/2011 14:33	0.048
24600	0.037	0.037	0.039	0.052	2:34:49 PM	10/6/2011 14:34	0.061
24660	0.011	0.011	0.012	0.014	2:35:49 PM	10/6/2011 14:35	0.017

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533112903
Firmware Version	2.8
Calibration Date	7/18/2011
Test Name	MANUAL_005
Test Start Time	7:42:02
Test Start Date	10/6/2011
Test Length [D:H:M]	0:06:52
Test Interval [M:S]	1:00
PM1 Average [mg/m3]	0.019
PM1 Minimum [mg/m3]	0.006
PM1 Maximum [mg/m3]	0.048
PM1 TWA [mg/m3]	0.016
PM2.5 Average [mg/m3]	0.019
PM2.5 Minimum [mg/m3]	0.006
PM2.5 Maximum [mg/m3]	0.049
PM2.5 TWA [mg/m3]	0.016
PM4 Average [mg/m3]	0.02
PM4 Minimum [mg/m3]	0.006
PM4 Maximum [mg/m3]	0.057
PM4 TWA [mg/m3]	0.017
PM10 Average [mg/m3]	0.023
PM10 Minimum [mg/m3]	0.006
PM10 Maximum [mg/m3]	0.068
PM10 TWA [mg/m3]	0.02
TOTAL Average [mg/m3]	0.024
TOTAL Minimum [mg/m3]	0.006
TOTAL Maximum [mg/m3]	0.096
TOTAL TWA [mg/m3]	0.02
Photometric User Cal	1
Size Correction User Cal	1
Flow User Cal	1
Errors	
Number of Samples	412

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	7:42:02	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.036	0.037	0.039	0.066	7:43:02	10/6/2011 7:43	0.096		
120	0.039	0.04	0.041	0.05	7:44:02	10/6/2011 7:44	0.058		
180	0.022	0.022	0.023	0.024	7:45:02	10/6/2011 7:45	0.024		
240	0.021	0.021	0.022	0.024	7:46:02	10/6/2011 7:46	0.025		
300	0.022	0.023	0.024	0.029	7:47:02	10/6/2011 7:47	0.029		
360	0.016	0.016	0.017	0.02	7:48:02	10/6/2011 7:48	0.02		
420	0.016	0.016	0.017	0.019	7:49:02	10/6/2011 7:49	0.019		
480	0.02	0.021	0.021	0.023	7:50:02	10/6/2011 7:50	0.025		
540	0.019	0.019	0.02	0.022	7:51:02	10/6/2011 7:51	0.023		
600	0.015	0.016	0.017	0.019	7:52:02	10/6/2011 7:52	0.02		
660	0.015	0.016	0.017	0.019	7:53:02	10/6/2011 7:53	0.02		
720	0.024	0.024	0.025	0.027	7:54:02	10/6/2011 7:54	0.027		
780	0.019	0.02	0.02	0.022	7:55:02	10/6/2011 7:55	0.023		
840	0.02	0.021	0.021	0.024	7:56:02	10/6/2011 7:56	0.025		
900	0.016	0.017	0.018	0.021	7:57:02	10/6/2011 7:57	0.022		
960	0.015	0.015	0.016	0.018	7:58:02	10/6/2011 7:58	0.018		
1020	0.012	0.012	0.013	0.015	7:59:02	10/6/2011 7:59	0.015		
1080	0.023	0.023	0.024	0.025	8:00:02	10/6/2011 8:00	0.025		
1140	0.019	0.02	0.02	0.022	8:01:02	10/6/2011 8:01	0.022		
1200	0.014	0.014	0.015	0.017	8:02:02	10/6/2011 8:02	0.017		
1260	0.02	0.02	0.021	0.024	8:03:02	10/6/2011 8:03	0.024		
1320	0.019	0.019	0.02	0.022	8:04:02	10/6/2011 8:04	0.022		
1380	0.016	0.016	0.017	0.019	8:05:02	10/6/2011 8:05	0.019		
1440	0.017	0.017	0.018	0.02	8:06:02	10/6/2011 8:06	0.02		
1500	0.02	0.02	0.021	0.022	8:07:02	10/6/2011 8:07	0.022		
1560	0.014	0.014	0.015	0.017	8:08:02	10/6/2011 8:08	0.018		
1620	0.023	0.024	0.024	0.025	8:09:02	10/6/2011 8:09	0.026		
1680	0.021	0.021	0.022	0.023	8:10:02	10/6/2011 8:10	0.024		
1740	0.018	0.018	0.018	0.02	8:11:02	10/6/2011 8:11	0.02		
1800	0.016	0.017	0.017	0.019	8:12:02	10/6/2011 8:12	0.019		
1860	0.018	0.018	0.019	0.021	8:13:02	10/6/2011 8:13	0.021		
1920	0.021	0.022	0.022	0.023	8:14:02	10/6/2011 8:14	0.024		

1980	0.02	0.02	0.02	0.022	8:15:02	10/6/2011 8:15	0.022
2040	0.016	0.017	0.017	0.019	8:16:02	10/6/2011 8:16	0.02
2100	0.018	0.018	0.019	0.02	8:17:02	10/6/2011 8:17	0.02
2160	0.013	0.013	0.014	0.016	8:18:02	10/6/2011 8:18	0.016
2220	0.011	0.011	0.012	0.014	8:19:02	10/6/2011 8:19	0.014
2280	0.012	0.012	0.013	0.014	8:20:02	10/6/2011 8:20	0.015
2340	0.013	0.013	0.014	0.016	8:21:02	10/6/2011 8:21	0.016
2400	0.013	0.013	0.013	0.014	8:22:02	10/6/2011 8:22	0.014
2460	0.01	0.011	0.011	0.012	8:23:02	10/6/2011 8:23	0.012
2520	0.012	0.012	0.013	0.014	8:24:02	10/6/2011 8:24	0.014
2580	0.012	0.013	0.013	0.015	8:25:02	10/6/2011 8:25	0.016
2640	0.015	0.016	0.016	0.018	8:26:02	10/6/2011 8:26	0.019
2700	0.017	0.017	0.018	0.02	8:27:02	10/6/2011 8:27	0.021
2760	0.013	0.013	0.014	0.016	8:28:02	10/6/2011 8:28	0.017
2820	0.012	0.013	0.013	0.015	8:29:02	10/6/2011 8:29	0.015
2880	0.008	0.009	0.009	0.01	8:30:02	10/6/2011 8:30	0.011
2940	0.009	0.009	0.009	0.01	8:31:02	10/6/2011 8:31	0.011
3000	0.011	0.011	0.011	0.013	8:32:02	10/6/2011 8:32	0.013
3060	0.014	0.014	0.015	0.017	8:33:02	10/6/2011 8:33	0.018
3120	0.015	0.015	0.016	0.017	8:34:02	10/6/2011 8:34	0.018
3180	0.015	0.015	0.016	0.018	8:35:02	10/6/2011 8:35	0.019
3240	0.012	0.012	0.013	0.015	8:36:02	10/6/2011 8:36	0.015
3300	0.016	0.017	0.018	0.021	8:37:02	10/6/2011 8:37	0.023
3360	0.021	0.022	0.024	0.028	8:38:02	10/6/2011 8:38	0.029
3420	0.02	0.021	0.023	0.027	8:39:02	10/6/2011 8:39	0.028
3480	0.026	0.027	0.029	0.033	8:40:02	10/6/2011 8:40	0.033
3540	0.026	0.027	0.028	0.033	8:41:02	10/6/2011 8:41	0.033
3600	0.019	0.02	0.021	0.023	8:42:02	10/6/2011 8:42	0.025
3660	0.019	0.019	0.02	0.024	8:43:02	10/6/2011 8:43	0.024
3720	0.015	0.015	0.016	0.018	8:44:02	10/6/2011 8:44	0.019
3780	0.017	0.018	0.019	0.022	8:45:02	10/6/2011 8:45	0.023
3840	0.025	0.025	0.026	0.028	8:46:02	10/6/2011 8:46	0.029
3900	0.023	0.024	0.025	0.029	8:47:02	10/6/2011 8:47	0.03
3960	0.013	0.014	0.015	0.018	8:48:02	10/6/2011 8:48	0.019
4020	0.024	0.024	0.025	0.027	8:49:02	10/6/2011 8:49	0.027
4080	0.016	0.017	0.017	0.019	8:50:02	10/6/2011 8:50	0.02
4140	0.034	0.035	0.038	0.045	8:51:02	10/6/2011 8:51	0.047
4200	0.028	0.029	0.031	0.036	8:52:02	10/6/2011 8:52	0.039
4260	0.015	0.015	0.016	0.019	8:53:02	10/6/2011 8:53	0.02
4320	0.023	0.023	0.025	0.029	8:54:02	10/6/2011 8:54	0.03
4380	0.023	0.024	0.025	0.03	8:55:02	10/6/2011 8:55	0.03
4440	0.026	0.027	0.028	0.032	8:56:02	10/6/2011 8:56	0.034
4500	0.021	0.021	0.022	0.026	8:57:02	10/6/2011 8:57	0.026
4560	0.015	0.016	0.017	0.018	8:58:02	10/6/2011 8:58	0.019
4620	0.026	0.027	0.028	0.031	8:59:02	10/6/2011 8:59	0.032
4680	0.02	0.021	0.022	0.024	9:00:02	10/6/2011 9:00	0.024
4740	0.02	0.02	0.022	0.025	9:01:02	10/6/2011 9:01	0.025
4800	0.016	0.016	0.017	0.02	9:02:02	10/6/2011 9:02	0.02
4860	0.027	0.028	0.03	0.034	9:03:02	10/6/2011 9:03	0.034
4920	0.026	0.027	0.03	0.037	9:04:02	10/6/2011 9:04	0.038
4980	0.036	0.037	0.039	0.045	9:05:02	10/6/2011 9:05	0.045
5040	0.033	0.034	0.036	0.042	9:06:02	10/6/2011 9:06	0.043
5100	0.014	0.015	0.015	0.017	9:07:02	10/6/2011 9:07	0.019
5160	0.014	0.014	0.014	0.016	9:08:02	10/6/2011 9:08	0.016
5220	0.024	0.024	0.025	0.029	9:09:02	10/6/2011 9:09	0.029
5280	0.026	0.027	0.029	0.032	9:10:02	10/6/2011 9:10	0.033
5340	0.018	0.019	0.02	0.021	9:11:02	10/6/2011 9:11	0.022
5400	0.022	0.023	0.024	0.027	9:12:02	10/6/2011 9:12	0.028
5460	0.022	0.023	0.024	0.028	9:13:02	10/6/2011 9:13	0.03
5520	0.013	0.013	0.014	0.016	9:14:02	10/6/2011 9:14	0.017
5580	0.015	0.016	0.016	0.018	9:15:02	10/6/2011 9:15	0.018
5640	0.012	0.012	0.013	0.016	9:16:02	10/6/2011 9:16	0.016
5700	0.014	0.015	0.015	0.017	9:17:02	10/6/2011 9:17	0.018
5760	0.016	0.016	0.017	0.018	9:18:02	10/6/2011 9:18	0.018
5820	0.03	0.031	0.033	0.038	9:19:02	10/6/2011 9:19	0.039
5880	0.031	0.032	0.033	0.037	9:20:02	10/6/2011 9:20	0.039
5940	0.025	0.025	0.026	0.029	9:21:02	10/6/2011 9:21	0.029
6000	0.024	0.024	0.025	0.029	9:22:02	10/6/2011 9:22	0.029
6060	0.03	0.03	0.031	0.034	9:23:02	10/6/2011 9:23	0.034

6120	0.033	0.034	0.035	0.036	9:24:02	10/6/2011 9:24	0.037
6180	0.024	0.024	0.025	0.027	9:25:02	10/6/2011 9:25	0.028
6240	0.031	0.032	0.033	0.035	9:26:02	10/6/2011 9:26	0.036
6300	0.03	0.031	0.032	0.034	9:27:02	10/6/2011 9:27	0.034
6360	0.027	0.027	0.029	0.031	9:28:02	10/6/2011 9:28	0.031
6420	0.021	0.021	0.022	0.025	9:29:02	10/6/2011 9:29	0.025
6480	0.019	0.02	0.02	0.022	9:30:02	10/6/2011 9:30	0.022
6540	0.021	0.022	0.023	0.027	9:31:02	10/6/2011 9:31	0.028
6600	0.021	0.022	0.023	0.027	9:32:02	10/6/2011 9:32	0.028
6660	0.02	0.02	0.022	0.028	9:33:02	10/6/2011 9:33	0.03
6720	0.021	0.021	0.023	0.026	9:34:02	10/6/2011 9:34	0.027
6780	0.025	0.026	0.027	0.03	9:35:02	10/6/2011 9:35	0.032
6840	0.024	0.024	0.025	0.029	9:36:02	10/6/2011 9:36	0.029
6900	0.022	0.022	0.023	0.025	9:37:02	10/6/2011 9:37	0.026
6960	0.018	0.018	0.019	0.021	9:38:02	10/6/2011 9:38	0.021
7020	0.02	0.021	0.021	0.023	9:39:02	10/6/2011 9:39	0.024
7080	0.017	0.017	0.018	0.019	9:40:02	10/6/2011 9:40	0.02
7140	0.022	0.022	0.023	0.026	9:41:02	10/6/2011 9:41	0.026
7200	0.017	0.018	0.018	0.02	9:42:02	10/6/2011 9:42	0.02
7260	0.02	0.021	0.022	0.025	9:43:02	10/6/2011 9:43	0.026
7320	0.017	0.018	0.018	0.021	9:44:02	10/6/2011 9:44	0.021
7380	0.018	0.018	0.019	0.021	9:45:02	10/6/2011 9:45	0.021
7440	0.048	0.049	0.05	0.06	9:46:02	10/6/2011 9:46	0.067
7500	0.028	0.029	0.03	0.032	9:47:02	10/6/2011 9:47	0.032
7560	0.024	0.024	0.025	0.027	9:48:02	10/6/2011 9:48	0.027
7620	0.016	0.016	0.017	0.019	9:49:02	10/6/2011 9:49	0.02
7680	0.018	0.018	0.019	0.021	9:50:02	10/6/2011 9:50	0.021
7740	0.022	0.022	0.023	0.025	9:51:02	10/6/2011 9:51	0.025
7800	0.019	0.02	0.021	0.023	9:52:02	10/6/2011 9:52	0.024
7860	0.017	0.017	0.018	0.02	9:53:02	10/6/2011 9:53	0.022
7920	0.016	0.016	0.017	0.019	9:54:02	10/6/2011 9:54	0.02
7980	0.017	0.017	0.018	0.021	9:55:02	10/6/2011 9:55	0.022
8040	0.023	0.024	0.025	0.029	9:56:02	10/6/2011 9:56	0.029
8100	0.02	0.021	0.022	0.026	9:57:02	10/6/2011 9:57	0.026
8160	0.023	0.024	0.026	0.028	9:58:02	10/6/2011 9:58	0.029
8220	0.025	0.027	0.029	0.034	9:59:02	10/6/2011 9:59	0.035
8280	0.024	0.025	0.027	0.032	10:00:02	10/6/2011 10:00	0.033
8340	0.023	0.024	0.026	0.031	10:01:02	10/6/2011 10:01	0.033
8400	0.029	0.03	0.032	0.037	10:02:02	10/6/2011 10:02	0.039
8460	0.027	0.028	0.029	0.033	10:03:02	10/6/2011 10:03	0.033
8520	0.027	0.027	0.029	0.033	10:04:02	10/6/2011 10:04	0.033
8580	0.031	0.033	0.035	0.04	10:05:02	10/6/2011 10:05	0.04
8640	0.021	0.022	0.024	0.028	10:06:02	10/6/2011 10:06	0.028
8700	0.02	0.021	0.023	0.025	10:07:02	10/6/2011 10:07	0.026
8760	0.022	0.023	0.025	0.03	10:08:02	10/6/2011 10:08	0.03
8820	0.025	0.026	0.027	0.033	10:09:02	10/6/2011 10:09	0.033
8880	0.026	0.027	0.029	0.034	10:10:02	10/6/2011 10:10	0.036
8940	0.021	0.022	0.023	0.027	10:11:02	10/6/2011 10:11	0.028
9000	0.022	0.022	0.024	0.026	10:12:02	10/6/2011 10:12	0.026
9060	0.024	0.025	0.026	0.03	10:13:02	10/6/2011 10:13	0.031
9120	0.031	0.032	0.033	0.039	10:14:02	10/6/2011 10:14	0.042
9180	0.028	0.029	0.03	0.033	10:15:02	10/6/2011 10:15	0.033
9240	0.027	0.027	0.029	0.032	10:16:02	10/6/2011 10:16	0.033
9300	0.024	0.024	0.025	0.028	10:17:02	10/6/2011 10:17	0.03
9360	0.025	0.025	0.026	0.03	10:18:02	10/6/2011 10:18	0.031
9420	0.025	0.026	0.027	0.031	10:19:02	10/6/2011 10:19	0.032
9480	0.03	0.031	0.033	0.036	10:20:02	10/6/2011 10:20	0.037
9540	0.03	0.031	0.033	0.037	10:21:02	10/6/2011 10:21	0.038
9600	0.028	0.029	0.03	0.034	10:22:02	10/6/2011 10:22	0.034
9660	0.026	0.026	0.027	0.029	10:23:02	10/6/2011 10:23	0.029
9720	0.025	0.026	0.027	0.029	10:24:02	10/6/2011 10:24	0.03
9780	0.027	0.028	0.029	0.032	10:25:02	10/6/2011 10:25	0.032
9840	0.031	0.031	0.032	0.035	10:26:02	10/6/2011 10:26	0.036
9900	0.029	0.03	0.032	0.036	10:27:02	10/6/2011 10:27	0.037
9960	0.024	0.024	0.025	0.028	10:28:02	10/6/2011 10:28	0.03
10020	0.023	0.023	0.024	0.026	10:29:02	10/6/2011 10:29	0.027
10080	0.024	0.025	0.026	0.029	10:30:02	10/6/2011 10:30	0.029
10140	0.024	0.025	0.026	0.029	10:31:02	10/6/2011 10:31	0.03
10200	0.026	0.027	0.028	0.032	10:32:02	10/6/2011 10:32	0.032

10260	0.028	0.028	0.029	0.032	10:33:02	10/6/2011 10:33	0.032
10320	0.031	0.031	0.033	0.036	10:34:02	10/6/2011 10:34	0.036
10380	0.028	0.028	0.029	0.033	10:35:02	10/6/2011 10:35	0.033
10440	0.028	0.029	0.03	0.032	10:36:02	10/6/2011 10:36	0.033
10500	0.035	0.035	0.037	0.04	10:37:02	10/6/2011 10:37	0.041
10560	0.039	0.04	0.041	0.044	10:38:02	10/6/2011 10:38	0.044
10620	0.037	0.038	0.039	0.042	10:39:02	10/6/2011 10:39	0.042
10680	0.034	0.034	0.036	0.039	10:40:02	10/6/2011 10:40	0.039
10740	0.039	0.039	0.041	0.044	10:41:02	10/6/2011 10:41	0.044
10800	0.033	0.034	0.035	0.038	10:42:02	10/6/2011 10:42	0.039
10860	0.026	0.027	0.028	0.031	10:43:02	10/6/2011 10:43	0.032
10920	0.024	0.025	0.026	0.029	10:44:02	10/6/2011 10:44	0.029
10980	0.027	0.027	0.028	0.031	10:45:02	10/6/2011 10:45	0.032
11040	0.032	0.033	0.034	0.037	10:46:02	10/6/2011 10:46	0.037
11100	0.037	0.038	0.039	0.042	10:47:02	10/6/2011 10:47	0.042
11160	0.026	0.026	0.027	0.029	10:48:02	10/6/2011 10:48	0.029
11220	0.034	0.035	0.036	0.038	10:49:02	10/6/2011 10:49	0.04
11280	0.027	0.027	0.029	0.031	10:50:02	10/6/2011 10:50	0.031
11340	0.026	0.027	0.028	0.031	10:51:02	10/6/2011 10:51	0.032
11400	0.029	0.029	0.03	0.033	10:52:02	10/6/2011 10:52	0.033
11460	0.027	0.028	0.028	0.03	10:53:02	10/6/2011 10:53	0.031
11520	0.038	0.039	0.04	0.043	10:54:02	10/6/2011 10:54	0.044
11580	0.031	0.032	0.033	0.035	10:55:02	10/6/2011 10:55	0.036
11640	0.035	0.036	0.037	0.041	10:56:02	10/6/2011 10:56	0.041
11700	0.041	0.042	0.045	0.05	10:57:02	10/6/2011 10:57	0.052
11760	0.032	0.033	0.035	0.038	10:58:02	10/6/2011 10:58	0.039
11820	0.028	0.029	0.03	0.034	10:59:02	10/6/2011 10:59	0.034
11880	0.03	0.031	0.032	0.036	11:00:02	10/6/2011 11:00	0.037
11940	0.029	0.03	0.031	0.033	11:01:02	10/6/2011 11:01	0.034
12000	0.031	0.032	0.033	0.035	11:02:02	10/6/2011 11:02	0.036
12060	0.028	0.029	0.03	0.033	11:03:02	10/6/2011 11:03	0.033
12120	0.023	0.023	0.024	0.027	11:04:02	10/6/2011 11:04	0.027
12180	0.027	0.028	0.029	0.031	11:05:02	10/6/2011 11:05	0.031
12240	0.041	0.042	0.043	0.045	11:06:02	10/6/2011 11:06	0.046
12300	0.028	0.028	0.029	0.031	11:07:02	10/6/2011 11:07	0.031
12360	0.019	0.02	0.02	0.022	11:08:02	10/6/2011 11:08	0.022
12420	0.021	0.021	0.022	0.023	11:09:02	10/6/2011 11:09	0.023
12480	0.022	0.022	0.023	0.025	11:10:02	10/6/2011 11:10	0.025
12540	0.021	0.021	0.022	0.024	11:11:02	10/6/2011 11:11	0.024
12600	0.015	0.015	0.016	0.017	11:12:02	10/6/2011 11:12	0.018
12660	0.016	0.016	0.017	0.019	11:13:02	10/6/2011 11:13	0.019
12720	0.018	0.018	0.019	0.021	11:14:02	10/6/2011 11:14	0.021
12780	0.023	0.024	0.024	0.026	11:15:02	10/6/2011 11:15	0.027
12840	0.021	0.021	0.022	0.024	11:16:02	10/6/2011 11:16	0.025
12900	0.016	0.016	0.017	0.019	11:17:02	10/6/2011 11:17	0.019
12960	0.014	0.014	0.015	0.017	11:18:02	10/6/2011 11:18	0.017
13020	0.013	0.013	0.014	0.016	11:19:02	10/6/2011 11:19	0.016
13080	0.013	0.013	0.014	0.015	11:20:02	10/6/2011 11:20	0.015
13140	0.015	0.015	0.016	0.018	11:21:02	10/6/2011 11:21	0.018
13200	0.014	0.014	0.015	0.016	11:22:02	10/6/2011 11:22	0.016
13260	0.02	0.021	0.021	0.023	11:23:02	10/6/2011 11:23	0.023
13320	0.036	0.037	0.039	0.054	11:24:02	10/6/2011 11:24	0.062
13380	0.02	0.02	0.02	0.022	11:25:02	10/6/2011 11:25	0.022
13440	0.022	0.023	0.023	0.026	11:26:02	10/6/2011 11:26	0.026
13500	0.024	0.024	0.026	0.029	11:27:02	10/6/2011 11:27	0.031
13560	0.02	0.02	0.021	0.022	11:28:02	10/6/2011 11:28	0.022
13620	0.018	0.018	0.019	0.02	11:29:02	10/6/2011 11:29	0.02
13680	0.018	0.018	0.019	0.021	11:30:02	10/6/2011 11:30	0.022
13740	0.017	0.017	0.018	0.02	11:31:02	10/6/2011 11:31	0.02
13800	0.02	0.02	0.021	0.024	11:32:02	10/6/2011 11:32	0.024
13860	0.02	0.021	0.022	0.024	11:33:02	10/6/2011 11:33	0.024
13920	0.024	0.024	0.025	0.029	11:34:02	10/6/2011 11:34	0.029
13980	0.023	0.024	0.025	0.029	11:35:02	10/6/2011 11:35	0.03
14040	0.024	0.025	0.026	0.03	11:36:02	10/6/2011 11:36	0.031
14100	0.045	0.049	0.057	0.068	11:37:02	10/6/2011 11:37	0.069
14160	0.041	0.043	0.048	0.057	11:38:02	10/6/2011 11:38	0.057
14220	0.021	0.022	0.023	0.026	11:39:02	10/6/2011 11:39	0.026
14280	0.019	0.019	0.021	0.023	11:40:02	10/6/2011 11:40	0.023
14340	0.017	0.017	0.019	0.021	11:41:02	10/6/2011 11:41	0.022

14400	0.027	0.029	0.033	0.041	11:42:02	10/6/2011 11:42	0.043
14460	0.021	0.022	0.024	0.027	11:43:02	10/6/2011 11:43	0.027
14520	0.023	0.024	0.026	0.03	11:44:02	10/6/2011 11:44	0.032
14580	0.013	0.013	0.015	0.018	11:45:02	10/6/2011 11:45	0.018
14640	0.024	0.026	0.029	0.035	11:46:02	10/6/2011 11:46	0.036
14700	0.012	0.012	0.013	0.017	11:47:02	10/6/2011 11:47	0.017
14760	0.019	0.02	0.022	0.026	11:48:02	10/6/2011 11:48	0.027
14820	0.048	0.048	0.05	0.06	11:49:02	10/6/2011 11:49	0.065
14880	0.014	0.014	0.015	0.018	11:50:02	10/6/2011 11:50	0.018
14940	0.02	0.02	0.022	0.026	11:51:02	10/6/2011 11:51	0.028
15000	0.015	0.016	0.017	0.021	11:52:02	10/6/2011 11:52	0.021
15060	0.019	0.019	0.021	0.025	11:53:02	10/6/2011 11:53	0.025
15120	0.018	0.018	0.019	0.022	11:54:02	10/6/2011 11:54	0.024
15180	0.016	0.017	0.018	0.021	11:55:02	10/6/2011 11:55	0.021
15240	0.021	0.023	0.025	0.029	11:56:02	10/6/2011 11:56	0.031
15300	0.025	0.026	0.029	0.034	11:57:02	10/6/2011 11:57	0.034
15360	0.021	0.022	0.023	0.026	11:58:02	10/6/2011 11:58	0.026
15420	0.016	0.016	0.017	0.019	11:59:02	10/6/2011 11:59	0.02
15480	0.013	0.013	0.014	0.017	12:00:02	10/6/2011 12:00	0.017
15540	0.01	0.011	0.011	0.012	12:01:02	10/6/2011 12:01	0.013
15600	0.019	0.02	0.021	0.024	12:02:02	10/6/2011 12:02	0.026
15660	0.02	0.021	0.023	0.027	12:03:02	10/6/2011 12:03	0.028
15720	0.015	0.016	0.017	0.02	12:04:02	10/6/2011 12:04	0.02
15780	0.016	0.016	0.017	0.02	12:05:02	10/6/2011 12:05	0.02
15840	0.011	0.011	0.012	0.014	12:06:02	10/6/2011 12:06	0.014
15900	0.011	0.011	0.012	0.013	12:07:02	10/6/2011 12:07	0.013
15960	0.014	0.014	0.015	0.018	12:08:02	10/6/2011 12:08	0.018
16020	0.017	0.017	0.018	0.02	12:09:02	10/6/2011 12:09	0.021
16080	0.011	0.011	0.012	0.014	12:10:02	10/6/2011 12:10	0.014
16140	0.01	0.01	0.011	0.012	12:11:02	10/6/2011 12:11	0.012
16200	0.01	0.011	0.011	0.014	12:12:02	10/6/2011 12:12	0.015
16260	0.01	0.01	0.011	0.013	12:13:02	10/6/2011 12:13	0.014
16320	0.014	0.015	0.016	0.019	12:14:02	10/6/2011 12:14	0.02
16380	0.012	0.013	0.014	0.018	12:15:02	10/6/2011 12:15	0.019
16440	0.01	0.01	0.011	0.013	12:16:02	10/6/2011 12:16	0.013
16500	0.011	0.011	0.012	0.014	12:17:02	10/6/2011 12:17	0.014
16560	0.009	0.009	0.01	0.011	12:18:02	10/6/2011 12:18	0.011
16620	0.01	0.011	0.012	0.013	12:19:02	10/6/2011 12:19	0.014
16680	0.011	0.011	0.012	0.013	12:20:02	10/6/2011 12:20	0.014
16740	0.011	0.011	0.012	0.013	12:21:02	10/6/2011 12:21	0.013
16800	0.01	0.01	0.011	0.013	12:22:02	10/6/2011 12:22	0.013
16860	0.011	0.011	0.012	0.013	12:23:02	10/6/2011 12:23	0.013
16920	0.011	0.012	0.012	0.014	12:24:02	10/6/2011 12:24	0.014
16980	0.01	0.011	0.011	0.013	12:25:02	10/6/2011 12:25	0.013
17040	0.009	0.009	0.01	0.012	12:26:02	10/6/2011 12:26	0.012
17100	0.012	0.013	0.015	0.018	12:27:02	10/6/2011 12:27	0.018
17160	0.009	0.009	0.01	0.012	12:28:02	10/6/2011 12:28	0.012
17220	0.006	0.006	0.007	0.008	12:29:02	10/6/2011 12:29	0.008
17280	0.006	0.006	0.007	0.008	12:30:02	10/6/2011 12:30	0.008
17340	0.008	0.008	0.008	0.01	12:31:02	10/6/2011 12:31	0.01
17400	0.012	0.013	0.014	0.017	12:32:02	10/6/2011 12:32	0.017
17460	0.007	0.007	0.007	0.009	12:33:02	10/6/2011 12:33	0.009
17520	0.006	0.006	0.006	0.007	12:34:02	10/6/2011 12:34	0.007
17580	0.006	0.006	0.006	0.007	12:35:02	10/6/2011 12:35	0.007
17640	0.012	0.012	0.014	0.017	12:36:02	10/6/2011 12:36	0.019
17700	0.008	0.008	0.009	0.01	12:37:02	10/6/2011 12:37	0.01
17760	0.01	0.011	0.012	0.013	12:38:02	10/6/2011 12:38	0.014
17820	0.014	0.015	0.017	0.02	12:39:02	10/6/2011 12:39	0.02
17880	0.015	0.015	0.017	0.019	12:40:02	10/6/2011 12:40	0.02
17940	0.015	0.016	0.019	0.023	12:41:02	10/6/2011 12:41	0.023
18000	0.013	0.013	0.014	0.017	12:42:02	10/6/2011 12:42	0.017
18060	0.009	0.009	0.01	0.012	12:43:02	10/6/2011 12:43	0.012
18120	0.011	0.012	0.012	0.015	12:44:02	10/6/2011 12:44	0.015
18180	0.008	0.008	0.008	0.011	12:45:02	10/6/2011 12:45	0.012
18240	0.012	0.012	0.013	0.016	12:46:02	10/6/2011 12:46	0.016
18300	0.006	0.007	0.007	0.009	12:47:02	10/6/2011 12:47	0.009
18360	0.007	0.007	0.007	0.008	12:48:02	10/6/2011 12:48	0.009
18420	0.008	0.009	0.009	0.01	12:49:02	10/6/2011 12:49	0.01
18480	0.007	0.007	0.008	0.009	12:50:02	10/6/2011 12:50	0.01

18540	0.009	0.009	0.01	0.011	12:51:02	10/6/2011 12:51	0.012
18600	0.011	0.011	0.012	0.014	12:52:02	10/6/2011 12:52	0.014
18660	0.01	0.01	0.011	0.012	12:53:02	10/6/2011 12:53	0.012
18720	0.009	0.009	0.009	0.01	12:54:02	10/6/2011 12:54	0.01
18780	0.011	0.011	0.011	0.012	12:55:02	10/6/2011 12:55	0.013
18840	0.012	0.012	0.013	0.015	12:56:02	10/6/2011 12:56	0.015
18900	0.007	0.008	0.008	0.009	12:57:02	10/6/2011 12:57	0.009
18960	0.006	0.006	0.006	0.007	12:58:02	10/6/2011 12:58	0.008
19020	0.006	0.007	0.007	0.007	12:59:02	10/6/2011 12:59	0.008
19080	0.009	0.009	0.01	0.011	13:00:02	10/6/2011 13:00	0.012
19140	0.014	0.015	0.017	0.023	13:01:02	10/6/2011 13:01	0.025
19200	0.011	0.012	0.013	0.015	13:02:02	10/6/2011 13:02	0.016
19260	0.013	0.013	0.014	0.015	13:03:02	10/6/2011 13:03	0.016
19320	0.012	0.013	0.014	0.017	13:04:02	10/6/2011 13:04	0.017
19380	0.012	0.012	0.013	0.016	13:05:02	10/6/2011 13:05	0.017
19440	0.012	0.013	0.014	0.018	13:06:02	10/6/2011 13:06	0.018
19500	0.012	0.013	0.015	0.025	13:07:02	10/6/2011 13:07	0.027
19560	0.007	0.007	0.007	0.009	13:08:02	10/6/2011 13:08	0.009
19620	0.007	0.008	0.008	0.01	13:09:02	10/6/2011 13:09	0.01
19680	0.008	0.009	0.009	0.011	13:10:02	10/6/2011 13:10	0.013
19740	0.006	0.006	0.006	0.007	13:11:02	10/6/2011 13:11	0.007
19800	0.006	0.006	0.006	0.006	13:12:02	10/6/2011 13:12	0.006
19860	0.007	0.007	0.007	0.008	13:13:02	10/6/2011 13:13	0.008
19920	0.011	0.011	0.011	0.013	13:14:02	10/6/2011 13:14	0.014
19980	0.011	0.012	0.012	0.014	13:15:02	10/6/2011 13:15	0.015
20040	0.014	0.014	0.014	0.017	13:16:02	10/6/2011 13:16	0.017
20100	0.012	0.012	0.013	0.014	13:17:02	10/6/2011 13:17	0.014
20160	0.009	0.009	0.01	0.012	13:18:02	10/6/2011 13:18	0.012
20220	0.017	0.018	0.02	0.023	13:19:02	10/6/2011 13:19	0.023
20280	0.013	0.014	0.016	0.019	13:20:02	10/6/2011 13:20	0.019
20340	0.021	0.023	0.025	0.029	13:21:02	10/6/2011 13:21	0.029
20400	0.012	0.012	0.013	0.015	13:22:02	10/6/2011 13:22	0.015
20460	0.01	0.01	0.011	0.012	13:23:02	10/6/2011 13:23	0.012
20520	0.016	0.016	0.017	0.02	13:24:02	10/6/2011 13:24	0.02
20580	0.014	0.014	0.015	0.016	13:25:02	10/6/2011 13:25	0.016
20640	0.009	0.009	0.01	0.011	13:26:02	10/6/2011 13:26	0.011
20700	0.009	0.009	0.009	0.01	13:27:02	10/6/2011 13:27	0.01
20760	0.009	0.009	0.009	0.01	13:28:02	10/6/2011 13:28	0.011
20820	0.008	0.008	0.009	0.011	13:29:02	10/6/2011 13:29	0.011
20880	0.016	0.016	0.017	0.021	13:30:02	10/6/2011 13:30	0.022
20940	0.022	0.022	0.024	0.03	13:31:02	10/6/2011 13:31	0.031
21000	0.033	0.034	0.035	0.04	13:32:02	10/6/2011 13:32	0.041
21060	0.028	0.028	0.029	0.032	13:33:02	10/6/2011 13:33	0.032
21120	0.006	0.006	0.006	0.007	13:34:02	10/6/2011 13:34	0.007
21180	0.006	0.006	0.006	0.007	13:35:02	10/6/2011 13:35	0.007
21240	0.009	0.009	0.009	0.01	13:36:02	10/6/2011 13:36	0.01
21300	0.008	0.008	0.009	0.01	13:37:02	10/6/2011 13:37	0.01
21360	0.008	0.008	0.008	0.009	13:38:02	10/6/2011 13:38	0.01
21420	0.013	0.014	0.016	0.022	13:39:02	10/6/2011 13:39	0.023
21480	0.034	0.039	0.046	0.058	13:40:02	10/6/2011 13:40	0.059
21540	0.024	0.027	0.031	0.04	13:41:02	10/6/2011 13:41	0.04
21600	0.01	0.011	0.012	0.016	13:42:02	10/6/2011 13:42	0.017
21660	0.009	0.01	0.011	0.015	13:43:02	10/6/2011 13:43	0.016
21720	0.006	0.006	0.007	0.009	13:44:02	10/6/2011 13:44	0.009
21780	0.009	0.01	0.01	0.013	13:45:02	10/6/2011 13:45	0.013
21840	0.016	0.016	0.017	0.019	13:46:02	10/6/2011 13:46	0.019
21900	0.011	0.011	0.012	0.014	13:47:02	10/6/2011 13:47	0.015
21960	0.01	0.011	0.011	0.014	13:48:02	10/6/2011 13:48	0.015
22020	0.011	0.012	0.012	0.015	13:49:02	10/6/2011 13:49	0.015
22080	0.02	0.021	0.022	0.027	13:50:02	10/6/2011 13:50	0.027
22140	0.033	0.034	0.036	0.043	13:51:02	10/6/2011 13:51	0.046
22200	0.017	0.018	0.02	0.028	13:52:02	10/6/2011 13:52	0.031
22260	0.017	0.018	0.019	0.024	13:53:02	10/6/2011 13:53	0.025
22320	0.012	0.012	0.013	0.016	13:54:02	10/6/2011 13:54	0.016
22380	0.023	0.024	0.025	0.031	13:55:02	10/6/2011 13:55	0.032
22440	0.014	0.015	0.016	0.02	13:56:02	10/6/2011 13:56	0.02
22500	0.017	0.018	0.019	0.022	13:57:02	10/6/2011 13:57	0.022
22560	0.014	0.014	0.015	0.018	13:58:02	10/6/2011 13:58	0.018
22620	0.009	0.009	0.009	0.01	13:59:02	10/6/2011 13:59	0.01

22680	0.019	0.02	0.02	0.023	14:00:02	10/6/2011 14:00	0.023
22740	0.013	0.014	0.014	0.016	14:01:02	10/6/2011 14:01	0.016
22800	0.007	0.007	0.008	0.008	14:02:02	10/6/2011 14:02	0.009
22860	0.008	0.008	0.008	0.01	14:03:02	10/6/2011 14:03	0.01
22920	0.008	0.008	0.009	0.011	14:04:02	10/6/2011 14:04	0.012
22980	0.008	0.008	0.009	0.011	14:05:02	10/6/2011 14:05	0.011
23040	0.007	0.008	0.008	0.008	14:06:02	10/6/2011 14:06	0.009
23100	0.007	0.007	0.007	0.008	14:07:02	10/6/2011 14:07	0.008
23160	0.008	0.008	0.009	0.01	14:08:02	10/6/2011 14:08	0.01
23220	0.007	0.007	0.007	0.008	14:09:02	10/6/2011 14:09	0.008
23280	0.01	0.01	0.011	0.012	14:10:02	10/6/2011 14:10	0.013
23340	0.019	0.02	0.021	0.024	14:11:02	10/6/2011 14:11	0.025
23400	0.012	0.012	0.013	0.014	14:12:02	10/6/2011 14:12	0.014
23460	0.013	0.014	0.014	0.016	14:13:02	10/6/2011 14:13	0.017
23520	0.02	0.021	0.022	0.025	14:14:02	10/6/2011 14:14	0.027
23580	0.011	0.012	0.012	0.015	14:15:02	10/6/2011 14:15	0.015
23640	0.011	0.011	0.012	0.014	14:16:02	10/6/2011 14:16	0.014
23700	0.009	0.009	0.01	0.011	14:17:02	10/6/2011 14:17	0.012
23760	0.01	0.01	0.011	0.013	14:18:02	10/6/2011 14:18	0.014
23820	0.008	0.009	0.009	0.01	14:19:02	10/6/2011 14:19	0.01
23880	0.015	0.016	0.017	0.019	14:20:02	10/6/2011 14:20	0.019
23940	0.023	0.024	0.025	0.031	14:21:02	10/6/2011 14:21	0.031
24000	0.019	0.02	0.022	0.033	14:22:02	10/6/2011 14:22	0.034
24060	0.024	0.025	0.025	0.028	14:23:02	10/6/2011 14:23	0.029
24120	0.015	0.016	0.017	0.022	14:24:02	10/6/2011 14:24	0.022
24180	0.006	0.006	0.007	0.009	14:25:02	10/6/2011 14:25	0.009
24240	0.006	0.007	0.007	0.008	14:26:02	10/6/2011 14:26	0.008
24300	0.022	0.022	0.024	0.029	14:27:02	10/6/2011 14:27	0.031
24360	0.017	0.018	0.019	0.023	14:28:02	10/6/2011 14:28	0.024
24420	0.019	0.019	0.02	0.024	14:29:02	10/6/2011 14:29	0.025
24480	0.02	0.02	0.022	0.028	14:30:02	10/6/2011 14:30	0.029
24540	0.011	0.012	0.012	0.015	14:31:02	10/6/2011 14:31	0.016
24600	0.009	0.009	0.009	0.011	14:32:02	10/6/2011 14:32	0.011
24660	0.031	0.032	0.034	0.04	14:33:02	10/6/2011 14:33	0.042
24720	0.032	0.033	0.037	0.052	14:34:02	10/6/2011 14:34	0.057

AECOM

Client: National Grid
Location: Lowes
Date: 10/11/11
Field Personnel: J. Ehlen

Project: Metropolitan
Project Number: 60137361
Weather: ~75°F, party cloudy, little wind
Ambient Noise: ~80dB

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
0850	0.0	0.032	0.0	0.3	0.032	80.2	Setting up on SB-24
0927	0.0	0.031	0.1	0.4	0.048	84.4	Saw cutting SB-24
0944	0.0	0.025	0.1	0.3	0.032	77.3	pre-clearance of SB-24
1000	0.0	0.023	0.1	0.2	0.024	81.2	"
1015	0.0	0.023	0.1	0.3	0.029	86.7	Setting rig on SB-24
1030	0.0	0.019	0.1	0.3	0.034	92.5	Drilling SB-24
1045	0.0	0.018	0.1	0.2	0.025	94.2	Drilling SB-24
1102	0.0	0.018	0.1	0.3	0.026	91.9	"
1114	0.0	0.018	0.1	0.2	0.022	90.0	"
1130	0.0	0.012	0.1	0.2	0.020	92.5	"
1150	0.0	0.011	0.1	0.3	0.023	92.5	"
1205	0.0	0.009	0.1	0.2	0.028	90.3	" becoming more windy
1245	0.0	0.022	0.1	0.2	0.026	92.1	Drilling SB-24 > Lunch
1307	0.0	0.016	0.2	0.2	0.012	92.6	"
1330	0.0	0.019	0.2	0.2	0.033	92.3	"
1343	0.0	0.016	0.1	0.2	0.025	91.7	"
1358	0.0	0.017	0.2	0.3	0.024	91.9	"

=========Event #27 information (begin)=========
==========
[Event #27 name:]--[Event #27]2011-10-11 08:47<-->2011-10-11 14:20
[Event start time:]--2011-10-11 08:47:50[Event end time:]--2011-10-11 14:20:50
==========Event #27 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624
Data Points: 333 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)
Measurement Gas : Isobutene
Calibration Time : 2011-10-11 07:18:002011-10-11 07:18:002011-10-11 07:18:00
Drift Value : --- --- ---
Low Alarm Levels : 50.000 50.000 50.000
High Alarm Levels : 100.000 100.000 100.000
Span Value : 100.000 100.000 100.000
Correction Factor : 1.00 1.00 1.00
Over Alarm Levels : 15000.000 15000.000 15000.000
==========Event #27 data informations==========

LINE#	Date/Time	PID-Max(ppm)	PID-Min(ppm)	PID-Avg(ppm)
1	10/11/2011 8:48	0.869	0.235	0.538
2	10/11/2011 8:49	0.367	0.166	0.217
3	10/11/2011 8:50	0.284	0.139	0.214
4	10/11/2011 8:51	0.301	0.236	0.277
5	10/11/2011 8:52	0.266	0.138	0.187
6	10/11/2011 8:53	0.253	0.158	0.205
7	10/11/2011 8:54	0.216	0.1	0.155
8	10/11/2011 8:55	0.12	0	0.037
9	10/11/2011 8:56	0.2	0	0.085
10	10/11/2011 8:57	0.217	0.066	0.136
11	10/11/2011 8:58	0.063	0	0.028
12	10/11/2011 8:59	0.112	0	0.035
13	10/11/2011 9:00	0.219	0	0.078
14	10/11/2011 9:01	0.003	0	0
15	10/11/2011 9:02	0.103	0	0.022
16	10/11/2011 9:03	0	0	0
17	10/11/2011 9:04	0	0	0
18	10/11/2011 9:05	0	0	0
19	10/11/2011 9:06	0	0	0
20	10/11/2011 9:07	0	0	0
21	10/11/2011 9:08	0	0	0
22	10/11/2011 9:09	0	0	0
23	10/11/2011 9:10	0	0	0
24	10/11/2011 9:11	0	0	0
25	10/11/2011 9:12	0	0	0
26	10/11/2011 9:13	0	0	0
27	10/11/2011 9:14	0	0	0
28	10/11/2011 9:15	0	0	0
29	10/11/2011 9:16	0	0	0
30	10/11/2011 9:17	0	0	0
31	10/11/2011 9:18	0	0	0
32	10/11/2011 9:19	0	0	0
33	10/11/2011 9:20	0	0	0
34	10/11/2011 9:21	0	0	0
35	10/11/2011 9:22	0	0	0
36	10/11/2011 9:23	0	0	0
37	10/11/2011 9:24	0	0	0
38	10/11/2011 9:25	0	0	0
39	10/11/2011 9:26	0	0	0
40	10/11/2011 9:27	0	0	0
41	10/11/2011 9:28	0	0	0
42	10/11/2011 9:29	0	0	0
43	10/11/2011 9:30	0	0	0
44	10/11/2011 9:31	0	0	0
45	10/11/2011 9:32	0	0	0
46	10/11/2011 9:33	0	0	0
47	10/11/2011 9:34	0	0	0
48	10/11/2011 9:35	0	0	0

49	10/11/2011 9:36	0	0	0
50	10/11/2011 9:37	0	0	0
51	10/11/2011 9:38	0	0	0
52	10/11/2011 9:39	0	0	0
53	10/11/2011 9:40	0	0	0
54	10/11/2011 9:41	0	0	0
55	10/11/2011 9:42	0	0	0
56	10/11/2011 9:43	0	0	0
57	10/11/2011 9:44	0	0	0
58	10/11/2011 9:45	0	0	0
59	10/11/2011 9:46	0	0	0
60	10/11/2011 9:47	0	0	0
61	10/11/2011 9:48	0	0	0
62	10/11/2011 9:49	0	0	0
63	10/11/2011 9:50	0	0	0
64	10/11/2011 9:51	0	0	0
65	10/11/2011 9:52	0	0	0
66	10/11/2011 9:53	0	0	0
67	10/11/2011 9:54	0	0	0
68	10/11/2011 9:55	0	0	0
69	10/11/2011 9:56	0	0	0
70	10/11/2011 9:57	0	0	0
71	10/11/2011 9:58	0	0	0
72	10/11/2011 9:59	0	0	0
73	10/11/2011 10:00	0	0	0
74	10/11/2011 10:01	0	0	0
75	10/11/2011 10:02	0	0	0
76	10/11/2011 10:03	0	0	0
77	10/11/2011 10:04	0	0	0
78	10/11/2011 10:05	0	0	0
79	10/11/2011 10:06	0	0	0
80	10/11/2011 10:07	0	0	0
81	10/11/2011 10:08	0	0	0
82	10/11/2011 10:09	0	0	0
83	10/11/2011 10:10	0	0	0
84	10/11/2011 10:11	0	0	0
85	10/11/2011 10:12	0	0	0
86	10/11/2011 10:13	0	0	0
87	10/11/2011 10:14	0	0	0
88	10/11/2011 10:15	0	0	0
89	10/11/2011 10:16	0	0	0
90	10/11/2011 10:17	0	0	0
91	10/11/2011 10:18	0	0	0
92	10/11/2011 10:19	0	0	0
93	10/11/2011 10:20	0	0	0
94	10/11/2011 10:21	0	0	0
95	10/11/2011 10:22	0	0	0
96	10/11/2011 10:23	0	0	0
97	10/11/2011 10:24	0	0	0
98	10/11/2011 10:25	0	0	0
99	10/11/2011 10:26	0	0	0
100	10/11/2011 10:27	0	0	0
101	10/11/2011 10:28	0	0	0
102	10/11/2011 10:29	0	0	0
103	10/11/2011 10:30	0	0	0
104	10/11/2011 10:31	0	0	0
105	10/11/2011 10:32	0	0	0
106	10/11/2011 10:33	0	0	0
107	10/11/2011 10:34	0	0	0
108	10/11/2011 10:35	0	0	0
109	10/11/2011 10:36	0	0	0
110	10/11/2011 10:37	0	0	0
111	10/11/2011 10:38	0	0	0
112	10/11/2011 10:39	0	0	0
113	10/11/2011 10:40	0	0	0
114	10/11/2011 10:41	0	0	0
115	10/11/2011 10:42	0	0	0
116	10/11/2011 10:43	0	0	0
117	10/11/2011 10:44	0	0	0

118	10/11/2011 10:45	0	0	0
119	10/11/2011 10:46	0	0	0
120	10/11/2011 10:47	0	0	0
121	10/11/2011 10:48	0	0	0
122	10/11/2011 10:49	0	0	0
123	10/11/2011 10:50	0	0	0
124	10/11/2011 10:51	0	0	0
125	10/11/2011 10:52	0	0	0
126	10/11/2011 10:53	0	0	0
127	10/11/2011 10:54	0	0	0
128	10/11/2011 10:55	0	0	0
129	10/11/2011 10:56	0	0	0
130	10/11/2011 10:57	0	0	0
131	10/11/2011 10:58	0	0	0
132	10/11/2011 10:59	0	0	0
133	10/11/2011 11:00	0	0	0
134	10/11/2011 11:01	0	0	0
135	10/11/2011 11:02	0	0	0
136	10/11/2011 11:03	0	0	0
137	10/11/2011 11:04	0	0	0
138	10/11/2011 11:05	0	0	0
139	10/11/2011 11:06	0	0	0
140	10/11/2011 11:07	0	0	0
141	10/11/2011 11:08	0	0	0
142	10/11/2011 11:09	0	0	0
143	10/11/2011 11:10	0	0	0
144	10/11/2011 11:11	0	0	0
145	10/11/2011 11:12	0	0	0
146	10/11/2011 11:13	0	0	0
147	10/11/2011 11:14	0	0	0
148	10/11/2011 11:15	0	0	0
149	10/11/2011 11:16	0	0	0
150	10/11/2011 11:17	0	0	0
151	10/11/2011 11:18	0	0	0
152	10/11/2011 11:19	0	0	0
153	10/11/2011 11:20	0	0	0
154	10/11/2011 11:21	0	0	0
155	10/11/2011 11:22	0	0	0
156	10/11/2011 11:23	0	0	0
157	10/11/2011 11:24	0	0	0
158	10/11/2011 11:25	0	0	0
159	10/11/2011 11:26	0	0	0
160	10/11/2011 11:27	0	0	0
161	10/11/2011 11:28	0	0	0
162	10/11/2011 11:29	0	0	0
163	10/11/2011 11:30	0	0	0
164	10/11/2011 11:31	0	0	0
165	10/11/2011 11:32	0	0	0
166	10/11/2011 11:33	0	0	0
167	10/11/2011 11:34	0	0	0
168	10/11/2011 11:35	0	0	0
169	10/11/2011 11:36	0	0	0
170	10/11/2011 11:37	0	0	0
171	10/11/2011 11:38	0	0	0
172	10/11/2011 11:39	0	0	0
173	10/11/2011 11:40	0	0	0
174	10/11/2011 11:41	0	0	0
175	10/11/2011 11:42	0	0	0
176	10/11/2011 11:43	0	0	0
177	10/11/2011 11:44	0	0	0
178	10/11/2011 11:45	0	0	0
179	10/11/2011 11:46	0	0	0
180	10/11/2011 11:47	0	0	0
181	10/11/2011 11:48	0	0	0
182	10/11/2011 11:49	0	0	0
183	10/11/2011 11:50	0	0	0
184	10/11/2011 11:51	0	0	0
185	10/11/2011 11:52	0	0	0
186	10/11/2011 11:53	0	0	0

187	10/11/2011 11:54	0	0	0
188	10/11/2011 11:55	0	0	0
189	10/11/2011 11:56	0	0	0
190	10/11/2011 11:57	0	0	0
191	10/11/2011 11:58	0	0	0
192	10/11/2011 11:59	0	0	0
193	10/11/2011 12:00	0	0	0
194	10/11/2011 12:01	0	0	0
195	10/11/2011 12:02	0	0	0
196	10/11/2011 12:03	0	0	0
197	10/11/2011 12:04	0	0	0
198	10/11/2011 12:05	0	0	0
199	10/11/2011 12:06	0	0	0
200	10/11/2011 12:07	0	0	0
201	10/11/2011 12:08	0	0	0
202	10/11/2011 12:09	0	0	0
203	10/11/2011 12:10	0	0	0
204	10/11/2011 12:11	0	0	0
205	10/11/2011 12:12	0	0	0
206	10/11/2011 12:13	0	0	0
207	10/11/2011 12:14	0	0	0
208	10/11/2011 12:15	0	0	0
209	10/11/2011 12:16	0	0	0
210	10/11/2011 12:17	0	0	0
211	10/11/2011 12:18	0	0	0
212	10/11/2011 12:19	0	0	0
213	10/11/2011 12:20	0	0	0
214	10/11/2011 12:21	0	0	0
215	10/11/2011 12:22	0	0	0
216	10/11/2011 12:23	0	0	0
217	10/11/2011 12:24	0	0	0
218	10/11/2011 12:25	0	0	0
219	10/11/2011 12:26	0	0	0
220	10/11/2011 12:27	0	0	0
221	10/11/2011 12:28	0	0	0
222	10/11/2011 12:29	0	0	0
223	10/11/2011 12:30	0	0	0
224	10/11/2011 12:31	0	0	0
225	10/11/2011 12:32	0	0	0
226	10/11/2011 12:33	0	0	0
227	10/11/2011 12:34	0	0	0
228	10/11/2011 12:35	0	0	0
229	10/11/2011 12:36	0	0	0
230	10/11/2011 12:37	0	0	0
231	10/11/2011 12:38	0	0	0
232	10/11/2011 12:39	0	0	0
233	10/11/2011 12:40	0	0	0
234	10/11/2011 12:41	0	0	0
235	10/11/2011 12:42	0	0	0
236	10/11/2011 12:43	0	0	0
237	10/11/2011 12:44	0	0	0
238	10/11/2011 12:45	0	0	0
239	10/11/2011 12:46	0	0	0
240	10/11/2011 12:47	0	0	0
241	10/11/2011 12:48	0	0	0
242	10/11/2011 12:49	0	0	0
243	10/11/2011 12:50	0	0	0
244	10/11/2011 12:51	0	0	0
245	10/11/2011 12:52	0	0	0
246	10/11/2011 12:53	0	0	0
247	10/11/2011 12:54	0	0	0
248	10/11/2011 12:55	0	0	0
249	10/11/2011 12:56	0	0	0
250	10/11/2011 12:57	0	0	0
251	10/11/2011 12:58	0	0	0
252	10/11/2011 12:59	0	0	0
253	10/11/2011 13:00	0	0	0
254	10/11/2011 13:01	0	0	0
255	10/11/2011 13:02	0	0	0

256	10/11/2011 13:03	0	0	0
257	10/11/2011 13:04	0	0	0
258	10/11/2011 13:05	0	0	0
259	10/11/2011 13:06	0	0	0
260	10/11/2011 13:07	0	0	0
261	10/11/2011 13:08	0	0	0
262	10/11/2011 13:09	0	0	0
263	10/11/2011 13:10	0	0	0
264	10/11/2011 13:11	0	0	0
265	10/11/2011 13:12	0	0	0
266	10/11/2011 13:13	0	0	0
267	10/11/2011 13:14	0	0	0
268	10/11/2011 13:15	0	0	0
269	10/11/2011 13:16	0	0	0
270	10/11/2011 13:17	0	0	0
271	10/11/2011 13:18	0	0	0
272	10/11/2011 13:19	0	0	0
273	10/11/2011 13:20	0	0	0
274	10/11/2011 13:21	0	0	0
275	10/11/2011 13:22	0	0	0
276	10/11/2011 13:23	0	0	0
277	10/11/2011 13:24	0	0	0
278	10/11/2011 13:25	0	0	0
279	10/11/2011 13:26	0	0	0
280	10/11/2011 13:27	0	0	0
281	10/11/2011 13:28	0	0	0
282	10/11/2011 13:29	0	0	0
283	10/11/2011 13:30	0	0	0
284	10/11/2011 13:31	0	0	0
285	10/11/2011 13:32	0	0	0
286	10/11/2011 13:33	0	0	0
287	10/11/2011 13:34	0	0	0
288	10/11/2011 13:35	0	0	0
289	10/11/2011 13:36	0	0	0
290	10/11/2011 13:37	0	0	0
291	10/11/2011 13:38	0	0	0
292	10/11/2011 13:39	0	0	0
293	10/11/2011 13:40	0	0	0
294	10/11/2011 13:41	0	0	0
295	10/11/2011 13:42	0	0	0
296	10/11/2011 13:43	0	0	0
297	10/11/2011 13:44	0	0	0
298	10/11/2011 13:45	0	0	0
299	10/11/2011 13:46	0	0	0
300	10/11/2011 13:47	0	0	0
301	10/11/2011 13:48	0	0	0
302	10/11/2011 13:49	0	0	0
303	10/11/2011 13:50	0	0	0
304	10/11/2011 13:51	0	0	0
305	10/11/2011 13:52	0	0	0
306	10/11/2011 13:53	0	0	0
307	10/11/2011 13:54	0	0	0
308	10/11/2011 13:55	0	0	0
309	10/11/2011 13:56	0	0	0
310	10/11/2011 13:57	0	0	0
311	10/11/2011 13:58	0	0	0
312	10/11/2011 13:59	0	0	0
313	10/11/2011 14:00	0	0	0
314	10/11/2011 14:01	0	0	0
315	10/11/2011 14:02	0	0	0
316	10/11/2011 14:03	0	0	0
317	10/11/2011 14:04	0	0	0
318	10/11/2011 14:05	0	0	0
319	10/11/2011 14:06	0	0	0
320	10/11/2011 14:07	0	0	0
321	10/11/2011 14:08	0	0	0
322	10/11/2011 14:09	0	0	0
323	10/11/2011 14:10	0	0	0
324	10/11/2011 14:11	0	0	0

325	10/11/2011 14:12	0	0	0
326	10/11/2011 14:13	0	0	0
327	10/11/2011 14:14	0	0	0
328	10/11/2011 14:15	0	0	0
329	10/11/2011 14:16	0	0	0
330	10/11/2011 14:17	0	0	0
331	10/11/2011 14:18	0	0	0
332	10/11/2011 14:19	0	0	0
333	10/11/2011 14:20	0	0	0

==========Event #27 information (end)==========

=========Event #16 information (begin)=========
==========
[Event #16 name:]--[Event #16]2011-10-11 08:54<-->2011-10-11 14:29
[Event start time:]--2011-10-11 08:54:31[Event end time:]--2011-10-11 14:29:31
==========Event #16 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367
Data Points: 335 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID(ppb)
Measurement Gas : Isobutene
Calibration Time : 2011-10-11 07:28:00
Drift Value : ---
Low Alarm Levels : 25847
High Alarm Levels : 51694
Span Value : 100000
Correction Factor : 1.00
Over Alarm Levels : 15000000
==========Event #16 data informations==========

LINE#	Date/Time	PID(ppm)	PID(ppb)
1	10/11/2011 8:55	0.377	377
2	10/11/2011 8:56	0.361	361
3	10/11/2011 8:57	0.287	287
4	10/11/2011 8:58	0.389	389
5	10/11/2011 8:59	0.314	314
6	10/11/2011 9:00	0.119	119
7	10/11/2011 9:01	0.103	103
8	10/11/2011 9:02	0.238	238
9	10/11/2011 9:03	0.162	162
10	10/11/2011 9:04	0.338	338
11	10/11/2011 9:05	0.404	404
12	10/11/2011 9:06	0.365	365
13	10/11/2011 9:07	0.462	462
14	10/11/2011 9:08	0.465	465
15	10/11/2011 9:09	0.399	399
16	10/11/2011 9:10	0.539	539
17	10/11/2011 9:11	0.532	532
18	10/11/2011 9:12	0.493	493
19	10/11/2011 9:13	0.483	483
20	10/11/2011 9:14	0.234	234
21	10/11/2011 9:15	0.164	164
22	10/11/2011 9:16	0.175	175
23	10/11/2011 9:17	0.281	281
24	10/11/2011 9:18	0.303	303
25	10/11/2011 9:19	0.213	213
26	10/11/2011 9:20	0.18	180
27	10/11/2011 9:21	0.147	147
28	10/11/2011 9:22	0.159	159
29	10/11/2011 9:23	0.179	179
30	10/11/2011 9:24	0.253	253
31	10/11/2011 9:25	0.187	187
32	10/11/2011 9:26	0.182	182
33	10/11/2011 9:27	0.179	179
34	10/11/2011 9:28	0.176	176
35	10/11/2011 9:29	0.162	162
36	10/11/2011 9:30	0.197	197
37	10/11/2011 9:31	0.261	261
38	10/11/2011 9:32	0.244	244
39	10/11/2011 9:33	0.221	221
40	10/11/2011 9:34	0.199	199
41	10/11/2011 9:35	0.19	190
42	10/11/2011 9:36	0.256	256
43	10/11/2011 9:37	0.217	217
44	10/11/2011 9:38	0.229	229
45	10/11/2011 9:39	0.374	374
46	10/11/2011 9:40	0.424	424
47	10/11/2011 9:41	0.298	298
48	10/11/2011 9:42	0.253	253

49	10/11/2011 9:43	0.402	402
50	10/11/2011 9:44	1.071	1071
51	10/11/2011 9:45	0.948	948
52	10/11/2011 9:46	0.484	484
53	10/11/2011 9:47	0.727	727
54	10/11/2011 9:48	0.934	934
55	10/11/2011 9:49	0.537	537
56	10/11/2011 9:50	0.376	376
57	10/11/2011 9:51	0.294	294
58	10/11/2011 9:52	0.333	333
59	10/11/2011 9:53	0.366	366
60	10/11/2011 9:54	0.369	369
61	10/11/2011 9:55	0.368	368
62	10/11/2011 9:56	0.413	413
63	10/11/2011 9:57	0.37	370
64	10/11/2011 9:58	0.37	370
65	10/11/2011 9:59	0.361	361
66	10/11/2011 10:00	0.398	398
67	10/11/2011 10:01	0.385	385
68	10/11/2011 10:02	0.427	427
69	10/11/2011 10:03	0.388	388
70	10/11/2011 10:04	0.355	355
71	10/11/2011 10:05	0.341	341
72	10/11/2011 10:06	0.259	259
73	10/11/2011 10:07	0.256	256
74	10/11/2011 10:08	0.275	275
75	10/11/2011 10:09	0.24	240
76	10/11/2011 10:10	0.259	259
77	10/11/2011 10:11	0.234	234
78	10/11/2011 10:12	0.235	235
79	10/11/2011 10:13	0.463	463
80	10/11/2011 10:14	0.573	573
81	10/11/2011 10:15	0.466	466
82	10/11/2011 10:16	0.325	325
83	10/11/2011 10:17	0.232	232
84	10/11/2011 10:18	0.234	234
85	10/11/2011 10:19	0.35	350
86	10/11/2011 10:20	0.499	499
87	10/11/2011 10:21	0.292	292
88	10/11/2011 10:22	0.344	344
89	10/11/2011 10:23	0.34	340
90	10/11/2011 10:24	0.423	423
91	10/11/2011 10:25	0.43	430
92	10/11/2011 10:26	0.413	413
93	10/11/2011 10:27	0.435	435
94	10/11/2011 10:28	0.45	450
95	10/11/2011 10:29	0.454	454
96	10/11/2011 10:30	0.476	476
97	10/11/2011 10:31	0.422	422
98	10/11/2011 10:32	0.386	386
99	10/11/2011 10:33	0.544	544
100	10/11/2011 10:34	0.345	345
101	10/11/2011 10:35	0.276	276
102	10/11/2011 10:36	0.238	238
103	10/11/2011 10:37	0.256	256
104	10/11/2011 10:38	0.354	354
105	10/11/2011 10:39	0.29	290
106	10/11/2011 10:40	0.344	344
107	10/11/2011 10:41	0.36	360
108	10/11/2011 10:42	0.268	268
109	10/11/2011 10:43	0.253	253
110	10/11/2011 10:44	0.254	254
111	10/11/2011 10:45	0.256	256
112	10/11/2011 10:46	0.337	337
113	10/11/2011 10:47	0.36	360
114	10/11/2011 10:48	0.305	305
115	10/11/2011 10:49	0.332	332
116	10/11/2011 10:50	0.319	319
117	10/11/2011 10:51	0.317	317

118	10/11/2011 10:52	0.303	303
119	10/11/2011 10:53	0.251	251
120	10/11/2011 10:54	0.342	342
121	10/11/2011 10:55	0.292	292
122	10/11/2011 10:56	0.285	285
123	10/11/2011 10:57	0.277	277
124	10/11/2011 10:58	0.219	219
125	10/11/2011 10:59	0.22	220
126	10/11/2011 11:00	0.223	223
127	10/11/2011 11:01	0.226	226
128	10/11/2011 11:02	0.229	229
129	10/11/2011 11:03	0.25	250
130	10/11/2011 11:04	0.26	260
131	10/11/2011 11:05	0.278	278
132	10/11/2011 11:06	0.286	286
133	10/11/2011 11:07	0.28	280
134	10/11/2011 11:08	0.238	238
135	10/11/2011 11:09	0.217	217
136	10/11/2011 11:10	0.225	225
137	10/11/2011 11:11	0.225	225
138	10/11/2011 11:12	0.235	235
139	10/11/2011 11:13	0.243	243
140	10/11/2011 11:14	0.225	225
141	10/11/2011 11:15	0.242	242
142	10/11/2011 11:16	0.284	284
143	10/11/2011 11:17	0.262	262
144	10/11/2011 11:18	0.286	286
145	10/11/2011 11:19	0.286	286
146	10/11/2011 11:20	0.269	269
147	10/11/2011 11:21	0.297	297
148	10/11/2011 11:22	0.29	290
149	10/11/2011 11:23	0.302	302
150	10/11/2011 11:24	0.305	305
151	10/11/2011 11:25	0.264	264
152	10/11/2011 11:26	0.263	263
153	10/11/2011 11:27	0.279	279
154	10/11/2011 11:28	0.253	253
155	10/11/2011 11:29	0.268	268
156	10/11/2011 11:30	0.238	238
157	10/11/2011 11:31	0.224	224
158	10/11/2011 11:32	0.218	218
159	10/11/2011 11:33	0.216	216
160	10/11/2011 11:34	0.244	244
161	10/11/2011 11:35	0.238	238
162	10/11/2011 11:36	0.235	235
163	10/11/2011 11:37	0.286	286
164	10/11/2011 11:38	0.302	302
165	10/11/2011 11:39	0.287	287
166	10/11/2011 11:40	0.263	263
167	10/11/2011 11:41	0.223	223
168	10/11/2011 11:42	0.214	214
169	10/11/2011 11:43	0.212	212
170	10/11/2011 11:44	0.253	253
171	10/11/2011 11:45	0.277	277
172	10/11/2011 11:46	0.244	244
173	10/11/2011 11:47	0.263	263
174	10/11/2011 11:48	0.268	268
175	10/11/2011 11:49	0.241	241
176	10/11/2011 11:50	0.225	225
177	10/11/2011 11:51	0.268	268
178	10/11/2011 11:52	0.245	245
179	10/11/2011 11:53	0.258	258
180	10/11/2011 11:54	0.291	291
181	10/11/2011 11:55	0.337	337
182	10/11/2011 11:56	0.337	337
183	10/11/2011 11:57	0.258	258
184	10/11/2011 11:58	0.222	222
185	10/11/2011 11:59	0.227	227
186	10/11/2011 12:00	0.259	259

187	10/11/2011 12:01	0.236	236
188	10/11/2011 12:02	0.252	252
189	10/11/2011 12:03	0.277	277
190	10/11/2011 12:04	0.263	263
191	10/11/2011 12:05	0.289	289
192	10/11/2011 12:06	0.253	253
193	10/11/2011 12:07	0.252	252
194	10/11/2011 12:08	0.255	255
195	10/11/2011 12:09	0.246	246
196	10/11/2011 12:10	0.224	224
197	10/11/2011 12:11	0.228	228
198	10/11/2011 12:12	0.211	211
199	10/11/2011 12:13	0.209	209
200	10/11/2011 12:14	0.218	218
201	10/11/2011 12:15	0.214	214
202	10/11/2011 12:16	0.215	215
203	10/11/2011 12:17	0.22	220
204	10/11/2011 12:18	0.222	222
205	10/11/2011 12:19	0.211	211
206	10/11/2011 12:20	0.218	218
207	10/11/2011 12:21	0.226	226
208	10/11/2011 12:22	0.263	263
209	10/11/2011 12:23	0.242	242
210	10/11/2011 12:24	0.239	239
211	10/11/2011 12:25	0.249	249
212	10/11/2011 12:26	0.242	242
213	10/11/2011 12:27	0.29	290
214	10/11/2011 12:28	0.248	248
215	10/11/2011 12:29	0.244	244
216	10/11/2011 12:30	0.278	278
217	10/11/2011 12:31	0.258	258
218	10/11/2011 12:32	0.244	244
219	10/11/2011 12:33	0.244	244
220	10/11/2011 12:34	0.261	261
221	10/11/2011 12:35	0.252	252
222	10/11/2011 12:36	0.238	238
223	10/11/2011 12:37	0.284	284
224	10/11/2011 12:38	0.244	244
225	10/11/2011 12:39	0.216	216
226	10/11/2011 12:40	0.223	223
227	10/11/2011 12:41	0.244	244
228	10/11/2011 12:42	0.239	239
229	10/11/2011 12:43	0.222	222
230	10/11/2011 12:44	0.221	221
231	10/11/2011 12:45	0.241	241
232	10/11/2011 12:46	0.211	211
233	10/11/2011 12:47	0.221	221
234	10/11/2011 12:48	0.206	206
235	10/11/2011 12:49	0.217	217
236	10/11/2011 12:50	0.236	236
237	10/11/2011 12:51	0.236	236
238	10/11/2011 12:52	0.266	266
239	10/11/2011 12:53	0.271	271
240	10/11/2011 12:54	0.254	254
241	10/11/2011 12:55	0.254	254
242	10/11/2011 12:56	0.233	233
243	10/11/2011 12:57	0.231	231
244	10/11/2011 12:58	0.216	216
245	10/11/2011 12:59	0.205	205
246	10/11/2011 13:00	0.2	200
247	10/11/2011 13:01	0.191	191
248	10/11/2011 13:02	0.203	203
249	10/11/2011 13:03	0.211	211
250	10/11/2011 13:04	0.235	235
251	10/11/2011 13:05	0.227	227
252	10/11/2011 13:06	0.237	237
253	10/11/2011 13:07	0.216	216
254	10/11/2011 13:08	0.21	210
255	10/11/2011 13:09	0.227	227

256	10/11/2011 13:10	0.235	235
257	10/11/2011 13:11	0.213	213
258	10/11/2011 13:12	0.209	209
259	10/11/2011 13:13	0.224	224
260	10/11/2011 13:14	0.244	244
261	10/11/2011 13:15	0.254	254
262	10/11/2011 13:16	0.27	270
263	10/11/2011 13:17	0.243	243
264	10/11/2011 13:18	0.23	230
265	10/11/2011 13:19	0.233	233
266	10/11/2011 13:20	0.244	244
267	10/11/2011 13:21	0.25	250
268	10/11/2011 13:22	0.229	229
269	10/11/2011 13:23	0.217	217
270	10/11/2011 13:24	0.223	223
271	10/11/2011 13:25	0.236	236
272	10/11/2011 13:26	0.252	252
273	10/11/2011 13:27	0.227	227
274	10/11/2011 13:28	0.211	211
275	10/11/2011 13:29	0.209	209
276	10/11/2011 13:30	0.232	232
277	10/11/2011 13:31	0.228	228
278	10/11/2011 13:32	0.217	217
279	10/11/2011 13:33	0.223	223
280	10/11/2011 13:34	0.239	239
281	10/11/2011 13:35	0.244	244
282	10/11/2011 13:36	0.244	244
283	10/11/2011 13:37	0.251	251
284	10/11/2011 13:38	0.246	246
285	10/11/2011 13:39	0.236	236
286	10/11/2011 13:40	0.252	252
287	10/11/2011 13:41	0.261	261
288	10/11/2011 13:42	0.269	269
289	10/11/2011 13:43	0.251	251
290	10/11/2011 13:44	0.239	239
291	10/11/2011 13:45	0.284	284
292	10/11/2011 13:46	0.251	251
293	10/11/2011 13:47	0.246	246
294	10/11/2011 13:48	0.243	243
295	10/11/2011 13:49	0.227	227
296	10/11/2011 13:50	0.249	249
297	10/11/2011 13:51	0.245	245
298	10/11/2011 13:52	0.238	238
299	10/11/2011 13:53	0.259	259
300	10/11/2011 13:54	0.239	239
301	10/11/2011 13:55	0.242	242
302	10/11/2011 13:56	0.229	229
303	10/11/2011 13:57	0.22	220
304	10/11/2011 13:58	0.231	231
305	10/11/2011 13:59	0.218	218
306	10/11/2011 14:00	0.225	225
307	10/11/2011 14:01	0.217	217
308	10/11/2011 14:02	0.226	226
309	10/11/2011 14:03	0.22	220
310	10/11/2011 14:04	0.218	218
311	10/11/2011 14:05	0.226	226
312	10/11/2011 14:06	0.23	230
313	10/11/2011 14:07	0.223	223
314	10/11/2011 14:08	0.228	228
315	10/11/2011 14:09	0.24	240
316	10/11/2011 14:10	0.218	218
317	10/11/2011 14:11	0.22	220
318	10/11/2011 14:12	0.261	261
319	10/11/2011 14:13	0.269	269
320	10/11/2011 14:14	0.288	288
321	10/11/2011 14:15	0.282	282
322	10/11/2011 14:16	0.316	316
323	10/11/2011 14:17	0.225	225
324	10/11/2011 14:18	0.219	219

325	10/11/2011 14:19	0.232	232
326	10/11/2011 14:20	0.242	242
327	10/11/2011 14:21	0.227	227
328	10/11/2011 14:22	0.238	238
329	10/11/2011 14:23	0.269	269
330	10/11/2011 14:24	0.243	243
331	10/11/2011 14:25	0.218	218
332	10/11/2011 14:26	0.233	233
333	10/11/2011 14:27	0.237	237
334	10/11/2011 14:28	0.229	229
335	10/11/2011 14:29	0.237	237

==========Event #16 information (end)==========

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533101806
Firmware Version	2.8
Calibration Date	5/19/2011
Test Name	MANUAL_006
Test Start Time	8:37:13 AM
Test Start Date	10/11/2011
Test Length [D:H:M	0:05:32
Test Interval [M:S]	1:00
PM1 Average [mg/r	0.019
PM1 Minimum [mg	0.008
PM1 Maximum [mg	0.062
PM1 TWA [mg/m3]	0.013
PM2.5 Average [mg	0.019
PM2.5 Minimum [m	0.008
PM2.5 Maximum [r	0.064
PM2.5 TWA [mg/m	0.013
PM4 Average [mg/r	0.02
PM4 Minimum [mg	0.008
PM4 Maximum [mg	0.067
PM4 TWA [mg/m3]	0.014
PM10 Average [mg,	0.02
PM10 Minimum [m	0.009
PM10 Maximum [m	0.075
PM10 TWA [mg/m3	0.014
TOTAL Average [mg	0.02
TOTAL Minimum [m	0.009
TOTAL Maximum [r	0.08
TOTAL TWA [mg/m	0.014
Photometric User C	1
Size Correction Use	1
Flow User Cal	1
Errors	
Number of Samples	332

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	8:37:13 AM	Date/Time	TOTAL [mg/m3]	Alarms	Errors
60	0.062	0.064	0.067	0.075	8:38:13 AM	10/11/2011 8:38	0.08		
120	0.04	0.04	0.041	0.041	8:39:13 AM	10/11/2011 8:39	0.041		
180	0.037	0.037	0.037	0.038	8:40:13 AM	10/11/2011 8:40	0.038		
240	0.035	0.035	0.036	0.037	8:41:13 AM	10/11/2011 8:41	0.037		
300	0.038	0.038	0.039	0.039	8:42:13 AM	10/11/2011 8:42	0.04		
360	0.037	0.037	0.037	0.038	8:43:13 AM	10/11/2011 8:43	0.038		
420	0.033	0.033	0.033	0.034	8:44:13 AM	10/11/2011 8:44	0.034		
480	0.042	0.043	0.043	0.043	8:45:13 AM	10/11/2011 8:45	0.044		
540	0.04	0.04	0.04	0.04	8:46:13 AM	10/11/2011 8:46	0.04		
600	0.037	0.037	0.037	0.038	8:47:13 AM	10/11/2011 8:47	0.038		
660	0.031	0.031	0.031	0.031	8:48:13 AM	10/11/2011 8:48	0.031		
720	0.039	0.039	0.04	0.04	8:49:13 AM	10/11/2011 8:49	0.04		
780	0.057	0.057	0.057	0.058	8:50:13 AM	10/11/2011 8:50	0.058		
840	0.041	0.041	0.041	0.042	8:51:13 AM	10/11/2011 8:51	0.042		
900	0.033	0.033	0.033	0.034	8:52:13 AM	10/11/2011 8:52	0.034		
960	0.03	0.03	0.03	0.031	8:53:13 AM	10/11/2011 8:53	0.031		
1020	0.035	0.035	0.035	0.036	8:54:13 AM	10/11/2011 8:54	0.036		
1080	0.034	0.034	0.035	0.041	8:55:13 AM	10/11/2011 8:55	0.047		
1140	0.029	0.029	0.029	0.03	8:56:13 AM	10/11/2011 8:56	0.03		
1200	0.029	0.029	0.03	0.03	8:57:13 AM	10/11/2011 8:57	0.03		
1260	0.025	0.025	0.025	0.026	8:58:13 AM	10/11/2011 8:58	0.026		
1320	0.036	0.036	0.036	0.036	8:59:13 AM	10/11/2011 8:59	0.037		
1380	0.033	0.033	0.033	0.033	9:00:13 AM	10/11/2011 9:00	0.033		
1440	0.033	0.033	0.034	0.034	9:01:13 AM	10/11/2011 9:01	0.034		
1500	0.03	0.03	0.03	0.03	9:02:13 AM	10/11/2011 9:02	0.03		
1560	0.031	0.031	0.031	0.032	9:03:13 AM	10/11/2011 9:03	0.032		
1620	0.027	0.027	0.027	0.028	9:04:13 AM	10/11/2011 9:04	0.028		
1680	0.033	0.033	0.033	0.033	9:05:13 AM	10/11/2011 9:05	0.033		
1740	0.029	0.029	0.029	0.029	9:06:13 AM	10/11/2011 9:06	0.03		
1800	0.028	0.028	0.028	0.028	9:07:13 AM	10/11/2011 9:07	0.028		
1860	0.026	0.026	0.026	0.027	9:08:13 AM	10/11/2011 9:08	0.027		
1920	0.031	0.031	0.032	0.032	9:09:13 AM	10/11/2011 9:09	0.033		

1980	0.027	0.027	0.028	0.028	9:10:13 AM	10/11/2011 9:10	0.028
2040	0.028	0.029	0.029	0.029	9:11:13 AM	10/11/2011 9:11	0.029
2100	0.029	0.029	0.03	0.03	9:12:13 AM	10/11/2011 9:12	0.03
2160	0.028	0.028	0.029	0.029	9:13:13 AM	10/11/2011 9:13	0.029
2220	0.029	0.029	0.03	0.03	9:14:13 AM	10/11/2011 9:14	0.031
2280	0.03	0.03	0.031	0.032	9:15:13 AM	10/11/2011 9:15	0.032
2340	0.032	0.033	0.033	0.033	9:16:13 AM	10/11/2011 9:16	0.034
2400	0.031	0.032	0.032	0.032	9:17:13 AM	10/11/2011 9:17	0.032
2460	0.03	0.03	0.03	0.031	9:18:13 AM	10/11/2011 9:18	0.031
2520	0.026	0.026	0.027	0.027	9:19:13 AM	10/11/2011 9:19	0.027
2580	0.026	0.027	0.027	0.028	9:20:13 AM	10/11/2011 9:20	0.028
2640	0.029	0.029	0.029	0.029	9:21:13 AM	10/11/2011 9:21	0.03
2700	0.026	0.026	0.027	0.027	9:22:13 AM	10/11/2011 9:22	0.027
2760	0.023	0.023	0.023	0.024	9:23:13 AM	10/11/2011 9:23	0.024
2820	0.028	0.028	0.028	0.029	9:24:13 AM	10/11/2011 9:24	0.029
2880	0.029	0.03	0.03	0.031	9:25:13 AM	10/11/2011 9:25	0.031
2940	0.027	0.027	0.027	0.027	9:26:13 AM	10/11/2011 9:26	0.028
3000	0.025	0.025	0.025	0.026	9:27:13 AM	10/11/2011 9:27	0.026
3060	0.033	0.033	0.034	0.04	9:28:13 AM	10/11/2011 9:28	0.046
3120	0.03	0.031	0.031	0.032	9:29:13 AM	10/11/2011 9:29	0.032
3180	0.024	0.024	0.025	0.025	9:30:13 AM	10/11/2011 9:30	0.025
3240	0.03	0.031	0.031	0.031	9:31:13 AM	10/11/2011 9:31	0.031
3300	0.026	0.026	0.026	0.027	9:32:13 AM	10/11/2011 9:32	0.027
3360	0.024	0.024	0.024	0.024	9:33:13 AM	10/11/2011 9:33	0.024
3420	0.027	0.027	0.027	0.027	9:34:13 AM	10/11/2011 9:34	0.028
3480	0.026	0.026	0.026	0.026	9:35:13 AM	10/11/2011 9:35	0.026
3540	0.025	0.025	0.026	0.026	9:36:13 AM	10/11/2011 9:36	0.026
3600	0.021	0.022	0.022	0.022	9:37:13 AM	10/11/2011 9:37	0.022
3660	0.025	0.025	0.026	0.027	9:38:13 AM	10/11/2011 9:38	0.027
3720	0.028	0.028	0.028	0.029	9:39:13 AM	10/11/2011 9:39	0.029
3780	0.028	0.029	0.029	0.03	9:40:13 AM	10/11/2011 9:40	0.03
3840	0.025	0.025	0.025	0.026	9:41:13 AM	10/11/2011 9:41	0.026
3900	0.026	0.026	0.027	0.027	9:42:13 AM	10/11/2011 9:42	0.027
3960	0.028	0.029	0.029	0.03	9:43:13 AM	10/11/2011 9:43	0.031
4020	0.025	0.026	0.026	0.027	9:44:13 AM	10/11/2011 9:44	0.027
4080	0.027	0.027	0.028	0.03	9:45:13 AM	10/11/2011 9:45	0.032
4140	0.026	0.026	0.026	0.027	9:46:13 AM	10/11/2011 9:46	0.028
4200	0.023	0.024	0.024	0.024	9:47:13 AM	10/11/2011 9:47	0.024
4260	0.02	0.02	0.021	0.021	9:48:13 AM	10/11/2011 9:48	0.022
4320	0.021	0.021	0.021	0.021	9:49:13 AM	10/11/2011 9:49	0.021
4380	0.023	0.023	0.023	0.024	9:50:13 AM	10/11/2011 9:50	0.024
4440	0.029	0.029	0.03	0.03	9:51:13 AM	10/11/2011 9:51	0.031
4500	0.03	0.031	0.031	0.032	9:52:13 AM	10/11/2011 9:52	0.032
4560	0.032	0.033	0.033	0.034	9:53:13 AM	10/11/2011 9:53	0.034
4620	0.026	0.026	0.026	0.027	9:54:13 AM	10/11/2011 9:54	0.027
4680	0.022	0.022	0.022	0.023	9:55:13 AM	10/11/2011 9:55	0.023
4740	0.021	0.021	0.021	0.022	9:56:13 AM	10/11/2011 9:56	0.022
4800	0.025	0.025	0.025	0.025	9:57:13 AM	10/11/2011 9:57	0.025
4860	0.027	0.027	0.027	0.027	9:58:13 AM	10/11/2011 9:58	0.027
4920	0.024	0.024	0.024	0.025	9:59:13 AM	10/11/2011 9:59	0.025
4980	0.025	0.025	0.025	0.026	10:00:13 AM	10/11/2011 10:00	0.026
5040	0.023	0.023	0.024	0.024	10:01:13 AM	10/11/2011 10:01	0.025
5100	0.031	0.031	0.031	0.031	10:02:13 AM	10/11/2011 10:02	0.032
5160	0.025	0.025	0.026	0.026	10:03:13 AM	10/11/2011 10:03	0.027
5220	0.027	0.027	0.027	0.028	10:04:13 AM	10/11/2011 10:04	0.028
5280	0.027	0.027	0.027	0.027	10:05:13 AM	10/11/2011 10:05	0.027
5340	0.025	0.026	0.026	0.026	10:06:13 AM	10/11/2011 10:06	0.026
5400	0.025	0.025	0.025	0.025	10:07:13 AM	10/11/2011 10:07	0.025
5460	0.022	0.023	0.023	0.023	10:08:13 AM	10/11/2011 10:08	0.023
5520	0.02	0.02	0.021	0.021	10:09:13 AM	10/11/2011 10:09	0.021
5580	0.018	0.019	0.019	0.019	10:10:13 AM	10/11/2011 10:10	0.019
5640	0.021	0.021	0.022	0.022	10:11:13 AM	10/11/2011 10:11	0.022
5700	0.025	0.025	0.025	0.025	10:12:13 AM	10/11/2011 10:12	0.025
5760	0.025	0.025	0.025	0.027	10:13:13 AM	10/11/2011 10:13	0.027
5820	0.017	0.017	0.018	0.018	10:14:13 AM	10/11/2011 10:14	0.018
5880	0.019	0.019	0.019	0.02	10:15:13 AM	10/11/2011 10:15	0.02
5940	0.021	0.021	0.021	0.022	10:16:13 AM	10/11/2011 10:16	0.022
6000	0.023	0.023	0.024	0.024	10:17:13 AM	10/11/2011 10:17	0.024
6060	0.022	0.023	0.023	0.023	10:18:13 AM	10/11/2011 10:18	0.023

6120	0.025	0.025	0.025	0.026	10:19:13 AM	10/11/2011 10:19	0.026
6180	0.02	0.02	0.02	0.021	10:20:13 AM	10/11/2011 10:20	0.021
6240	0.021	0.022	0.022	0.023	10:21:13 AM	10/11/2011 10:21	0.023
6300	0.022	0.022	0.023	0.023	10:22:13 AM	10/11/2011 10:22	0.023
6360	0.03	0.031	0.031	0.032	10:23:13 AM	10/11/2011 10:23	0.032
6420	0.022	0.022	0.023	0.023	10:24:13 AM	10/11/2011 10:24	0.023
6480	0.022	0.022	0.022	0.022	10:25:13 AM	10/11/2011 10:25	0.022
6540	0.019	0.019	0.02	0.02	10:26:13 AM	10/11/2011 10:26	0.02
6600	0.019	0.019	0.019	0.02	10:27:13 AM	10/11/2011 10:27	0.02
6660	0.021	0.021	0.022	0.023	10:28:13 AM	10/11/2011 10:28	0.023
6720	0.02	0.02	0.02	0.021	10:29:13 AM	10/11/2011 10:29	0.021
6780	0.02	0.02	0.021	0.021	10:30:13 AM	10/11/2011 10:30	0.022
6840	0.014	0.014	0.015	0.015	10:31:13 AM	10/11/2011 10:31	0.015
6900	0.022	0.023	0.023	0.023	10:32:13 AM	10/11/2011 10:32	0.024
6960	0.024	0.024	0.025	0.026	10:33:13 AM	10/11/2011 10:33	0.026
7020	0.021	0.021	0.021	0.021	10:34:13 AM	10/11/2011 10:34	0.021
7080	0.02	0.02	0.021	0.021	10:35:13 AM	10/11/2011 10:35	0.022
7140	0.016	0.016	0.017	0.017	10:36:13 AM	10/11/2011 10:36	0.017
7200	0.014	0.014	0.015	0.015	10:37:13 AM	10/11/2011 10:37	0.015
7260	0.019	0.019	0.019	0.02	10:38:13 AM	10/11/2011 10:38	0.02
7320	0.013	0.013	0.013	0.013	10:39:13 AM	10/11/2011 10:39	0.013
7380	0.014	0.014	0.014	0.015	10:40:13 AM	10/11/2011 10:40	0.015
7440	0.015	0.015	0.015	0.016	10:41:13 AM	10/11/2011 10:41	0.016
7500	0.018	0.018	0.018	0.019	10:42:13 AM	10/11/2011 10:42	0.019
7560	0.017	0.017	0.018	0.018	10:43:13 AM	10/11/2011 10:43	0.018
7620	0.022	0.022	0.022	0.022	10:44:13 AM	10/11/2011 10:44	0.022
7680	0.019	0.019	0.02	0.02	10:45:13 AM	10/11/2011 10:45	0.02
7740	0.015	0.015	0.016	0.016	10:46:13 AM	10/11/2011 10:46	0.016
7800	0.013	0.014	0.014	0.015	10:47:13 AM	10/11/2011 10:47	0.015
7860	0.015	0.015	0.016	0.016	10:48:13 AM	10/11/2011 10:48	0.016
7920	0.021	0.021	0.022	0.023	10:49:13 AM	10/11/2011 10:49	0.023
7980	0.019	0.02	0.02	0.02	10:50:13 AM	10/11/2011 10:50	0.02
8040	0.024	0.025	0.026	0.027	10:51:13 AM	10/11/2011 10:51	0.027
8100	0.018	0.019	0.019	0.021	10:52:13 AM	10/11/2011 10:52	0.021
8160	0.021	0.021	0.022	0.022	10:53:13 AM	10/11/2011 10:53	0.022
8220	0.018	0.018	0.018	0.019	10:54:13 AM	10/11/2011 10:54	0.019
8280	0.013	0.013	0.013	0.014	10:55:13 AM	10/11/2011 10:55	0.014
8340	0.015	0.015	0.015	0.016	10:56:13 AM	10/11/2011 10:56	0.016
8400	0.016	0.016	0.016	0.017	10:57:13 AM	10/11/2011 10:57	0.017
8460	0.019	0.019	0.019	0.02	10:58:13 AM	10/11/2011 10:58	0.02
8520	0.019	0.019	0.02	0.02	10:59:13 AM	10/11/2011 10:59	0.02
8580	0.017	0.017	0.017	0.018	11:00:13 AM	10/11/2011 11:00	0.018
8640	0.019	0.019	0.02	0.02	11:01:13 AM	10/11/2011 11:01	0.02
8700	0.016	0.016	0.016	0.017	11:02:13 AM	10/11/2011 11:02	0.017
8760	0.017	0.017	0.017	0.017	11:03:13 AM	10/11/2011 11:03	0.017
8820	0.015	0.015	0.015	0.016	11:04:13 AM	10/11/2011 11:04	0.016
8880	0.013	0.013	0.013	0.014	11:05:13 AM	10/11/2011 11:05	0.014
8940	0.013	0.013	0.013	0.013	11:06:13 AM	10/11/2011 11:06	0.013
9000	0.02	0.02	0.02	0.021	11:07:13 AM	10/11/2011 11:07	0.021
9060	0.01	0.01	0.01	0.01	11:08:13 AM	10/11/2011 11:08	0.01
9120	0.012	0.013	0.013	0.013	11:09:13 AM	10/11/2011 11:09	0.014
9180	0.011	0.012	0.012	0.013	11:10:13 AM	10/11/2011 11:10	0.013
9240	0.013	0.013	0.013	0.014	11:11:13 AM	10/11/2011 11:11	0.014
9300	0.017	0.018	0.018	0.019	11:12:13 AM	10/11/2011 11:12	0.019
9360	0.011	0.011	0.011	0.012	11:13:13 AM	10/11/2011 11:13	0.012
9420	0.012	0.012	0.012	0.013	11:14:13 AM	10/11/2011 11:14	0.013
9480	0.015	0.015	0.015	0.015	11:15:13 AM	10/11/2011 11:15	0.016
9540	0.019	0.019	0.02	0.02	11:16:13 AM	10/11/2011 11:16	0.02
9600	0.019	0.019	0.019	0.021	11:17:13 AM	10/11/2011 11:17	0.021
9660	0.015	0.015	0.015	0.016	11:18:13 AM	10/11/2011 11:18	0.016
9720	0.012	0.012	0.012	0.013	11:19:13 AM	10/11/2011 11:19	0.013
9780	0.014	0.014	0.015	0.015	11:20:13 AM	10/11/2011 11:20	0.015
9840	0.026	0.027	0.028	0.031	11:21:13 AM	10/11/2011 11:21	0.031
9900	0.021	0.022	0.022	0.024	11:22:13 AM	10/11/2011 11:22	0.024
9960	0.018	0.018	0.018	0.02	11:23:13 AM	10/11/2011 11:23	0.02
10020	0.021	0.021	0.021	0.022	11:24:13 AM	10/11/2011 11:24	0.022
10080	0.014	0.014	0.014	0.015	11:25:13 AM	10/11/2011 11:25	0.015
10140	0.017	0.017	0.017	0.018	11:26:13 AM	10/11/2011 11:26	0.018
10200	0.012	0.012	0.012	0.013	11:27:13 AM	10/11/2011 11:27	0.013

10260	0.011	0.011	0.011	0.012	11:28:13 AM	10/11/2011 11:28	0.012
10320	0.014	0.014	0.014	0.015	11:29:13 AM	10/11/2011 11:29	0.016
10380	0.019	0.019	0.02	0.02	11:30:13 AM	10/11/2011 11:30	0.021
10440	0.017	0.017	0.017	0.018	11:31:13 AM	10/11/2011 11:31	0.018
10500	0.017	0.017	0.017	0.018	11:32:13 AM	10/11/2011 11:32	0.018
10560	0.015	0.016	0.016	0.017	11:33:13 AM	10/11/2011 11:33	0.017
10620	0.016	0.017	0.017	0.018	11:34:13 AM	10/11/2011 11:34	0.018
10680	0.015	0.015	0.016	0.016	11:35:13 AM	10/11/2011 11:35	0.016
10740	0.012	0.012	0.012	0.013	11:36:13 AM	10/11/2011 11:36	0.013
10800	0.016	0.016	0.016	0.017	11:37:13 AM	10/11/2011 11:37	0.017
10860	0.019	0.019	0.019	0.02	11:38:13 AM	10/11/2011 11:38	0.02
10920	0.017	0.017	0.017	0.018	11:39:13 AM	10/11/2011 11:39	0.018
10980	0.018	0.018	0.018	0.019	11:40:13 AM	10/11/2011 11:40	0.019
11040	0.018	0.019	0.019	0.019	11:41:13 AM	10/11/2011 11:41	0.019
11100	0.011	0.011	0.011	0.012	11:42:13 AM	10/11/2011 11:42	0.012
11160	0.01	0.01	0.01	0.011	11:43:13 AM	10/11/2011 11:43	0.011
11220	0.009	0.009	0.009	0.009	11:44:13 AM	10/11/2011 11:44	0.009
11280	0.009	0.009	0.009	0.009	11:45:13 AM	10/11/2011 11:45	0.009
11340	0.009	0.009	0.01	0.01	11:46:13 AM	10/11/2011 11:46	0.01
11400	0.01	0.01	0.01	0.01	11:47:13 AM	10/11/2011 11:47	0.01
11460	0.01	0.011	0.011	0.011	11:48:13 AM	10/11/2011 11:48	0.011
11520	0.011	0.011	0.012	0.012	11:49:13 AM	10/11/2011 11:49	0.013
11580	0.014	0.014	0.015	0.017	11:50:13 AM	10/11/2011 11:50	0.017
11640	0.02	0.02	0.02	0.021	11:51:13 AM	10/11/2011 11:51	0.021
11700	0.012	0.012	0.012	0.013	11:52:13 AM	10/11/2011 11:52	0.013
11760	0.012	0.012	0.012	0.013	11:53:13 AM	10/11/2011 11:53	0.013
11820	0.015	0.015	0.016	0.017	11:54:13 AM	10/11/2011 11:54	0.017
11880	0.015	0.015	0.015	0.016	11:55:13 AM	10/11/2011 11:55	0.016
11940	0.01	0.01	0.01	0.011	11:56:13 AM	10/11/2011 11:56	0.011
12000	0.008	0.008	0.008	0.009	11:57:13 AM	10/11/2011 11:57	0.009
12060	0.009	0.009	0.01	0.01	11:58:13 AM	10/11/2011 11:58	0.01
12120	0.009	0.009	0.009	0.009	11:59:13 AM	10/11/2011 11:59	0.009
12180	0.01	0.01	0.011	0.011	12:00:13 PM	10/11/2011 12:00	0.011
12240	0.009	0.009	0.009	0.01	12:01:13 PM	10/11/2011 12:01	0.01
12300	0.009	0.009	0.009	0.01	12:02:13 PM	10/11/2011 12:02	0.01
12360	0.009	0.009	0.009	0.01	12:03:13 PM	10/11/2011 12:03	0.01
12420	0.009	0.009	0.01	0.01	12:04:13 PM	10/11/2011 12:04	0.01
12480	0.01	0.01	0.01	0.011	12:05:13 PM	10/11/2011 12:05	0.011
12540	0.011	0.011	0.011	0.012	12:06:13 PM	10/11/2011 12:06	0.012
12600	0.01	0.01	0.01	0.011	12:07:13 PM	10/11/2011 12:07	0.011
12660	0.01	0.011	0.011	0.012	12:08:13 PM	10/11/2011 12:08	0.012
12720	0.01	0.011	0.011	0.012	12:09:13 PM	10/11/2011 12:09	0.012
12780	0.01	0.011	0.011	0.012	12:10:13 PM	10/11/2011 12:10	0.012
12840	0.009	0.009	0.01	0.01	12:11:13 PM	10/11/2011 12:11	0.01
12900	0.01	0.01	0.011	0.011	12:12:13 PM	10/11/2011 12:12	0.011
12960	0.009	0.009	0.009	0.01	12:13:13 PM	10/11/2011 12:13	0.01
13020	0.009	0.009	0.009	0.009	12:14:13 PM	10/11/2011 12:14	0.009
13080	0.01	0.01	0.011	0.011	12:15:13 PM	10/11/2011 12:15	0.012
13140	0.009	0.01	0.01	0.01	12:16:13 PM	10/11/2011 12:16	0.01
13200	0.009	0.009	0.01	0.01	12:17:13 PM	10/11/2011 12:17	0.01
13260	0.009	0.009	0.009	0.01	12:18:13 PM	10/11/2011 12:18	0.01
13320	0.009	0.009	0.01	0.01	12:19:13 PM	10/11/2011 12:19	0.011
13380	0.01	0.01	0.01	0.011	12:20:13 PM	10/11/2011 12:20	0.011
13440	0.011	0.011	0.011	0.012	12:21:13 PM	10/11/2011 12:21	0.012
13500	0.011	0.011	0.012	0.012	12:22:13 PM	10/11/2011 12:22	0.012
13560	0.01	0.01	0.011	0.011	12:23:13 PM	10/11/2011 12:23	0.011
13620	0.01	0.01	0.01	0.011	12:24:13 PM	10/11/2011 12:24	0.011
13680	0.009	0.009	0.009	0.01	12:25:13 PM	10/11/2011 12:25	0.01
13740	0.01	0.01	0.01	0.01	12:26:13 PM	10/11/2011 12:26	0.01
13800	0.01	0.01	0.011	0.011	12:27:13 PM	10/11/2011 12:27	0.011
13860	0.01	0.01	0.01	0.01	12:28:13 PM	10/11/2011 12:28	0.01
13920	0.034	0.034	0.034	0.035	12:29:13 PM	10/11/2011 12:29	0.035
13980	0.01	0.01	0.01	0.011	12:30:13 PM	10/11/2011 12:30	0.011
14040	0.012	0.012	0.012	0.013	12:31:13 PM	10/11/2011 12:31	0.013
14100	0.011	0.011	0.011	0.012	12:32:13 PM	10/11/2011 12:32	0.012
14160	0.011	0.012	0.012	0.013	12:33:13 PM	10/11/2011 12:33	0.013
14220	0.016	0.016	0.016	0.017	12:34:13 PM	10/11/2011 12:34	0.017
14280	0.012	0.012	0.013	0.013	12:35:13 PM	10/11/2011 12:35	0.013
14340	0.012	0.012	0.012	0.013	12:36:13 PM	10/11/2011 12:36	0.013

14400	0.013	0.014	0.014	0.014	12:37:13 PM	10/11/2011 12:37	0.014
14460	0.012	0.012	0.012	0.012	12:38:13 PM	10/11/2011 12:38	0.012
14520	0.009	0.009	0.01	0.01	12:39:13 PM	10/11/2011 12:39	0.01
14580	0.009	0.009	0.009	0.01	12:40:13 PM	10/11/2011 12:40	0.01
14640	0.01	0.01	0.011	0.012	12:41:13 PM	10/11/2011 12:41	0.012
14700	0.009	0.009	0.009	0.01	12:42:13 PM	10/11/2011 12:42	0.01
14760	0.015	0.015	0.015	0.016	12:43:13 PM	10/11/2011 12:43	0.016
14820	0.021	0.021	0.022	0.023	12:44:13 PM	10/11/2011 12:44	0.023
14880	0.014	0.014	0.015	0.016	12:45:13 PM	10/11/2011 12:45	0.017
14940	0.015	0.015	0.016	0.016	12:46:13 PM	10/11/2011 12:46	0.016
15000	0.022	0.022	0.022	0.023	12:47:13 PM	10/11/2011 12:47	0.023
15060	0.016	0.016	0.017	0.018	12:48:13 PM	10/11/2011 12:48	0.018
15120	0.014	0.015	0.015	0.016	12:49:13 PM	10/11/2011 12:49	0.016
15180	0.013	0.013	0.013	0.014	12:50:13 PM	10/11/2011 12:50	0.014
15240	0.015	0.016	0.016	0.017	12:51:13 PM	10/11/2011 12:51	0.017
15300	0.018	0.018	0.018	0.019	12:52:13 PM	10/11/2011 12:52	0.019
15360	0.016	0.016	0.017	0.017	12:53:13 PM	10/11/2011 12:53	0.017
15420	0.017	0.017	0.017	0.018	12:54:13 PM	10/11/2011 12:54	0.018
15480	0.013	0.014	0.014	0.014	12:55:13 PM	10/11/2011 12:55	0.014
15540	0.011	0.011	0.011	0.012	12:56:13 PM	10/11/2011 12:56	0.012
15600	0.013	0.013	0.013	0.014	12:57:13 PM	10/11/2011 12:57	0.014
15660	0.019	0.019	0.019	0.02	12:58:13 PM	10/11/2011 12:58	0.02
15720	0.017	0.018	0.018	0.019	12:59:13 PM	10/11/2011 12:59	0.019
15780	0.021	0.021	0.021	0.022	1:00:13 PM	10/11/2011 13:00	0.022
15840	0.02	0.02	0.02	0.021	1:01:13 PM	10/11/2011 13:01	0.021
15900	0.018	0.018	0.018	0.019	1:02:13 PM	10/11/2011 13:02	0.019
15960	0.017	0.017	0.018	0.018	1:03:13 PM	10/11/2011 13:03	0.018
16020	0.019	0.019	0.019	0.02	1:04:13 PM	10/11/2011 13:04	0.02
16080	0.016	0.017	0.017	0.017	1:05:13 PM	10/11/2011 13:05	0.017
16140	0.012	0.012	0.013	0.014	1:06:13 PM	10/11/2011 13:06	0.014
16200	0.012	0.012	0.012	0.013	1:07:13 PM	10/11/2011 13:07	0.013
16260	0.014	0.014	0.014	0.015	1:08:13 PM	10/11/2011 13:08	0.015
16320	0.017	0.017	0.017	0.018	1:09:13 PM	10/11/2011 13:09	0.018
16380	0.015	0.015	0.016	0.016	1:10:13 PM	10/11/2011 13:10	0.016
16440	0.014	0.015	0.015	0.016	1:11:13 PM	10/11/2011 13:11	0.016
16500	0.016	0.017	0.017	0.019	1:12:13 PM	10/11/2011 13:12	0.019
16560	0.017	0.017	0.018	0.019	1:13:13 PM	10/11/2011 13:13	0.019
16620	0.015	0.015	0.016	0.016	1:14:13 PM	10/11/2011 13:14	0.016
16680	0.016	0.016	0.016	0.017	1:15:13 PM	10/11/2011 13:15	0.017
16740	0.014	0.014	0.014	0.015	1:16:13 PM	10/11/2011 13:16	0.015
16800	0.012	0.013	0.013	0.013	1:17:13 PM	10/11/2011 13:17	0.013
16860	0.014	0.015	0.015	0.015	1:18:13 PM	10/11/2011 13:18	0.015
16920	0.018	0.018	0.019	0.019	1:19:13 PM	10/11/2011 13:19	0.019
16980	0.019	0.019	0.02	0.021	1:20:13 PM	10/11/2011 13:20	0.021
17040	0.016	0.016	0.017	0.017	1:21:13 PM	10/11/2011 13:21	0.018
17100	0.014	0.015	0.015	0.016	1:22:13 PM	10/11/2011 13:22	0.016
17160	0.014	0.014	0.015	0.015	1:23:13 PM	10/11/2011 13:23	0.016
17220	0.013	0.013	0.013	0.014	1:24:13 PM	10/11/2011 13:24	0.014
17280	0.02	0.021	0.022	0.025	1:25:13 PM	10/11/2011 13:25	0.026
17340	0.016	0.016	0.017	0.019	1:26:13 PM	10/11/2011 13:26	0.019
17400	0.014	0.015	0.015	0.017	1:27:13 PM	10/11/2011 13:27	0.017
17460	0.015	0.015	0.016	0.016	1:28:13 PM	10/11/2011 13:28	0.016
17520	0.02	0.02	0.021	0.022	1:29:13 PM	10/11/2011 13:29	0.022
17580	0.016	0.016	0.016	0.017	1:30:13 PM	10/11/2011 13:30	0.017
17640	0.016	0.016	0.016	0.017	1:31:13 PM	10/11/2011 13:31	0.017
17700	0.016	0.017	0.018	0.021	1:32:13 PM	10/11/2011 13:32	0.021
17760	0.016	0.016	0.016	0.017	1:33:13 PM	10/11/2011 13:33	0.019
17820	0.011	0.011	0.011	0.012	1:34:13 PM	10/11/2011 13:34	0.012
17880	0.011	0.011	0.011	0.012	1:35:13 PM	10/11/2011 13:35	0.012
17940	0.014	0.014	0.014	0.016	1:36:13 PM	10/11/2011 13:36	0.016
18000	0.012	0.012	0.012	0.013	1:37:13 PM	10/11/2011 13:37	0.013
18060	0.016	0.017	0.017	0.018	1:38:13 PM	10/11/2011 13:38	0.018
18120	0.014	0.014	0.014	0.016	1:39:13 PM	10/11/2011 13:39	0.016
18180	0.015	0.015	0.016	0.017	1:40:13 PM	10/11/2011 13:40	0.017
18240	0.015	0.015	0.016	0.017	1:41:13 PM	10/11/2011 13:41	0.018
18300	0.014	0.014	0.014	0.015	1:42:13 PM	10/11/2011 13:42	0.015
18360	0.013	0.013	0.013	0.014	1:43:13 PM	10/11/2011 13:43	0.014
18420	0.012	0.012	0.013	0.014	1:44:13 PM	10/11/2011 13:44	0.014
18480	0.012	0.012	0.013	0.014	1:45:13 PM	10/11/2011 13:45	0.014

18540	0.012	0.012	0.012	0.014	1:46:13 PM	10/11/2011 13:46	0.014
18600	0.014	0.014	0.014	0.015	1:47:13 PM	10/11/2011 13:47	0.016
18660	0.018	0.018	0.018	0.019	1:48:13 PM	10/11/2011 13:48	0.02
18720	0.015	0.016	0.016	0.017	1:49:13 PM	10/11/2011 13:49	0.018
18780	0.019	0.019	0.02	0.021	1:50:13 PM	10/11/2011 13:50	0.022
18840	0.025	0.025	0.026	0.027	1:51:13 PM	10/11/2011 13:51	0.027
18900	0.017	0.017	0.017	0.019	1:52:13 PM	10/11/2011 13:52	0.019
18960	0.014	0.015	0.015	0.017	1:53:13 PM	10/11/2011 13:53	0.017
19020	0.017	0.017	0.017	0.018	1:54:13 PM	10/11/2011 13:54	0.018
19080	0.015	0.016	0.016	0.017	1:55:13 PM	10/11/2011 13:55	0.018
19140	0.016	0.016	0.017	0.018	1:56:13 PM	10/11/2011 13:56	0.018
19200	0.014	0.014	0.014	0.015	1:57:13 PM	10/11/2011 13:57	0.015
19260	0.014	0.014	0.015	0.015	1:58:13 PM	10/11/2011 13:58	0.015
19320	0.017	0.017	0.017	0.019	1:59:13 PM	10/11/2011 13:59	0.019
19380	0.016	0.016	0.016	0.018	2:00:13 PM	10/11/2011 14:00	0.018
19440	0.017	0.017	0.018	0.019	2:01:13 PM	10/11/2011 14:01	0.019
19500	0.019	0.019	0.02	0.023	2:02:13 PM	10/11/2011 14:02	0.025
19560	0.013	0.013	0.014	0.015	2:03:13 PM	10/11/2011 14:03	0.015
19620	0.013	0.013	0.013	0.014	2:04:13 PM	10/11/2011 14:04	0.014
19680	0.011	0.011	0.011	0.012	2:05:13 PM	10/11/2011 14:05	0.012
19740	0.011	0.011	0.011	0.011	2:06:13 PM	10/11/2011 14:06	0.011
19800	0.011	0.011	0.012	0.012	2:07:13 PM	10/11/2011 14:07	0.013
19860	0.01	0.01	0.01	0.011	2:08:13 PM	10/11/2011 14:08	0.011
19920	0.012	0.012	0.012	0.013	2:09:13 PM	10/11/2011 14:09	0.013

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533112903
Firmware Version	2.8
Calibration Date	7/18/2011
Test Name	MANUAL_006
Test Start Time	8:33:20
Test Start Date	10/11/2011
Test Length [D:H:M]	0:05:34
Test Interval [M:S]	1:00
PM1 Average [mg/m3]	0.02
PM1 Minimum [mg/m3]	0
PM1 Maximum [mg/m3]	0.12
PM1 TWA [mg/m3]	0.014
PM2.5 Average [mg/m3]	0.021
PM2.5 Minimum [mg/m3]	0
PM2.5 Maximum [mg/m3]	0.134
PM2.5 TWA [mg/m3]	0.015
PM4 Average [mg/m3]	0.022
PM4 Minimum [mg/m3]	0
PM4 Maximum [mg/m3]	0.163
PM4 TWA [mg/m3]	0.015
PM10 Average [mg/m3]	0.025
PM10 Minimum [mg/m3]	0
PM10 Maximum [mg/m3]	0.229
PM10 TWA [mg/m3]	0.017
TOTAL Average [mg/m3]	0.026
TOTAL Minimum [mg/m3]	0
TOTAL Maximum [mg/m3]	0.243
TOTAL TWA [mg/m3]	0.018
Photometric User Cal	1
Size Correction User Cal	1
Flow User Cal	1
Errors	
Number of Samples	334

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	8:33:20	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.058	0.059	0.061	0.082	8:34:20	10/11/2011 8:34	0.106		
120	0.039	0.04	0.041	0.044	8:35:20	10/11/2011 8:35	0.045		
180	0.055	0.055	0.057	0.061	8:36:20	10/11/2011 8:36	0.062		
240	0.089	0.097	0.109	0.133	8:37:20	10/11/2011 8:37	0.136		
300	0.037	0.038	0.04	0.044	8:38:20	10/11/2011 8:38	0.044		
360	0.034	0.034	0.035	0.037	8:39:20	10/11/2011 8:39	0.038		
420	0.036	0.036	0.037	0.04	8:40:20	10/11/2011 8:40	0.041		
480	0.045	0.047	0.051	0.056	8:41:20	10/11/2011 8:41	0.057		
540	0.038	0.039	0.04	0.042	8:42:20	10/11/2011 8:42	0.042		
600	0.046	0.046	0.047	0.05	8:43:20	10/11/2011 8:43	0.051		
660	0.044	0.044	0.045	0.048	8:44:20	10/11/2011 8:44	0.049		
720	0.039	0.039	0.04	0.043	8:45:20	10/11/2011 8:45	0.043		
780	0.035	0.035	0.037	0.041	8:46:20	10/11/2011 8:46	0.043		
840	0.039	0.04	0.041	0.044	8:47:20	10/11/2011 8:47	0.046		
900	0.037	0.038	0.038	0.04	8:48:20	10/11/2011 8:48	0.042		
960	0.037	0.037	0.038	0.04	8:49:20	10/11/2011 8:49	0.041		
1020	0.045	0.045	0.046	0.049	8:50:20	10/11/2011 8:50	0.051		
1080	0.03	0.031	0.031	0.033	8:51:20	10/11/2011 8:51	0.033		
1140	0.044	0.044	0.046	0.056	8:52:20	10/11/2011 8:52	0.066		
1200	0.031	0.032	0.032	0.034	8:53:20	10/11/2011 8:53	0.036		
1260	0.031	0.031	0.032	0.035	8:54:20	10/11/2011 8:54	0.035		
1320	0.032	0.033	0.034	0.035	8:55:20	10/11/2011 8:55	0.037		
1380	0.03	0.03	0.031	0.033	8:56:20	10/11/2011 8:56	0.035		
1440	0.028	0.029	0.03	0.032	8:57:20	10/11/2011 8:57	0.034		
1500	0.099	0.106	0.132	0.229	8:58:20	10/11/2011 8:58	0.243		
1560	0.028	0.028	0.029	0.031	8:59:20	10/11/2011 8:59	0.031		
1620	0.028	0.029	0.029	0.033	9:00:20	10/11/2011 9:00	0.033		
1680	0.032	0.032	0.033	0.034	9:01:20	10/11/2011 9:01	0.035		
1740	0.034	0.035	0.036	0.04	9:02:20	10/11/2011 9:02	0.041		
1800	0.027	0.027	0.028	0.03	9:03:20	10/11/2011 9:03	0.03		
1860	0.029	0.029	0.03	0.031	9:04:20	10/11/2011 9:04	0.032		
1920	0.029	0.029	0.03	0.032	9:05:20	10/11/2011 9:05	0.032		

1980	0.028	0.028	0.029	0.031	9:06:20	10/11/2011 9:06	0.032
2040	0.027	0.027	0.028	0.031	9:07:20	10/11/2011 9:07	0.032
2100	0.03	0.03	0.031	0.032	9:08:20	10/11/2011 9:08	0.033
2160	0.032	0.033	0.034	0.036	9:09:20	10/11/2011 9:09	0.036
2220	0.029	0.029	0.03	0.031	9:10:20	10/11/2011 9:10	0.032
2280	0.029	0.029	0.03	0.033	9:11:20	10/11/2011 9:11	0.034
2340	0.028	0.028	0.029	0.031	9:12:20	10/11/2011 9:12	0.031
2400	0.029	0.03	0.031	0.033	9:13:20	10/11/2011 9:13	0.033
2460	0.031	0.032	0.033	0.035	9:14:20	10/11/2011 9:14	0.036
2520	0.027	0.028	0.028	0.031	9:15:20	10/11/2011 9:15	0.031
2580	0.036	0.037	0.037	0.039	9:16:20	10/11/2011 9:16	0.04
2640	0.03	0.031	0.032	0.033	9:17:20	10/11/2011 9:17	0.033
2700	0.032	0.033	0.033	0.035	9:18:20	10/11/2011 9:18	0.035
2760	0.027	0.028	0.028	0.031	9:19:20	10/11/2011 9:19	0.032
2820	0.027	0.027	0.029	0.031	9:20:20	10/11/2011 9:20	0.032
2880	0.049	0.052	0.056	0.066	9:21:20	10/11/2011 9:21	0.069
2940	0.12	0.134	0.163	0.229	9:22:20	10/11/2011 9:22	0.24
3000	0.029	0.03	0.031	0.033	9:23:20	10/11/2011 9:23	0.034
3060	0.083	0.084	0.086	0.091	9:24:20	10/11/2011 9:24	0.091
3120	0.116	0.127	0.15	0.194	9:25:20	10/11/2011 9:25	0.198
3180	0.069	0.075	0.084	0.1	9:26:20	10/11/2011 9:26	0.101
3240	0.029	0.029	0.031	0.033	9:27:20	10/11/2011 9:27	0.033
3300	0.059	0.06	0.062	0.07	9:28:20	10/11/2011 9:28	0.071
3360	0.029	0.029	0.031	0.035	9:29:20	10/11/2011 9:29	0.036
3420	0.029	0.029	0.03	0.033	9:30:20	10/11/2011 9:30	0.033
3480	0.04	0.042	0.046	0.059	9:31:20	10/11/2011 9:31	0.062
3540	0.058	0.062	0.071	0.106	9:32:20	10/11/2011 9:32	0.112
3600	0.034	0.035	0.037	0.042	9:33:20	10/11/2011 9:33	0.043
3660	0.031	0.032	0.034	0.039	9:34:20	10/11/2011 9:34	0.039
3720	0.031	0.031	0.032	0.036	9:35:20	10/11/2011 9:35	0.037
3780	0.03	0.03	0.031	0.033	9:36:20	10/11/2011 9:36	0.033
3840	0.031	0.031	0.032	0.035	9:37:20	10/11/2011 9:37	0.035
3900	0.033	0.033	0.034	0.037	9:38:20	10/11/2011 9:38	0.039
3960	0.033	0.034	0.035	0.038	9:39:20	10/11/2011 9:39	0.038
4020	0.034	0.035	0.036	0.038	9:40:20	10/11/2011 9:40	0.039
4080	0.033	0.034	0.034	0.036	9:41:20	10/11/2011 9:41	0.038
4140	0.029	0.029	0.03	0.034	9:42:20	10/11/2011 9:42	0.035
4200	0.029	0.029	0.03	0.035	9:43:20	10/11/2011 9:43	0.035
4260	0.023	0.024	0.025	0.027	9:44:20	10/11/2011 9:44	0.027
4320	0.031	0.032	0.033	0.035	9:45:20	10/11/2011 9:45	0.036
4380	0.025	0.025	0.027	0.03	9:46:20	10/11/2011 9:46	0.032
4440	0.022	0.023	0.024	0.025	9:47:20	10/11/2011 9:47	0.026
4500	0.022	0.022	0.023	0.024	9:48:20	10/11/2011 9:48	0.024
4560	0.022	0.023	0.023	0.024	9:49:20	10/11/2011 9:49	0.025
4620	0.026	0.026	0.027	0.029	9:50:20	10/11/2011 9:50	0.03
4680	0.03	0.03	0.031	0.033	9:51:20	10/11/2011 9:51	0.034
4740	0.026	0.026	0.027	0.029	9:52:20	10/11/2011 9:52	0.03
4800	0.029	0.029	0.03	0.032	9:53:20	10/11/2011 9:53	0.032
4860	0.023	0.023	0.024	0.026	9:54:20	10/11/2011 9:54	0.026
4920	0.022	0.022	0.023	0.025	9:55:20	10/11/2011 9:55	0.025
4980	0.023	0.023	0.024	0.025	9:56:20	10/11/2011 9:56	0.025
5040	0.028	0.028	0.029	0.03	9:57:20	10/11/2011 9:57	0.031
5100	0.026	0.027	0.027	0.029	9:58:20	10/11/2011 9:58	0.03
5160	0.023	0.024	0.024	0.026	9:59:20	10/11/2011 9:59	0.026
5220	0.029	0.029	0.03	0.031	10:00:20	10/11/2011 10:00	0.032
5280	0.028	0.029	0.03	0.031	10:01:20	10/11/2011 10:01	0.032
5340	0.027	0.028	0.028	0.03	10:02:20	10/11/2011 10:02	0.03
5400	0.026	0.026	0.027	0.03	10:03:20	10/11/2011 10:03	0.03
5460	0.027	0.027	0.028	0.029	10:04:20	10/11/2011 10:04	0.03
5520	0.028	0.028	0.029	0.031	10:05:20	10/11/2011 10:05	0.031
5580	0.03	0.031	0.032	0.034	10:06:20	10/11/2011 10:06	0.034
5640	0.026	0.027	0.028	0.029	10:07:20	10/11/2011 10:07	0.029
5700	0.033	0.033	0.035	0.037	10:08:20	10/11/2011 10:08	0.038
5760	0.03	0.032	0.033	0.039	10:09:20	10/11/2011 10:09	0.041
5820	0.028	0.029	0.03	0.034	10:10:20	10/11/2011 10:10	0.035
5880	0.027	0.028	0.029	0.032	10:11:20	10/11/2011 10:11	0.033
5940	0.025	0.026	0.027	0.029	10:12:20	10/11/2011 10:12	0.029
6000	0.046	0.046	0.048	0.054	10:13:20	10/11/2011 10:13	0.056
6060	0.019	0.019	0.02	0.022	10:14:20	10/11/2011 10:14	0.022

6120	0.024	0.024	0.025	0.027	10:15:20	10/11/2011 10:15	0.027
6180	0.023	0.023	0.024	0.026	10:16:20	10/11/2011 10:16	0.026
6240	0.022	0.023	0.023	0.024	10:17:20	10/11/2011 10:17	0.025
6300	0.023	0.023	0.024	0.025	10:18:20	10/11/2011 10:18	0.025
6360	0.019	0.02	0.02	0.022	10:19:20	10/11/2011 10:19	0.022
6420	0.023	0.023	0.024	0.027	10:20:20	10/11/2011 10:20	0.028
6480	0.021	0.021	0.022	0.023	10:21:20	10/11/2011 10:21	0.024
6540	0.025	0.025	0.027	0.031	10:22:20	10/11/2011 10:22	0.032
6600	0.028	0.029	0.03	0.035	10:23:20	10/11/2011 10:23	0.036
6660	0.031	0.031	0.032	0.034	10:24:20	10/11/2011 10:24	0.034
6720	0.032	0.033	0.033	0.035	10:25:20	10/11/2011 10:25	0.035
6780	0.025	0.025	0.026	0.027	10:26:20	10/11/2011 10:26	0.027
6840	0.029	0.029	0.03	0.033	10:27:20	10/11/2011 10:27	0.034
6900	0.025	0.026	0.027	0.031	10:28:20	10/11/2011 10:28	0.035
6960	0.029	0.029	0.03	0.032	10:29:20	10/11/2011 10:29	0.032
7020	0.03	0.031	0.033	0.04	10:30:20	10/11/2011 10:30	0.041
7080	0.024	0.024	0.026	0.031	10:31:20	10/11/2011 10:31	0.031
7140	0.026	0.026	0.027	0.03	10:32:20	10/11/2011 10:32	0.03
7200	0.023	0.023	0.024	0.026	10:33:20	10/11/2011 10:33	0.027
7260	0.023	0.023	0.024	0.025	10:34:20	10/11/2011 10:34	0.026
7320	0.018	0.019	0.019	0.021	10:35:20	10/11/2011 10:35	0.022
7380	0.015	0.015	0.016	0.017	10:36:20	10/11/2011 10:36	0.018
7440	0.017	0.017	0.018	0.019	10:37:20	10/11/2011 10:37	0.019
7500	0.017	0.018	0.018	0.02	10:38:20	10/11/2011 10:38	0.02
7560	0.017	0.017	0.018	0.019	10:39:20	10/11/2011 10:39	0.02
7620	0.02	0.02	0.021	0.023	10:40:20	10/11/2011 10:40	0.023
7680	0.02	0.021	0.022	0.025	10:41:20	10/11/2011 10:41	0.025
7740	0.066	0.066	0.069	0.093	10:42:20	10/11/2011 10:42	0.108
7800	0.024	0.025	0.026	0.028	10:43:20	10/11/2011 10:43	0.029
7860	0.023	0.023	0.024	0.025	10:44:20	10/11/2011 10:44	0.025
7920	0.028	0.029	0.031	0.035	10:45:20	10/11/2011 10:45	0.036
7980	0.018	0.018	0.019	0.021	10:46:20	10/11/2011 10:46	0.022
8040	0.016	0.017	0.017	0.019	10:47:20	10/11/2011 10:47	0.02
8100	0.017	0.018	0.018	0.02	10:48:20	10/11/2011 10:48	0.02
8160	0.017	0.018	0.018	0.02	10:49:20	10/11/2011 10:49	0.02
8220	0.026	0.027	0.028	0.031	10:50:20	10/11/2011 10:50	0.031
8280	0.025	0.026	0.028	0.032	10:51:20	10/11/2011 10:51	0.034
8340	0.019	0.02	0.021	0.023	10:52:20	10/11/2011 10:52	0.023
8400	0.023	0.023	0.024	0.025	10:53:20	10/11/2011 10:53	0.026
8460	0.022	0.022	0.023	0.025	10:54:20	10/11/2011 10:54	0.026
8520	0.024	0.025	0.026	0.028	10:55:20	10/11/2011 10:55	0.029
8580	0.026	0.026	0.028	0.032	10:56:20	10/11/2011 10:56	0.033
8640	0.022	0.023	0.023	0.026	10:57:20	10/11/2011 10:57	0.026
8700	0.019	0.019	0.02	0.021	10:58:20	10/11/2011 10:58	0.021
8760	0.024	0.025	0.025	0.027	10:59:20	10/11/2011 10:59	0.028
8820	0.025	0.025	0.026	0.027	11:00:20	10/11/2011 11:00	0.028
8880	0.032	0.032	0.033	0.04	11:01:20	10/11/2011 11:01	0.046
8940	0.027	0.028	0.028	0.032	11:02:20	10/11/2011 11:02	0.033
9000	0.026	0.027	0.028	0.032	11:03:20	10/11/2011 11:03	0.032
9060	0.025	0.025	0.026	0.029	11:04:20	10/11/2011 11:04	0.03
9120	0.022	0.023	0.023	0.025	11:05:20	10/11/2011 11:05	0.025
9180	0.019	0.02	0.021	0.022	11:06:20	10/11/2011 11:06	0.023
9240	0.017	0.018	0.018	0.019	11:07:20	10/11/2011 11:07	0.02
9300	0.016	0.017	0.018	0.02	11:08:20	10/11/2011 11:08	0.021
9360	0.016	0.016	0.017	0.019	11:09:20	10/11/2011 11:09	0.02
9420	0.017	0.018	0.018	0.02	11:10:20	10/11/2011 11:10	0.021
9480	0.022	0.022	0.023	0.029	11:11:20	10/11/2011 11:11	0.033
9540	0.022	0.023	0.025	0.03	11:12:20	10/11/2011 11:12	0.031
9600	0.02	0.021	0.022	0.026	11:13:20	10/11/2011 11:13	0.027
9660	0.019	0.019	0.02	0.022	11:14:20	10/11/2011 11:14	0.023
9720	0.023	0.023	0.024	0.026	11:15:20	10/11/2011 11:15	0.026
9780	0.022	0.022	0.023	0.025	11:16:20	10/11/2011 11:16	0.025
9840	0.024	0.024	0.025	0.026	11:17:20	10/11/2011 11:17	0.028
9900	0.019	0.019	0.02	0.022	11:18:20	10/11/2011 11:18	0.023
9960	0.014	0.015	0.015	0.016	11:19:20	10/11/2011 11:19	0.017
10020	0.018	0.019	0.02	0.022	11:20:20	10/11/2011 11:20	0.022
10080	0.02	0.021	0.024	0.028	11:21:20	10/11/2011 11:21	0.028
10140	0.028	0.029	0.031	0.035	11:22:20	10/11/2011 11:22	0.036
10200	0.026	0.026	0.028	0.031	11:23:20	10/11/2011 11:23	0.031

10260	0.022	0.022	0.023	0.026	11:24:20	10/11/2011 11:24	0.027
10320	0.022	0.022	0.023	0.025	11:25:20	10/11/2011 11:25	0.026
10380	0.024	0.024	0.025	0.028	11:26:20	10/11/2011 11:26	0.029
10440	0.016	0.016	0.017	0.019	11:27:20	10/11/2011 11:27	0.021
10500	0.018	0.018	0.019	0.02	11:28:20	10/11/2011 11:28	0.021
10560	0.02	0.021	0.021	0.023	11:29:20	10/11/2011 11:29	0.024
10620	0.02	0.02	0.021	0.022	11:30:20	10/11/2011 11:30	0.023
10680	0.022	0.023	0.023	0.027	11:31:20	10/11/2011 11:31	0.029
10740	0.023	0.023	0.024	0.026	11:32:20	10/11/2011 11:32	0.026
10800	0.027	0.028	0.029	0.032	11:33:20	10/11/2011 11:33	0.033
10860	0.025	0.026	0.027	0.029	11:34:20	10/11/2011 11:34	0.03
10920	0.016	0.016	0.017	0.019	11:35:20	10/11/2011 11:35	0.019
10980	0.015	0.016	0.016	0.018	11:36:20	10/11/2011 11:36	0.018
11040	0.018	0.019	0.019	0.021	11:37:20	10/11/2011 11:37	0.022
11100	0.022	0.023	0.023	0.026	11:38:20	10/11/2011 11:38	0.026
11160	0.017	0.017	0.018	0.02	11:39:20	10/11/2011 11:39	0.02
11220	0.023	0.023	0.024	0.025	11:40:20	10/11/2011 11:40	0.025
11280	0.024	0.024	0.025	0.028	11:41:20	10/11/2011 11:41	0.028
11340	0.017	0.018	0.019	0.021	11:42:20	10/11/2011 11:42	0.023
11400	0.015	0.015	0.016	0.017	11:43:20	10/11/2011 11:43	0.017
11460	0.014	0.015	0.015	0.017	11:44:20	10/11/2011 11:44	0.017
11520	0.016	0.016	0.017	0.019	11:45:20	10/11/2011 11:45	0.02
11580	0.018	0.019	0.02	0.021	11:46:20	10/11/2011 11:46	0.021
11640	0.003	0.003	0.004	0.009	11:47:20	10/11/2011 11:47	0.014
11700	0	0	0	0	11:48:20	10/11/2011 11:48	0
11760	0	0	0	0	11:49:20	10/11/2011 11:49	0.001
11820	0	0	0	0	11:50:20	10/11/2011 11:50	0
11880	0	0	0	0	11:51:20	10/11/2011 11:51	0
11940	0	0	0	0	11:52:20	10/11/2011 11:52	0
12000	0	0	0	0	11:53:20	10/11/2011 11:53	0
12060	0	0	0	0	11:54:20	10/11/2011 11:54	0
12120	0	0	0	0	11:55:20	10/11/2011 11:55	0
12180	0	0	0	0	11:56:20	10/11/2011 11:56	0
12240	0	0	0	0	11:57:20	10/11/2011 11:57	0
12300	0	0	0	0	11:58:20	10/11/2011 11:58	0
12360	0	0	0	0	11:59:20	10/11/2011 11:59	0
12420	0	0	0	0	12:00:20	10/11/2011 12:00	0
12480	0	0	0	0	12:01:20	10/11/2011 12:01	0
12540	0	0	0	0	12:02:20	10/11/2011 12:02	0.001
12600	0	0	0	0	12:03:20	10/11/2011 12:03	0
12660	0.008	0.008	0.009	0.012	12:04:20	10/11/2011 12:04	0.015
12720	0.028	0.028	0.029	0.037	12:05:20	10/11/2011 12:05	0.043
12780	0	0	0	0	12:06:20	10/11/2011 12:06	0
12840	0	0	0	0	12:07:20	10/11/2011 12:07	0
12900	0	0	0	0	12:08:20	10/11/2011 12:08	0
12960	0	0	0	0	12:09:20	10/11/2011 12:09	0
13020	0	0	0	0	12:10:20	10/11/2011 12:10	0
13080	0	0	0	0	12:11:20	10/11/2011 12:11	0
13140	0	0	0	0	12:12:20	10/11/2011 12:12	0
13200	0	0	0	0	12:13:20	10/11/2011 12:13	0
13260	0	0	0	0	12:14:20	10/11/2011 12:14	0
13320	0	0	0	0	12:15:20	10/11/2011 12:15	0
13380	0	0	0	0.001	12:16:20	10/11/2011 12:16	0.001
13440	0	0	0	0	12:17:20	10/11/2011 12:17	0
13500	0	0	0	0	12:18:20	10/11/2011 12:18	0
13560	0	0	0	0	12:19:20	10/11/2011 12:19	0
13620	0	0	0	0	12:20:20	10/11/2011 12:20	0
13680	0	0	0	0	12:21:20	10/11/2011 12:21	0
13740	0	0	0	0	12:22:20	10/11/2011 12:22	0
13800	0	0	0	0	12:23:20	10/11/2011 12:23	0
13860	0	0	0	0	12:24:20	10/11/2011 12:24	0
13920	0	0	0	0	12:25:20	10/11/2011 12:25	0
13980	0	0	0	0	12:26:20	10/11/2011 12:26	0
14040	0	0	0	0	12:27:20	10/11/2011 12:27	0
14100	0.01	0.01	0.011	0.012	12:28:20	10/11/2011 12:28	0.013
14160	0	0	0.001	0.001	12:29:20	10/11/2011 12:29	0.001
14220	0	0	0	0	12:30:20	10/11/2011 12:30	0
14280	0	0	0	0	12:31:20	10/11/2011 12:31	0
14340	0	0	0	0	12:32:20	10/11/2011 12:32	0

14400	0	0	0	0	12:33:20	10/11/2011 12:33	0.001
14460	0	0	0	0	12:34:20	10/11/2011 12:34	0
14520	0	0	0	0	12:35:20	10/11/2011 12:35	0
14580	0	0	0	0	12:36:20	10/11/2011 12:36	0
14640	0	0	0	0	12:37:20	10/11/2011 12:37	0
14700	0	0	0	0	12:38:20	10/11/2011 12:38	0
14760	0	0	0	0	12:39:20	10/11/2011 12:39	0
14820	0	0	0	0	12:40:20	10/11/2011 12:40	0
14880	0	0	0	0	12:41:20	10/11/2011 12:41	0
14940	0.004	0.004	0.004	0.008	12:42:20	10/11/2011 12:42	0.011
15000	0.015	0.016	0.016	0.019	12:43:20	10/11/2011 12:43	0.022
15060	0	0	0	0	12:44:20	10/11/2011 12:44	0
15120	0	0	0	0	12:45:20	10/11/2011 12:45	0.001
15180	0	0	0	0	12:46:20	10/11/2011 12:46	0
15240	0	0	0	0	12:47:20	10/11/2011 12:47	0
15300	0	0	0	0	12:48:20	10/11/2011 12:48	0
15360	0	0	0	0	12:49:20	10/11/2011 12:49	0
15420	0	0	0	0	12:50:20	10/11/2011 12:50	0
15480	0	0	0	0.001	12:51:20	10/11/2011 12:51	0.003
15540	0	0	0	0	12:52:20	10/11/2011 12:52	0
15600	0	0	0	0	12:53:20	10/11/2011 12:53	0
15660	0	0	0	0.001	12:54:20	10/11/2011 12:54	0.001
15720	0	0	0	0	12:55:20	10/11/2011 12:55	0
15780	0	0	0	0	12:56:20	10/11/2011 12:56	0
15840	0	0	0	0	12:57:20	10/11/2011 12:57	0.001
15900	0	0	0	0.002	12:58:20	10/11/2011 12:58	0.003
15960	0	0	0	0	12:59:20	10/11/2011 12:59	0
16020	0	0	0	0	13:00:20	10/11/2011 13:00	0
16080	0	0	0	0	13:01:20	10/11/2011 13:01	0
16140	0	0	0	0	13:02:20	10/11/2011 13:02	0
16200	0	0	0	0	13:03:20	10/11/2011 13:03	0
16260	0.017	0.017	0.019	0.031	13:04:20	10/11/2011 13:04	0.04
16320	0	0	0	0	13:05:20	10/11/2011 13:05	0
16380	0	0	0	0	13:06:20	10/11/2011 13:06	0.001
16440	0	0	0	0.001	13:07:20	10/11/2011 13:07	0.001
16500	0	0	0	0.001	13:08:20	10/11/2011 13:08	0.001
16560	0	0	0	0	13:09:20	10/11/2011 13:09	0.001
16620	0	0	0	0.001	13:10:20	10/11/2011 13:10	0.002
16680	0.001	0.001	0.001	0.005	13:11:20	10/11/2011 13:11	0.006
16740	0	0	0	0.002	13:12:20	10/11/2011 13:12	0.003
16800	0	0	0	0.002	13:13:20	10/11/2011 13:13	0.002
16860	0	0	0	0.002	13:14:20	10/11/2011 13:14	0.003
16920	0.011	0.012	0.013	0.018	13:15:20	10/11/2011 13:15	0.019
16980	0.02	0.021	0.022	0.025	13:16:20	10/11/2011 13:16	0.026
17040	0.019	0.02	0.021	0.025	13:17:20	10/11/2011 13:17	0.025
17100	0.023	0.023	0.024	0.026	13:18:20	10/11/2011 13:18	0.026
17160	0.025	0.025	0.026	0.028	13:19:20	10/11/2011 13:19	0.03
17220	0.026	0.027	0.028	0.03	13:20:20	10/11/2011 13:20	0.031
17280	0.022	0.023	0.024	0.027	13:21:20	10/11/2011 13:21	0.028
17340	0.021	0.021	0.023	0.025	13:22:20	10/11/2011 13:22	0.025
17400	0.022	0.023	0.024	0.028	13:23:20	10/11/2011 13:23	0.028
17460	0.02	0.021	0.022	0.025	13:24:20	10/11/2011 13:24	0.026
17520	0.025	0.026	0.027	0.033	13:25:20	10/11/2011 13:25	0.035
17580	0.034	0.035	0.037	0.045	13:26:20	10/11/2011 13:26	0.049
17640	0.023	0.024	0.025	0.029	13:27:20	10/11/2011 13:27	0.031
17700	0.023	0.024	0.025	0.026	13:28:20	10/11/2011 13:28	0.026
17760	0.019	0.019	0.02	0.022	13:29:20	10/11/2011 13:29	0.022
17820	0.024	0.024	0.025	0.027	13:30:20	10/11/2011 13:30	0.027
17880	0.025	0.025	0.027	0.031	13:31:20	10/11/2011 13:31	0.031
17940	0.022	0.022	0.023	0.027	13:32:20	10/11/2011 13:32	0.027
18000	0.02	0.021	0.022	0.024	13:33:20	10/11/2011 13:33	0.024
18060	0.018	0.019	0.019	0.021	13:34:20	10/11/2011 13:34	0.022
18120	0.017	0.018	0.019	0.021	13:35:20	10/11/2011 13:35	0.021
18180	0.018	0.018	0.019	0.021	13:36:20	10/11/2011 13:36	0.021
18240	0.019	0.02	0.021	0.023	13:37:20	10/11/2011 13:37	0.024
18300	0.021	0.022	0.022	0.025	13:38:20	10/11/2011 13:38	0.025
18360	0.018	0.018	0.019	0.021	13:39:20	10/11/2011 13:39	0.022
18420	0.021	0.021	0.022	0.025	13:40:20	10/11/2011 13:40	0.025
18480	0.027	0.027	0.028	0.035	13:41:20	10/11/2011 13:41	0.038

18540	0.02	0.02	0.021	0.024	13:42:20	10/11/2011 13:42	0.024
18600	0.02	0.021	0.022	0.025	13:43:20	10/11/2011 13:43	0.025
18660	0.018	0.019	0.02	0.022	13:44:20	10/11/2011 13:44	0.022
18720	0.018	0.018	0.019	0.021	13:45:20	10/11/2011 13:45	0.021
18780	0.02	0.02	0.022	0.025	13:46:20	10/11/2011 13:46	0.025
18840	0.019	0.02	0.021	0.023	13:47:20	10/11/2011 13:47	0.023
18900	0.017	0.018	0.019	0.021	13:48:20	10/11/2011 13:48	0.021
18960	0.016	0.017	0.017	0.019	13:49:20	10/11/2011 13:49	0.019
19020	0.021	0.022	0.023	0.025	13:50:20	10/11/2011 13:50	0.025
19080	0.022	0.023	0.024	0.026	13:51:20	10/11/2011 13:51	0.026
19140	0.023	0.024	0.025	0.027	13:52:20	10/11/2011 13:52	0.028
19200	0.021	0.022	0.022	0.025	13:53:20	10/11/2011 13:53	0.025
19260	0.02	0.02	0.021	0.023	13:54:20	10/11/2011 13:54	0.024
19320	0.016	0.017	0.017	0.021	13:55:20	10/11/2011 13:55	0.022
19380	0.016	0.016	0.017	0.019	13:56:20	10/11/2011 13:56	0.019
19440	0.023	0.024	0.025	0.028	13:57:20	10/11/2011 13:57	0.029
19500	0.021	0.021	0.022	0.025	13:58:20	10/11/2011 13:58	0.026
19560	0.017	0.018	0.019	0.02	13:59:20	10/11/2011 13:59	0.021
19620	0.02	0.02	0.021	0.024	14:00:20	10/11/2011 14:00	0.024
19680	0.021	0.022	0.023	0.026	14:01:20	10/11/2011 14:01	0.026
19740	0.017	0.017	0.018	0.019	14:02:20	10/11/2011 14:02	0.019
19800	0.015	0.016	0.016	0.018	14:03:20	10/11/2011 14:03	0.018
19860	0.017	0.017	0.018	0.02	14:04:20	10/11/2011 14:04	0.02
19920	0.017	0.017	0.018	0.02	14:05:20	10/11/2011 14:05	0.021
19980	0.015	0.016	0.016	0.018	14:06:20	10/11/2011 14:06	0.018
20040	0.015	0.015	0.016	0.017	14:07:20	10/11/2011 14:07	0.018

AECOM

Client: National Grid
Location: Lowe's
Date: 10/12/11
Field Personnel: J. Ehlen

Project: Metropolitan
Project Number: 60137361
Weather: ~65°F, cloudy, breezy
Ambient Noise: ~80 dB

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
720	0.5	0.015	0.0	0.0	0.023	82.8	Preclearance of SB-21
800	0.0	0.009	0.0	0.0	0.022	88.0	Jackhammering SB-21
814	0.0	0.010	0.0	0.0	0.025	83.5	Preclearance of SB-21
830	0.0	0.013	0.0	0.0	0.024	82.1	"
920	0.0	0.017	0.0	0.0	0.025	83.6	Setting up on SB-24
935	0.0	0.013	0.0	0.0	0.029	94.8	Drilling SB-24
948	0.0	0.013	0.0	0.0	0.023	91.7	"
1005	0.0	0.028	0.0	0.0	0.028	79.3	Drilled SB-24 to 90 ft bgs
1030	0.0	0.018	0.0	0.0	0.024	93.7	Backfilling w/ grout
1045	0.0	0.018	0.0	0.0	0.023	89.3	"
1106	0.0	0.018	0.0	0.0	0.018	92.2	"
1115	0.0	0.018	0.0	0.0	0.014	91.2	"
1155	0.0	0.016	0.9	0.2	0.081	94.2	Saw cutting SB-25
1210	0.0	0.014	0.0	0.0	0.017	84.9	preclearance of SB-25
1226	0.0	0.012	0.0	0.0	0.017	82.3	"
1240	0.0	0.013	0.0	0.0	0.014	81.7	"
1355	0.0	0.013	0.0	0.0	0.014	91.7	Drilling SB-25

> Jackhammer not working.

- light rain

heavier rain.

> Decon casing

=========Event #31 information (begin)=========
==========
[Event #31 name:]--[Event #31]2011-10-12 07:30<-->2011-10-12 14:14
[Event start time:]--2011-10-12 07:30:52[Event end time:]--2011-10-12 14:14:52
==========Event #31 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624
Data Points: 404 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)
Measurement Gas : Isobutene
Calibration Time : 2011-10-12 07:11:002011-10-12 07:11:002011-10-12 07:11:00
Drift Value : --- --- ---
Low Alarm Levels : 50.000 50.000 50.000
High Alarm Levels : 100.000 100.000 100.000
Span Value : 100.000 100.000 100.000
Correction Factor : 1.00 1.00 1.00
Over Alarm Levels : 15000.000 15000.000 15000.000
==========Event #31 data informations==========

LINE#	Date/Time	PID-Max(ppm)	PID-Min(ppm)	PID-Avg(ppm)
1	10/12/2011 7:31	0.658	0.164	0.545
2	10/12/2011 7:32	0.553	0.455	0.494
3	10/12/2011 7:33	0.485	0.393	0.444
4	10/12/2011 7:34	0.419	0.371	0.396
5	10/12/2011 7:35	0.414	0.379	0.398
6	10/12/2011 7:36	0.396	0.364	0.377
7	10/12/2011 7:37	0.375	0.331	0.35
8	10/12/2011 7:38	0.374	0.314	0.338
9	10/12/2011 7:39	0.343	0.273	0.321
10	10/12/2011 7:40	0.371	0.234	0.278
11	10/12/2011 7:41	0.349	0.237	0.263
12	10/12/2011 7:42	0.277	0.178	0.216
13	10/12/2011 7:43	0.311	0.17	0.212
14	10/12/2011 7:44	0.288	0.161	0.195
15	10/12/2011 7:45	0.266	0.141	0.182
16	10/12/2011 7:46	0.257	0.123	0.163
17	10/12/2011 7:47	0.213	0.099	0.131
18	10/12/2011 7:48	0.24	0.109	0.152
19	10/12/2011 7:49	0.219	0.079	0.128
20	10/12/2011 7:50	0.188	0.07	0.107
21	10/12/2011 7:51	0.198	0.075	0.107
22	10/12/2011 7:52	0.182	0.057	0.101
23	10/12/2011 7:53	0.159	0.033	0.071
24	10/12/2011 7:54	0.144	0.03	0.059
25	10/12/2011 7:55	0.147	0.032	0.075
26	10/12/2011 7:56	0.122	0.013	0.044
27	10/12/2011 7:57	0.139	0.03	0.052
28	10/12/2011 7:58	0.142	0.007	0.03
29	10/12/2011 7:59	0.091	0	0.012
30	10/12/2011 8:00	0.077	0	0.008
31	10/12/2011 8:01	0.003	0	0
32	10/12/2011 8:02	0	0	0
33	10/12/2011 8:03	0	0	0
34	10/12/2011 8:04	0	0	0
35	10/12/2011 8:05	0.002	0	0
36	10/12/2011 8:06	0	0	0
37	10/12/2011 8:07	0	0	0
38	10/12/2011 8:08	0	0	0
39	10/12/2011 8:09	0	0	0
40	10/12/2011 8:10	0	0	0
41	10/12/2011 8:11	0	0	0
42	10/12/2011 8:12	0	0	0
43	10/12/2011 8:13	0.001	0	0
44	10/12/2011 8:14	0.002	0	0
45	10/12/2011 8:15	0	0	0
46	10/12/2011 8:16	0	0	0
47	10/12/2011 8:17	0	0	0
48	10/12/2011 8:18	0	0	0

49	10/12/2011 8:19	0	0	0
50	10/12/2011 8:20	0	0	0
51	10/12/2011 8:21	0	0	0
52	10/12/2011 8:22	0	0	0
53	10/12/2011 8:23	0	0	0
54	10/12/2011 8:24	0	0	0
55	10/12/2011 8:25	0	0	0
56	10/12/2011 8:26	0	0	0
57	10/12/2011 8:27	0	0	0
58	10/12/2011 8:28	0	0	0
59	10/12/2011 8:29	0	0	0
60	10/12/2011 8:30	0	0	0
61	10/12/2011 8:31	0	0	0
62	10/12/2011 8:32	0	0	0
63	10/12/2011 8:33	0	0	0
64	10/12/2011 8:34	0	0	0
65	10/12/2011 8:35	0	0	0
66	10/12/2011 8:36	0	0	0
67	10/12/2011 8:37	0	0	0
68	10/12/2011 8:38	0	0	0
69	10/12/2011 8:39	0	0	0
70	10/12/2011 8:40	0	0	0
71	10/12/2011 8:41	0	0	0
72	10/12/2011 8:42	0	0	0
73	10/12/2011 8:43	0	0	0
74	10/12/2011 8:44	0	0	0
75	10/12/2011 8:45	0	0	0
76	10/12/2011 8:46	0	0	0
77	10/12/2011 8:47	0	0	0
78	10/12/2011 8:48	0	0	0
79	10/12/2011 8:49	0	0	0
80	10/12/2011 8:50	0	0	0
81	10/12/2011 8:51	0	0	0
82	10/12/2011 8:52	0	0	0
83	10/12/2011 8:53	0	0	0
84	10/12/2011 8:54	0	0	0
85	10/12/2011 8:55	0	0	0
86	10/12/2011 8:56	0	0	0
87	10/12/2011 8:57	0	0	0
88	10/12/2011 8:58	0	0	0
89	10/12/2011 8:59	0	0	0
90	10/12/2011 9:00	0	0	0
91	10/12/2011 9:01	0	0	0
92	10/12/2011 9:02	0.018	0	0.001
93	10/12/2011 9:03	0	0	0
94	10/12/2011 9:04	0	0	0
95	10/12/2011 9:05	0	0	0
96	10/12/2011 9:06	0	0	0
97	10/12/2011 9:07	0	0	0
98	10/12/2011 9:08	0	0	0
99	10/12/2011 9:09	0	0	0
100	10/12/2011 9:10	0	0	0
101	10/12/2011 9:11	0	0	0
102	10/12/2011 9:12	0	0	0
103	10/12/2011 9:13	0	0	0
104	10/12/2011 9:14	0	0	0
105	10/12/2011 9:15	0	0	0
106	10/12/2011 9:16	0	0	0
107	10/12/2011 9:17	0	0	0
108	10/12/2011 9:18	0	0	0
109	10/12/2011 9:19	0	0	0
110	10/12/2011 9:20	0	0	0
111	10/12/2011 9:21	0	0	0
112	10/12/2011 9:22	0	0	0
113	10/12/2011 9:23	0	0	0
114	10/12/2011 9:24	0	0	0
115	10/12/2011 9:25	0	0	0
116	10/12/2011 9:26	0	0	0
117	10/12/2011 9:27	0	0	0

118	10/12/2011 9:28	0	0	0
119	10/12/2011 9:29	0	0	0
120	10/12/2011 9:30	0	0	0
121	10/12/2011 9:31	0	0	0
122	10/12/2011 9:32	0	0	0
123	10/12/2011 9:33	0	0	0
124	10/12/2011 9:34	0	0	0
125	10/12/2011 9:35	0	0	0
126	10/12/2011 9:36	0	0	0
127	10/12/2011 9:37	0	0	0
128	10/12/2011 9:38	0	0	0
129	10/12/2011 9:39	0	0	0
130	10/12/2011 9:40	0	0	0
131	10/12/2011 9:41	0	0	0
132	10/12/2011 9:42	0	0	0
133	10/12/2011 9:43	0	0	0
134	10/12/2011 9:44	0	0	0
135	10/12/2011 9:45	0	0	0
136	10/12/2011 9:46	0	0	0
137	10/12/2011 9:47	0	0	0
138	10/12/2011 9:48	0	0	0
139	10/12/2011 9:49	0	0	0
140	10/12/2011 9:50	0	0	0
141	10/12/2011 9:51	0	0	0
142	10/12/2011 9:52	0	0	0
143	10/12/2011 9:53	0	0	0
144	10/12/2011 9:54	0	0	0
145	10/12/2011 9:55	0	0	0
146	10/12/2011 9:56	0	0	0
147	10/12/2011 9:57	0	0	0
148	10/12/2011 9:58	0	0	0
149	10/12/2011 9:59	0	0	0
150	10/12/2011 10:00	0	0	0
151	10/12/2011 10:01	0	0	0
152	10/12/2011 10:02	0	0	0
153	10/12/2011 10:03	0	0	0
154	10/12/2011 10:04	0	0	0
155	10/12/2011 10:05	0	0	0
156	10/12/2011 10:06	0	0	0
157	10/12/2011 10:07	0	0	0
158	10/12/2011 10:08	0	0	0
159	10/12/2011 10:09	0	0	0
160	10/12/2011 10:10	0	0	0
161	10/12/2011 10:11	0	0	0
162	10/12/2011 10:12	0	0	0
163	10/12/2011 10:13	0	0	0
164	10/12/2011 10:14	0	0	0
165	10/12/2011 10:15	0	0	0
166	10/12/2011 10:16	0	0	0
167	10/12/2011 10:17	0	0	0
168	10/12/2011 10:18	0	0	0
169	10/12/2011 10:19	0	0	0
170	10/12/2011 10:20	0	0	0
171	10/12/2011 10:21	0	0	0
172	10/12/2011 10:22	0	0	0
173	10/12/2011 10:23	0	0	0
174	10/12/2011 10:24	0	0	0
175	10/12/2011 10:25	0	0	0
176	10/12/2011 10:26	0	0	0
177	10/12/2011 10:27	0	0	0
178	10/12/2011 10:28	0	0	0
179	10/12/2011 10:29	0	0	0
180	10/12/2011 10:30	0	0	0
181	10/12/2011 10:31	0	0	0
182	10/12/2011 10:32	0	0	0
183	10/12/2011 10:33	0	0	0
184	10/12/2011 10:34	0	0	0
185	10/12/2011 10:35	0	0	0
186	10/12/2011 10:36	0	0	0

187	10/12/2011 10:37	0	0	0
188	10/12/2011 10:38	0	0	0
189	10/12/2011 10:39	0	0	0
190	10/12/2011 10:40	0	0	0
191	10/12/2011 10:41	0	0	0
192	10/12/2011 10:42	0	0	0
193	10/12/2011 10:43	0	0	0
194	10/12/2011 10:44	0	0	0
195	10/12/2011 10:45	0	0	0
196	10/12/2011 10:46	0	0	0
197	10/12/2011 10:47	0	0	0
198	10/12/2011 10:48	0	0	0
199	10/12/2011 10:49	0	0	0
200	10/12/2011 10:50	0	0	0
201	10/12/2011 10:51	0	0	0
202	10/12/2011 10:52	0	0	0
203	10/12/2011 10:53	0	0	0
204	10/12/2011 10:54	0	0	0
205	10/12/2011 10:55	0	0	0
206	10/12/2011 10:56	0	0	0
207	10/12/2011 10:57	0	0	0
208	10/12/2011 10:58	0	0	0
209	10/12/2011 10:59	0	0	0
210	10/12/2011 11:00	0	0	0
211	10/12/2011 11:01	0	0	0
212	10/12/2011 11:02	0	0	0
213	10/12/2011 11:03	0	0	0
214	10/12/2011 11:04	0	0	0
215	10/12/2011 11:05	0	0	0
216	10/12/2011 11:06	0	0	0
217	10/12/2011 11:07	0	0	0
218	10/12/2011 11:08	0	0	0
219	10/12/2011 11:09	0	0	0
220	10/12/2011 11:10	0	0	0
221	10/12/2011 11:11	0	0	0
222	10/12/2011 11:12	0	0	0
223	10/12/2011 11:13	0	0	0
224	10/12/2011 11:14	0	0	0
225	10/12/2011 11:15	0	0	0
226	10/12/2011 11:16	0	0	0
227	10/12/2011 11:17	0	0	0
228	10/12/2011 11:18	0	0	0
229	10/12/2011 11:19	0	0	0
230	10/12/2011 11:20	0	0	0
231	10/12/2011 11:21	0	0	0
232	10/12/2011 11:22	0	0	0
233	10/12/2011 11:23	0	0	0
234	10/12/2011 11:24	0	0	0
235	10/12/2011 11:25	0	0	0
236	10/12/2011 11:26	0	0	0
237	10/12/2011 11:27	0	0	0
238	10/12/2011 11:28	0	0	0
239	10/12/2011 11:29	0	0	0
240	10/12/2011 11:30	0	0	0
241	10/12/2011 11:31	0	0	0
242	10/12/2011 11:32	0	0	0
243	10/12/2011 11:33	0	0	0
244	10/12/2011 11:34	0	0	0
245	10/12/2011 11:35	0	0	0
246	10/12/2011 11:36	0	0	0
247	10/12/2011 11:37	0	0	0
248	10/12/2011 11:38	0	0	0
249	10/12/2011 11:39	0	0	0
250	10/12/2011 11:40	0	0	0
251	10/12/2011 11:41	0	0	0
252	10/12/2011 11:42	0	0	0
253	10/12/2011 11:43	0	0	0
254	10/12/2011 11:44	0	0	0
255	10/12/2011 11:45	0	0	0

256	10/12/2011 11:46	0	0	0
257	10/12/2011 11:47	0	0	0
258	10/12/2011 11:48	0	0	0
259	10/12/2011 11:49	0	0	0
260	10/12/2011 11:50	0	0	0
261	10/12/2011 11:51	0	0	0
262	10/12/2011 11:52	0	0	0
263	10/12/2011 11:53	0	0	0
264	10/12/2011 11:54	0	0	0
265	10/12/2011 11:55	0	0	0
266	10/12/2011 11:56	0	0	0
267	10/12/2011 11:57	0	0	0
268	10/12/2011 11:58	0	0	0
269	10/12/2011 11:59	0	0	0
270	10/12/2011 12:00	0	0	0
271	10/12/2011 12:01	0	0	0
272	10/12/2011 12:02	0	0	0
273	10/12/2011 12:03	0	0	0
274	10/12/2011 12:04	0	0	0
275	10/12/2011 12:05	0	0	0
276	10/12/2011 12:06	0	0	0
277	10/12/2011 12:07	0	0	0
278	10/12/2011 12:08	0	0	0
279	10/12/2011 12:09	0	0	0
280	10/12/2011 12:10	0	0	0
281	10/12/2011 12:11	0	0	0
282	10/12/2011 12:12	0	0	0
283	10/12/2011 12:13	0	0	0
284	10/12/2011 12:14	0	0	0
285	10/12/2011 12:15	0	0	0
286	10/12/2011 12:16	0	0	0
287	10/12/2011 12:17	0	0	0
288	10/12/2011 12:18	0	0	0
289	10/12/2011 12:19	0	0	0
290	10/12/2011 12:20	0	0	0
291	10/12/2011 12:21	0	0	0
292	10/12/2011 12:22	0	0	0
293	10/12/2011 12:23	0	0	0
294	10/12/2011 12:24	0	0	0
295	10/12/2011 12:25	0	0	0
296	10/12/2011 12:26	0	0	0
297	10/12/2011 12:27	0	0	0
298	10/12/2011 12:28	0	0	0
299	10/12/2011 12:29	0	0	0
300	10/12/2011 12:30	0	0	0
301	10/12/2011 12:31	0	0	0
302	10/12/2011 12:32	0	0	0
303	10/12/2011 12:33	0	0	0
304	10/12/2011 12:34	0	0	0
305	10/12/2011 12:35	0	0	0
306	10/12/2011 12:36	0	0	0
307	10/12/2011 12:37	0	0	0
308	10/12/2011 12:38	0	0	0
309	10/12/2011 12:39	0	0	0
310	10/12/2011 12:40	0	0	0
311	10/12/2011 12:41	0	0	0
312	10/12/2011 12:42	0	0	0
313	10/12/2011 12:43	0	0	0
314	10/12/2011 12:44	0	0	0
315	10/12/2011 12:45	0	0	0
316	10/12/2011 12:46	0	0	0
317	10/12/2011 12:47	0	0	0
318	10/12/2011 12:48	0	0	0
319	10/12/2011 12:49	0	0	0
320	10/12/2011 12:50	0	0	0
321	10/12/2011 12:51	0	0	0
322	10/12/2011 12:52	0	0	0
323	10/12/2011 12:53	0	0	0
324	10/12/2011 12:54	0	0	0

325	10/12/2011 12:55	0	0	0
326	10/12/2011 12:56	0	0	0
327	10/12/2011 12:57	0	0	0
328	10/12/2011 12:58	0	0	0
329	10/12/2011 12:59	0	0	0
330	10/12/2011 13:00	0	0	0
331	10/12/2011 13:01	0	0	0
332	10/12/2011 13:02	0	0	0
333	10/12/2011 13:03	0	0	0
334	10/12/2011 13:04	0	0	0
335	10/12/2011 13:05	0	0	0
336	10/12/2011 13:06	0	0	0
337	10/12/2011 13:07	0	0	0
338	10/12/2011 13:08	0	0	0
339	10/12/2011 13:09	0	0	0
340	10/12/2011 13:10	0	0	0
341	10/12/2011 13:11	0	0	0
342	10/12/2011 13:12	0	0	0
343	10/12/2011 13:13	0	0	0
344	10/12/2011 13:14	0	0	0
345	10/12/2011 13:15	0	0	0
346	10/12/2011 13:16	0	0	0
347	10/12/2011 13:17	0	0	0
348	10/12/2011 13:18	0	0	0
349	10/12/2011 13:19	0	0	0
350	10/12/2011 13:20	0	0	0
351	10/12/2011 13:21	0	0	0
352	10/12/2011 13:22	0	0	0
353	10/12/2011 13:23	0	0	0
354	10/12/2011 13:24	0	0	0
355	10/12/2011 13:25	0	0	0
356	10/12/2011 13:26	0	0	0
357	10/12/2011 13:27	0	0	0
358	10/12/2011 13:28	0	0	0
359	10/12/2011 13:29	0	0	0
360	10/12/2011 13:30	0	0	0
361	10/12/2011 13:31	0	0	0
362	10/12/2011 13:32	0	0	0
363	10/12/2011 13:33	0	0	0
364	10/12/2011 13:34	0	0	0
365	10/12/2011 13:35	0	0	0
366	10/12/2011 13:36	0	0	0
367	10/12/2011 13:37	0	0	0
368	10/12/2011 13:38	0	0	0
369	10/12/2011 13:39	0	0	0
370	10/12/2011 13:40	0	0	0
371	10/12/2011 13:41	0	0	0
372	10/12/2011 13:42	0	0	0
373	10/12/2011 13:43	0	0	0
374	10/12/2011 13:44	0	0	0
375	10/12/2011 13:45	0	0	0
376	10/12/2011 13:46	0	0	0
377	10/12/2011 13:47	0	0	0
378	10/12/2011 13:48	0	0	0
379	10/12/2011 13:49	0	0	0
380	10/12/2011 13:50	0	0	0
381	10/12/2011 13:51	0	0	0
382	10/12/2011 13:52	0	0	0
383	10/12/2011 13:53	0	0	0
384	10/12/2011 13:54	0	0	0
385	10/12/2011 13:55	0	0	0
386	10/12/2011 13:56	0	0	0
387	10/12/2011 13:57	0	0	0
388	10/12/2011 13:58	0	0	0
389	10/12/2011 13:59	0	0	0
390	10/12/2011 14:00	0	0	0
391	10/12/2011 14:01	0	0	0
392	10/12/2011 14:02	0	0	0
393	10/12/2011 14:03	0	0	0

394	10/12/2011 14:04	0	0	0
395	10/12/2011 14:05	0	0	0
396	10/12/2011 14:06	0	0	0
397	10/12/2011 14:07	0	0	0
398	10/12/2011 14:08	0	0	0
399	10/12/2011 14:09	0	0	0
400	10/12/2011 14:10	0	0	0
401	10/12/2011 14:11	0	0	0
402	10/12/2011 14:12	0	0	0
403	10/12/2011 14:13	0	0	0
404	10/12/2011 14:14	0	0	0

==========Event #31 information (end)==========

=========Event #21 information (begin)=========
==========
[Event #21 name:]--[Event #21]2011-10-12 07:37<-->2011-10-12 14:28
[Event start time:]--2011-10-12 07:37:00[Event end time:]--2011-10-12 14:28:00
==========Event #21 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367
Data Points: 411 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID(ppb)
Measurement Gas : Isobutene
Calibration Time : 2011-10-12 07:18:00
Drift Value : ---
Low Alarm Levels : 25847
High Alarm Levels : 51694
Span Value : 100000
Correction Factor : 1.00
Over Alarm Levels : 15000000
==========Event #21 data informations==========

LINE#	Date/Time	PID(ppm)	PID(ppb)
1	10/12/2011 7:38	0.009	9
2	10/12/2011 7:39	0	0
3	10/12/2011 7:40	0	0
4	10/12/2011 7:41	0	0
5	10/12/2011 7:42	0	0
6	10/12/2011 7:43	0	0
7	10/12/2011 7:44	0	0
8	10/12/2011 7:45	0	0
9	10/12/2011 7:46	0	0
10	10/12/2011 7:47	0	0
11	10/12/2011 7:48	0	0
12	10/12/2011 7:49	0	0
13	10/12/2011 7:50	0	0
14	10/12/2011 7:51	0	0
15	10/12/2011 7:52	0	0
16	10/12/2011 7:53	0	0
17	10/12/2011 7:54	0	0
18	10/12/2011 7:55	0	0
19	10/12/2011 7:56	0	0
20	10/12/2011 7:57	0	0
21	10/12/2011 7:58	0	0
22	10/12/2011 7:59	0	0
23	10/12/2011 8:00	0	0
24	10/12/2011 8:01	0	0
25	10/12/2011 8:02	0	0
26	10/12/2011 8:03	0.02	20
27	10/12/2011 8:04	0	0
28	10/12/2011 8:05	0	0
29	10/12/2011 8:06	0	0
30	10/12/2011 8:07	0	0
31	10/12/2011 8:08	0	0
32	10/12/2011 8:09	0	0
33	10/12/2011 8:10	0	0
34	10/12/2011 8:11	0	0
35	10/12/2011 8:12	0	0
36	10/12/2011 8:13	0	0
37	10/12/2011 8:14	0	0
38	10/12/2011 8:15	0	0
39	10/12/2011 8:16	0	0
40	10/12/2011 8:17	0	0
41	10/12/2011 8:18	0	0
42	10/12/2011 8:19	0	0
43	10/12/2011 8:20	0	0
44	10/12/2011 8:21	0	0
45	10/12/2011 8:22	0	0
46	10/12/2011 8:23	0	0
47	10/12/2011 8:24	0	0
48	10/12/2011 8:25	0	0

49	10/12/2011 8:26	0	0
50	10/12/2011 8:27	0	0
51	10/12/2011 8:28	0	0
52	10/12/2011 8:29	0	0
53	10/12/2011 8:30	0	0
54	10/12/2011 8:31	0	0
55	10/12/2011 8:32	0	0
56	10/12/2011 8:33	0	0
57	10/12/2011 8:34	0	0
58	10/12/2011 8:35	0	0
59	10/12/2011 8:36	0	0
60	10/12/2011 8:37	0	0
61	10/12/2011 8:38	0	0
62	10/12/2011 8:39	0	0
63	10/12/2011 8:40	0.055	55
64	10/12/2011 8:41	0	0
65	10/12/2011 8:42	0	0
66	10/12/2011 8:43	0	0
67	10/12/2011 8:44	0	0
68	10/12/2011 8:45	0	0
69	10/12/2011 8:46	0	0
70	10/12/2011 8:47	0	0
71	10/12/2011 8:48	0	0
72	10/12/2011 8:49	0	0
73	10/12/2011 8:50	0	0
74	10/12/2011 8:51	0	0
75	10/12/2011 8:52	0	0
76	10/12/2011 8:53	0	0
77	10/12/2011 8:54	0	0
78	10/12/2011 8:55	0	0
79	10/12/2011 8:56	0	0
80	10/12/2011 8:57	0	0
81	10/12/2011 8:58	0	0
82	10/12/2011 8:59	0	0
83	10/12/2011 9:00	0	0
84	10/12/2011 9:01	0	0
85	10/12/2011 9:02	0	0
86	10/12/2011 9:03	0	0
87	10/12/2011 9:04	0	0
88	10/12/2011 9:05	0	0
89	10/12/2011 9:06	0	0
90	10/12/2011 9:07	0	0
91	10/12/2011 9:08	0	0
92	10/12/2011 9:09	0	0
93	10/12/2011 9:10	0	0
94	10/12/2011 9:11	0	0
95	10/12/2011 9:12	0	0
96	10/12/2011 9:13	0	0
97	10/12/2011 9:14	0	0
98	10/12/2011 9:15	0	0
99	10/12/2011 9:16	0	0
100	10/12/2011 9:17	0	0
101	10/12/2011 9:18	0	0
102	10/12/2011 9:19	0	0
103	10/12/2011 9:20	0	0
104	10/12/2011 9:21	0	0
105	10/12/2011 9:22	0	0
106	10/12/2011 9:23	0	0
107	10/12/2011 9:24	0	0
108	10/12/2011 9:25	0	0
109	10/12/2011 9:26	0	0
110	10/12/2011 9:27	0	0
111	10/12/2011 9:28	0	0
112	10/12/2011 9:29	0	0
113	10/12/2011 9:30	0	0
114	10/12/2011 9:31	0	0
115	10/12/2011 9:32	0	0
116	10/12/2011 9:33	0	0
117	10/12/2011 9:34	0	0

118	10/12/2011 9:35	0	0
119	10/12/2011 9:36	0	0
120	10/12/2011 9:37	0	0
121	10/12/2011 9:38	0	0
122	10/12/2011 9:39	0	0
123	10/12/2011 9:40	0	0
124	10/12/2011 9:41	0	0
125	10/12/2011 9:42	0	0
126	10/12/2011 9:43	0	0
127	10/12/2011 9:44	0	0
128	10/12/2011 9:45	0	0
129	10/12/2011 9:46	0	0
130	10/12/2011 9:47	0	0
131	10/12/2011 9:48	0	0
132	10/12/2011 9:49	0	0
133	10/12/2011 9:50	0	0
134	10/12/2011 9:51	0	0
135	10/12/2011 9:52	0	0
136	10/12/2011 9:53	0	0
137	10/12/2011 9:54	0	0
138	10/12/2011 9:55	0	0
139	10/12/2011 9:56	0	0
140	10/12/2011 9:57	0	0
141	10/12/2011 9:58	0	0
142	10/12/2011 9:59	0	0
143	10/12/2011 10:00	0	0
144	10/12/2011 10:01	0	0
145	10/12/2011 10:02	0	0
146	10/12/2011 10:03	0	0
147	10/12/2011 10:04	0	0
148	10/12/2011 10:05	0	0
149	10/12/2011 10:06	0	0
150	10/12/2011 10:07	0	0
151	10/12/2011 10:08	0	0
152	10/12/2011 10:09	0	0
153	10/12/2011 10:10	0	0
154	10/12/2011 10:11	0	0
155	10/12/2011 10:12	0	0
156	10/12/2011 10:13	0	0
157	10/12/2011 10:14	0	0
158	10/12/2011 10:15	0	0
159	10/12/2011 10:16	0	0
160	10/12/2011 10:17	0	0
161	10/12/2011 10:18	0	0
162	10/12/2011 10:19	0	0
163	10/12/2011 10:20	0	0
164	10/12/2011 10:21	0	0
165	10/12/2011 10:22	0	0
166	10/12/2011 10:23	0	0
167	10/12/2011 10:24	0	0
168	10/12/2011 10:25	0	0
169	10/12/2011 10:26	0	0
170	10/12/2011 10:27	0	0
171	10/12/2011 10:28	0	0
172	10/12/2011 10:29	0	0
173	10/12/2011 10:30	0	0
174	10/12/2011 10:31	0	0
175	10/12/2011 10:32	0	0
176	10/12/2011 10:33	0	0
177	10/12/2011 10:34	0	0
178	10/12/2011 10:35	0	0
179	10/12/2011 10:36	0	0
180	10/12/2011 10:37	0	0
181	10/12/2011 10:38	0	0
182	10/12/2011 10:39	0	0
183	10/12/2011 10:40	0	0
184	10/12/2011 10:41	0	0
185	10/12/2011 10:42	0	0
186	10/12/2011 10:43	0	0

187	10/12/2011 10:44	0	0
188	10/12/2011 10:45	0	0
189	10/12/2011 10:46	0	0
190	10/12/2011 10:47	0	0
191	10/12/2011 10:48	0	0
192	10/12/2011 10:49	0	0
193	10/12/2011 10:50	0	0
194	10/12/2011 10:51	0	0
195	10/12/2011 10:52	0	0
196	10/12/2011 10:53	0	0
197	10/12/2011 10:54	0	0
198	10/12/2011 10:55	0	0
199	10/12/2011 10:56	0	0
200	10/12/2011 10:57	0	0
201	10/12/2011 10:58	0	0
202	10/12/2011 10:59	0	0
203	10/12/2011 11:00	0	0
204	10/12/2011 11:01	0	0
205	10/12/2011 11:02	0	0
206	10/12/2011 11:03	0	0
207	10/12/2011 11:04	0	0
208	10/12/2011 11:05	0	0
209	10/12/2011 11:06	0	0
210	10/12/2011 11:07	0	0
211	10/12/2011 11:08	0	0
212	10/12/2011 11:09	0	0
213	10/12/2011 11:10	0	0
214	10/12/2011 11:11	0	0
215	10/12/2011 11:12	0	0
216	10/12/2011 11:13	0	0
217	10/12/2011 11:14	0	0
218	10/12/2011 11:15	0	0
219	10/12/2011 11:16	0	0
220	10/12/2011 11:17	0	0
221	10/12/2011 11:18	0	0
222	10/12/2011 11:19	0	0
223	10/12/2011 11:20	0	0
224	10/12/2011 11:21	0	0
225	10/12/2011 11:22	0	0
226	10/12/2011 11:23	0	0
227	10/12/2011 11:24	0	0
228	10/12/2011 11:25	0	0
229	10/12/2011 11:26	0	0
230	10/12/2011 11:27	0	0
231	10/12/2011 11:28	0	0
232	10/12/2011 11:29	0	0
233	10/12/2011 11:30	0	0
234	10/12/2011 11:31	0	0
235	10/12/2011 11:32	0	0
236	10/12/2011 11:33	0	0
237	10/12/2011 11:34	0	0
238	10/12/2011 11:35	0	0
239	10/12/2011 11:36	0	0
240	10/12/2011 11:37	0	0
241	10/12/2011 11:38	0	0
242	10/12/2011 11:39	0	0
243	10/12/2011 11:40	0.002	2
244	10/12/2011 11:41	0	0
245	10/12/2011 11:42	0	0
246	10/12/2011 11:43	0	0
247	10/12/2011 11:44	0	0
248	10/12/2011 11:45	0	0
249	10/12/2011 11:46	0	0
250	10/12/2011 11:47	0	0
251	10/12/2011 11:48	0	0
252	10/12/2011 11:49	0	0
253	10/12/2011 11:50	0	0
254	10/12/2011 11:51	0	0
255	10/12/2011 11:52	0	0

256	10/12/2011 11:53	0	0
257	10/12/2011 11:54	0	0
258	10/12/2011 11:55	0	0
259	10/12/2011 11:56	0	0
260	10/12/2011 11:57	0	0
261	10/12/2011 11:58	0	0
262	10/12/2011 11:59	0.032	32
263	10/12/2011 12:00	0	0
264	10/12/2011 12:01	0	0
265	10/12/2011 12:02	0	0
266	10/12/2011 12:03	2.787	2787
267	10/12/2011 12:04	2.021	2021
268	10/12/2011 12:05	0.328	328
269	10/12/2011 12:06	0.074	74
270	10/12/2011 12:07	0.087	87
271	10/12/2011 12:08	0.032	32
272	10/12/2011 12:09	0	0
273	10/12/2011 12:10	0	0
274	10/12/2011 12:11	0	0
275	10/12/2011 12:12	0	0
276	10/12/2011 12:13	0	0
277	10/12/2011 12:14	0	0
278	10/12/2011 12:15	0	0
279	10/12/2011 12:16	0.31	310
280	10/12/2011 12:17	0.011	11
281	10/12/2011 12:18	0.022	22
282	10/12/2011 12:19	0.3	300
283	10/12/2011 12:20	0.288	288
284	10/12/2011 12:21	0.137	137
285	10/12/2011 12:22	0.538	538
286	10/12/2011 12:23	0.535	535
287	10/12/2011 12:24	0	0
288	10/12/2011 12:25	0	0
289	10/12/2011 12:26	0	0
290	10/12/2011 12:27	0	0
291	10/12/2011 12:28	0	0
292	10/12/2011 12:29	0	0
293	10/12/2011 12:30	0	0
294	10/12/2011 12:31	0	0
295	10/12/2011 12:32	0	0
296	10/12/2011 12:33	0	0
297	10/12/2011 12:34	0	0
298	10/12/2011 12:35	0	0
299	10/12/2011 12:36	0	0
300	10/12/2011 12:37	0	0
301	10/12/2011 12:38	0	0
302	10/12/2011 12:39	0	0
303	10/12/2011 12:40	0	0
304	10/12/2011 12:41	0	0
305	10/12/2011 12:42	0	0
306	10/12/2011 12:43	0	0
307	10/12/2011 12:44	0	0
308	10/12/2011 12:45	0	0
309	10/12/2011 12:46	0	0
310	10/12/2011 12:47	0	0
311	10/12/2011 12:48	0	0
312	10/12/2011 12:49	0	0
313	10/12/2011 12:50	0	0
314	10/12/2011 12:51	0	0
315	10/12/2011 12:52	0	0
316	10/12/2011 12:53	0	0
317	10/12/2011 12:54	0	0
318	10/12/2011 12:55	0	0
319	10/12/2011 12:56	0	0
320	10/12/2011 12:57	0	0
321	10/12/2011 12:58	0	0
322	10/12/2011 12:59	0	0
323	10/12/2011 13:00	0	0
324	10/12/2011 13:01	0	0

325	10/12/2011 13:02	0	0
326	10/12/2011 13:03	0	0
327	10/12/2011 13:04	0	0
328	10/12/2011 13:05	0	0
329	10/12/2011 13:06	0	0
330	10/12/2011 13:07	0	0
331	10/12/2011 13:08	0	0
332	10/12/2011 13:09	0	0
333	10/12/2011 13:10	0	0
334	10/12/2011 13:11	0	0
335	10/12/2011 13:12	0	0
336	10/12/2011 13:13	0	0
337	10/12/2011 13:14	0	0
338	10/12/2011 13:15	0	0
339	10/12/2011 13:16	0	0
340	10/12/2011 13:17	0	0
341	10/12/2011 13:18	0	0
342	10/12/2011 13:19	0	0
343	10/12/2011 13:20	0	0
344	10/12/2011 13:21	0	0
345	10/12/2011 13:22	0	0
346	10/12/2011 13:23	0	0
347	10/12/2011 13:24	0	0
348	10/12/2011 13:25	0	0
349	10/12/2011 13:26	0	0
350	10/12/2011 13:27	0	0
351	10/12/2011 13:28	0	0
352	10/12/2011 13:29	0	0
353	10/12/2011 13:30	0	0
354	10/12/2011 13:31	0	0
355	10/12/2011 13:32	0	0
356	10/12/2011 13:33	0	0
357	10/12/2011 13:34	0	0
358	10/12/2011 13:35	0	0
359	10/12/2011 13:36	0	0
360	10/12/2011 13:37	0	0
361	10/12/2011 13:38	0	0
362	10/12/2011 13:39	0	0
363	10/12/2011 13:40	0	0
364	10/12/2011 13:41	0	0
365	10/12/2011 13:42	0	0
366	10/12/2011 13:43	0	0
367	10/12/2011 13:44	0	0
368	10/12/2011 13:45	0	0
369	10/12/2011 13:46	0	0
370	10/12/2011 13:47	0	0
371	10/12/2011 13:48	0	0
372	10/12/2011 13:49	0	0
373	10/12/2011 13:50	0	0
374	10/12/2011 13:51	0	0
375	10/12/2011 13:52	0	0
376	10/12/2011 13:53	0	0
377	10/12/2011 13:54	0	0
378	10/12/2011 13:55	0	0
379	10/12/2011 13:56	0	0
380	10/12/2011 13:57	0	0
381	10/12/2011 13:58	0	0
382	10/12/2011 13:59	0	0
383	10/12/2011 14:00	0	0
384	10/12/2011 14:01	0	0
385	10/12/2011 14:02	0.011	11
386	10/12/2011 14:03	0.014	14
387	10/12/2011 14:04	0.001	1
388	10/12/2011 14:05	0.001	1
389	10/12/2011 14:06	0	0
390	10/12/2011 14:07	0	0
391	10/12/2011 14:08	0	0
392	10/12/2011 14:09	0	0
393	10/12/2011 14:10	0	0

394	10/12/2011 14:11	0	0
395	10/12/2011 14:12	0	0
396	10/12/2011 14:13	0	0
397	10/12/2011 14:14	0	0
398	10/12/2011 14:15	0	0
399	10/12/2011 14:16	0	0
400	10/12/2011 14:17	0.002	2
401	10/12/2011 14:18	0	0
402	10/12/2011 14:19	0	0
403	10/12/2011 14:20	0	0
404	10/12/2011 14:21	0	0
405	10/12/2011 14:22	0	0
406	10/12/2011 14:23	0	0
407	10/12/2011 14:24	0	0
408	10/12/2011 14:25	0	0
409	10/12/2011 14:26	0.012	12
410	10/12/2011 14:27	0	0
411	10/12/2011 14:28	0	0

==========Event #21 information (end)==========

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533101806
Firmware Version	2.8
Calibration Date	5/19/2011
Test Name	MANUAL_007
Test Start Time	7:20:05 AM
Test Start Date	10/12/2011
Test Length [D:H:M	0:06:44
Test Interval [M:S]	1:00
PM1 Average [mg/r	0.012
PM1 Minimum [mg	0.007
PM1 Maximum [mg	0.031
PM1 TWA [mg/m3]	0.01
PM2.5 Average [mg	0.013
PM2.5 Minimum [m	0.007
PM2.5 Maximum [r	0.031
PM2.5 TWA [mg/m	0.011
PM4 Average [mg/r	0.013
PM4 Minimum [mg	0.007
PM4 Maximum [mg	0.032
PM4 TWA [mg/m3]	0.011
PM10 Average [mg,	0.015
PM10 Minimum [m	0.008
PM10 Maximum [m	0.038
PM10 TWA [mg/m3	0.012
TOTAL Average [mg	0.015
TOTAL Minimum [m	0.008
TOTAL Maximum [r	0.04
TOTAL TWA [mg/m	0.013
Photometric User C	1
Size Correction Use	1
Flow User Cal	1
Errors	
Number of Samples	404

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	7:20:05 AM	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.012	0.012	0.013	0.016	7:21:05 AM	10/12/2011 7:21	0.017		
120	0.009	0.009	0.009	0.009	7:22:05 AM	10/12/2011 7:22	0.009		
180	0.009	0.009	0.01	0.01	7:23:05 AM	10/12/2011 7:23	0.01		
240	0.008	0.009	0.009	0.009	7:24:05 AM	10/12/2011 7:24	0.009		
300	0.008	0.008	0.009	0.009	7:25:05 AM	10/12/2011 7:25	0.009		
360	0.008	0.008	0.009	0.009	7:26:05 AM	10/12/2011 7:26	0.009		
420	0.009	0.009	0.01	0.01	7:27:05 AM	10/12/2011 7:27	0.01		
480	0.01	0.01	0.01	0.01	7:28:05 AM	10/12/2011 7:28	0.011		
540	0.009	0.009	0.009	0.009	7:29:05 AM	10/12/2011 7:29	0.009		
600	0.009	0.009	0.009	0.01	7:30:05 AM	10/12/2011 7:30	0.01		
660	0.008	0.009	0.009	0.009	7:31:05 AM	10/12/2011 7:31	0.009		
720	0.008	0.008	0.009	0.009	7:32:05 AM	10/12/2011 7:32	0.009		
780	0.008	0.008	0.008	0.009	7:33:05 AM	10/12/2011 7:33	0.009		
840	0.008	0.008	0.008	0.008	7:34:05 AM	10/12/2011 7:34	0.008		
900	0.007	0.007	0.008	0.008	7:35:05 AM	10/12/2011 7:35	0.008		
960	0.007	0.007	0.007	0.008	7:36:05 AM	10/12/2011 7:36	0.008		
1020	0.009	0.01	0.01	0.011	7:37:05 AM	10/12/2011 7:37	0.011		
1080	0.009	0.009	0.009	0.009	7:38:05 AM	10/12/2011 7:38	0.009		
1140	0.007	0.008	0.008	0.008	7:39:05 AM	10/12/2011 7:39	0.008		
1200	0.008	0.009	0.009	0.009	7:40:05 AM	10/12/2011 7:40	0.009		
1260	0.013	0.013	0.013	0.013	7:41:05 AM	10/12/2011 7:41	0.013		
1320	0.008	0.008	0.008	0.009	7:42:05 AM	10/12/2011 7:42	0.009		
1380	0.009	0.009	0.009	0.01	7:43:05 AM	10/12/2011 7:43	0.01		
1440	0.008	0.008	0.008	0.009	7:44:05 AM	10/12/2011 7:44	0.009		
1500	0.008	0.008	0.009	0.009	7:45:05 AM	10/12/2011 7:45	0.009		
1560	0.012	0.012	0.012	0.013	7:46:05 AM	10/12/2011 7:46	0.013		
1620	0.014	0.014	0.014	0.015	7:47:05 AM	10/12/2011 7:47	0.015		
1680	0.011	0.011	0.011	0.011	7:48:05 AM	10/12/2011 7:48	0.011		
1740	0.009	0.009	0.009	0.01	7:49:05 AM	10/12/2011 7:49	0.01		
1800	0.013	0.013	0.013	0.014	7:50:05 AM	10/12/2011 7:50	0.014		
1860	0.009	0.009	0.009	0.01	7:51:05 AM	10/12/2011 7:51	0.01		
1920	0.009	0.009	0.01	0.01	7:52:05 AM	10/12/2011 7:52	0.01		

1980	0.009	0.009	0.01	0.01	7:53:05 AM	10/12/2011 7:53	0.01
2040	0.008	0.009	0.009	0.009	7:54:05 AM	10/12/2011 7:54	0.009
2100	0.01	0.01	0.011	0.011	7:55:05 AM	10/12/2011 7:55	0.011
2160	0.008	0.009	0.009	0.01	7:56:05 AM	10/12/2011 7:56	0.01
2220	0.007	0.007	0.008	0.008	7:57:05 AM	10/12/2011 7:57	0.008
2280	0.008	0.008	0.009	0.009	7:58:05 AM	10/12/2011 7:58	0.009
2340	0.008	0.009	0.009	0.009	7:59:05 AM	10/12/2011 7:59	0.009
2400	0.007	0.007	0.008	0.008	8:00:05 AM	10/12/2011 8:00	0.008
2460	0.007	0.008	0.008	0.008	8:01:05 AM	10/12/2011 8:01	0.008
2520	0.009	0.009	0.009	0.01	8:02:05 AM	10/12/2011 8:02	0.01
2580	0.011	0.011	0.011	0.012	8:03:05 AM	10/12/2011 8:03	0.012
2640	0.013	0.013	0.014	0.015	8:04:05 AM	10/12/2011 8:04	0.015
2700	0.009	0.01	0.01	0.01	8:05:05 AM	10/12/2011 8:05	0.011
2760	0.008	0.008	0.008	0.009	8:06:05 AM	10/12/2011 8:06	0.009
2820	0.008	0.008	0.008	0.009	8:07:05 AM	10/12/2011 8:07	0.009
2880	0.009	0.01	0.01	0.011	8:08:05 AM	10/12/2011 8:08	0.011
2940	0.009	0.009	0.01	0.011	8:09:05 AM	10/12/2011 8:09	0.011
3000	0.009	0.009	0.009	0.01	8:10:05 AM	10/12/2011 8:10	0.01
3060	0.008	0.009	0.009	0.01	8:11:05 AM	10/12/2011 8:11	0.01
3120	0.008	0.009	0.009	0.009	8:12:05 AM	10/12/2011 8:12	0.009
3180	0.008	0.009	0.009	0.009	8:13:05 AM	10/12/2011 8:13	0.01
3240	0.009	0.009	0.009	0.01	8:14:05 AM	10/12/2011 8:14	0.01
3300	0.008	0.008	0.008	0.009	8:15:05 AM	10/12/2011 8:15	0.009
3360	0.008	0.009	0.009	0.009	8:16:05 AM	10/12/2011 8:16	0.01
3420	0.009	0.009	0.009	0.01	8:17:05 AM	10/12/2011 8:17	0.01
3480	0.008	0.008	0.008	0.009	8:18:05 AM	10/12/2011 8:18	0.009
3540	0.01	0.01	0.01	0.011	8:19:05 AM	10/12/2011 8:19	0.011
3600	0.01	0.01	0.01	0.011	8:20:05 AM	10/12/2011 8:20	0.011
3660	0.008	0.009	0.009	0.009	8:21:05 AM	10/12/2011 8:21	0.01
3720	0.008	0.008	0.008	0.009	8:22:05 AM	10/12/2011 8:22	0.009
3780	0.007	0.007	0.008	0.008	8:23:05 AM	10/12/2011 8:23	0.008
3840	0.008	0.008	0.008	0.009	8:24:05 AM	10/12/2011 8:24	0.009
3900	0.01	0.01	0.01	0.011	8:25:05 AM	10/12/2011 8:25	0.011
3960	0.011	0.011	0.012	0.013	8:26:05 AM	10/12/2011 8:26	0.013
4020	0.011	0.011	0.011	0.013	8:27:05 AM	10/12/2011 8:27	0.013
4080	0.01	0.01	0.01	0.011	8:28:05 AM	10/12/2011 8:28	0.011
4140	0.01	0.01	0.011	0.012	8:29:05 AM	10/12/2011 8:29	0.012
4200	0.012	0.012	0.013	0.015	8:30:05 AM	10/12/2011 8:30	0.015
4260	0.011	0.011	0.012	0.014	8:31:05 AM	10/12/2011 8:31	0.014
4320	0.015	0.016	0.016	0.018	8:32:05 AM	10/12/2011 8:32	0.019
4380	0.014	0.015	0.015	0.016	8:33:05 AM	10/12/2011 8:33	0.016
4440	0.013	0.013	0.013	0.014	8:34:05 AM	10/12/2011 8:34	0.014
4500	0.008	0.008	0.009	0.009	8:35:05 AM	10/12/2011 8:35	0.009
4560	0.008	0.008	0.009	0.009	8:36:05 AM	10/12/2011 8:36	0.009
4620	0.011	0.011	0.011	0.012	8:37:05 AM	10/12/2011 8:37	0.012
4680	0.009	0.01	0.01	0.01	8:38:05 AM	10/12/2011 8:38	0.01
4740	0.009	0.009	0.009	0.01	8:39:05 AM	10/12/2011 8:39	0.01
4800	0.008	0.008	0.009	0.009	8:40:05 AM	10/12/2011 8:40	0.009
4860	0.008	0.008	0.009	0.009	8:41:05 AM	10/12/2011 8:41	0.009
4920	0.015	0.015	0.016	0.017	8:42:05 AM	10/12/2011 8:42	0.018
4980	0.013	0.013	0.013	0.014	8:43:05 AM	10/12/2011 8:43	0.014
5040	0.017	0.017	0.017	0.018	8:44:05 AM	10/12/2011 8:44	0.018
5100	0.019	0.02	0.02	0.021	8:45:05 AM	10/12/2011 8:45	0.021
5160	0.02	0.02	0.021	0.021	8:46:05 AM	10/12/2011 8:46	0.021
5220	0.027	0.028	0.028	0.03	8:47:05 AM	10/12/2011 8:47	0.03
5280	0.021	0.021	0.022	0.023	8:48:05 AM	10/12/2011 8:48	0.023
5340	0.016	0.016	0.017	0.018	8:49:05 AM	10/12/2011 8:49	0.018
5400	0.02	0.02	0.02	0.021	8:50:05 AM	10/12/2011 8:50	0.021
5460	0.02	0.021	0.021	0.023	8:51:05 AM	10/12/2011 8:51	0.023
5520	0.018	0.018	0.019	0.02	8:52:05 AM	10/12/2011 8:52	0.02
5580	0.019	0.02	0.02	0.021	8:53:05 AM	10/12/2011 8:53	0.021
5640	0.02	0.02	0.02	0.022	8:54:05 AM	10/12/2011 8:54	0.022
5700	0.014	0.014	0.015	0.016	8:55:05 AM	10/12/2011 8:55	0.016
5760	0.016	0.016	0.017	0.018	8:56:05 AM	10/12/2011 8:56	0.018
5820	0.019	0.019	0.02	0.022	8:57:05 AM	10/12/2011 8:57	0.022
5880	0.017	0.017	0.018	0.02	8:58:05 AM	10/12/2011 8:58	0.021
5940	0.017	0.018	0.018	0.02	8:59:05 AM	10/12/2011 8:59	0.02
6000	0.013	0.013	0.014	0.015	9:00:05 AM	10/12/2011 9:00	0.015
6060	0.016	0.017	0.017	0.018	9:01:05 AM	10/12/2011 9:01	0.018

6120	0.018	0.018	0.019	0.02	9:02:05 AM	10/12/2011 9:02	0.02
6180	0.016	0.016	0.016	0.017	9:03:05 AM	10/12/2011 9:03	0.017
6240	0.016	0.016	0.017	0.018	9:04:05 AM	10/12/2011 9:04	0.018
6300	0.017	0.018	0.018	0.019	9:05:05 AM	10/12/2011 9:05	0.019
6360	0.01	0.01	0.01	0.011	9:06:05 AM	10/12/2011 9:06	0.011
6420	0.012	0.013	0.013	0.014	9:07:05 AM	10/12/2011 9:07	0.014
6480	0.015	0.015	0.015	0.016	9:08:05 AM	10/12/2011 9:08	0.016
6540	0.017	0.017	0.018	0.018	9:09:05 AM	10/12/2011 9:09	0.019
6600	0.015	0.015	0.016	0.016	9:10:05 AM	10/12/2011 9:10	0.016
6660	0.017	0.017	0.017	0.018	9:11:05 AM	10/12/2011 9:11	0.018
6720	0.013	0.013	0.013	0.014	9:12:05 AM	10/12/2011 9:12	0.014
6780	0.012	0.013	0.013	0.014	9:13:05 AM	10/12/2011 9:13	0.014
6840	0.012	0.012	0.012	0.013	9:14:05 AM	10/12/2011 9:14	0.013
6900	0.016	0.016	0.016	0.017	9:15:05 AM	10/12/2011 9:15	0.017
6960	0.018	0.019	0.019	0.02	9:16:05 AM	10/12/2011 9:16	0.02
7020	0.011	0.011	0.011	0.012	9:17:05 AM	10/12/2011 9:17	0.012
7080	0.012	0.012	0.013	0.013	9:18:05 AM	10/12/2011 9:18	0.013
7140	0.01	0.01	0.01	0.011	9:19:05 AM	10/12/2011 9:19	0.012
7200	0.012	0.013	0.013	0.013	9:20:05 AM	10/12/2011 9:20	0.013
7260	0.013	0.013	0.013	0.014	9:21:05 AM	10/12/2011 9:21	0.014
7320	0.014	0.015	0.015	0.016	9:22:05 AM	10/12/2011 9:22	0.016
7380	0.017	0.017	0.017	0.019	9:23:05 AM	10/12/2011 9:23	0.02
7440	0.011	0.012	0.012	0.012	9:24:05 AM	10/12/2011 9:24	0.013
7500	0.015	0.015	0.016	0.017	9:25:05 AM	10/12/2011 9:25	0.017
7560	0.012	0.012	0.013	0.013	9:26:05 AM	10/12/2011 9:26	0.013
7620	0.013	0.013	0.014	0.015	9:27:05 AM	10/12/2011 9:27	0.015
7680	0.012	0.012	0.013	0.013	9:28:05 AM	10/12/2011 9:28	0.013
7740	0.016	0.016	0.016	0.017	9:29:05 AM	10/12/2011 9:29	0.018
7800	0.013	0.013	0.014	0.015	9:30:05 AM	10/12/2011 9:30	0.015
7860	0.012	0.012	0.012	0.013	9:31:05 AM	10/12/2011 9:31	0.013
7920	0.01	0.01	0.01	0.011	9:32:05 AM	10/12/2011 9:32	0.012
7980	0.013	0.014	0.014	0.015	9:33:05 AM	10/12/2011 9:33	0.015
8040	0.012	0.012	0.013	0.013	9:34:05 AM	10/12/2011 9:34	0.014
8100	0.012	0.012	0.013	0.014	9:35:05 AM	10/12/2011 9:35	0.014
8160	0.015	0.015	0.016	0.018	9:36:05 AM	10/12/2011 9:36	0.02
8220	0.017	0.017	0.018	0.018	9:37:05 AM	10/12/2011 9:37	0.019
8280	0.015	0.015	0.016	0.016	9:38:05 AM	10/12/2011 9:38	0.016
8340	0.019	0.02	0.02	0.021	9:39:05 AM	10/12/2011 9:39	0.021
8400	0.018	0.018	0.019	0.019	9:40:05 AM	10/12/2011 9:40	0.019
8460	0.022	0.022	0.022	0.024	9:41:05 AM	10/12/2011 9:41	0.024
8520	0.018	0.019	0.019	0.019	9:42:05 AM	10/12/2011 9:42	0.019
8580	0.015	0.015	0.016	0.017	9:43:05 AM	10/12/2011 9:43	0.017
8640	0.015	0.015	0.015	0.015	9:44:05 AM	10/12/2011 9:44	0.015
8700	0.013	0.013	0.013	0.014	9:45:05 AM	10/12/2011 9:45	0.015
8760	0.013	0.013	0.014	0.015	9:46:05 AM	10/12/2011 9:46	0.015
8820	0.015	0.015	0.015	0.016	9:47:05 AM	10/12/2011 9:47	0.016
8880	0.01	0.01	0.01	0.011	9:48:05 AM	10/12/2011 9:48	0.012
8940	0.014	0.014	0.015	0.017	9:49:05 AM	10/12/2011 9:49	0.017
9000	0.015	0.015	0.015	0.016	9:50:05 AM	10/12/2011 9:50	0.016
9060	0.017	0.017	0.017	0.019	9:51:05 AM	10/12/2011 9:51	0.019
9120	0.015	0.015	0.016	0.016	9:52:05 AM	10/12/2011 9:52	0.016
9180	0.016	0.017	0.017	0.018	9:53:05 AM	10/12/2011 9:53	0.018
9240	0.025	0.026	0.027	0.031	9:54:05 AM	10/12/2011 9:54	0.035
9300	0.031	0.031	0.032	0.034	9:55:05 AM	10/12/2011 9:55	0.035
9360	0.022	0.023	0.024	0.026	9:56:05 AM	10/12/2011 9:56	0.027
9420	0.03	0.031	0.032	0.034	9:57:05 AM	10/12/2011 9:57	0.035
9480	0.027	0.027	0.029	0.032	9:58:05 AM	10/12/2011 9:58	0.034
9540	0.022	0.023	0.024	0.027	9:59:05 AM	10/12/2011 9:59	0.028
9600	0.014	0.015	0.016	0.018	10:00:05 AM	10/12/2011 10:00	0.018
9660	0.021	0.022	0.023	0.025	10:01:05 AM	10/12/2011 10:01	0.026
9720	0.016	0.017	0.018	0.021	10:02:05 AM	10/12/2011 10:02	0.022
9780	0.017	0.018	0.02	0.023	10:03:05 AM	10/12/2011 10:03	0.024
9840	0.025	0.026	0.028	0.03	10:04:05 AM	10/12/2011 10:04	0.031
9900	0.028	0.029	0.031	0.038	10:05:05 AM	10/12/2011 10:05	0.04
9960	0.016	0.017	0.018	0.022	10:06:05 AM	10/12/2011 10:06	0.022
10020	0.014	0.015	0.016	0.018	10:07:05 AM	10/12/2011 10:07	0.019
10080	0.017	0.018	0.019	0.023	10:08:05 AM	10/12/2011 10:08	0.023
10140	0.023	0.023	0.024	0.026	10:09:05 AM	10/12/2011 10:09	0.027
10200	0.02	0.021	0.022	0.026	10:10:05 AM	10/12/2011 10:10	0.028

10260	0.015	0.016	0.017	0.02	10:11:05 AM	10/12/2011 10:11	0.021
10320	0.02	0.02	0.021	0.024	10:12:05 AM	10/12/2011 10:12	0.024
10380	0.015	0.015	0.016	0.018	10:13:05 AM	10/12/2011 10:13	0.019
10440	0.019	0.02	0.021	0.023	10:14:05 AM	10/12/2011 10:14	0.023
10500	0.016	0.016	0.017	0.02	10:15:05 AM	10/12/2011 10:15	0.02
10560	0.014	0.015	0.016	0.018	10:16:05 AM	10/12/2011 10:16	0.018
10620	0.014	0.015	0.016	0.018	10:17:05 AM	10/12/2011 10:17	0.018
10680	0.013	0.014	0.015	0.016	10:18:05 AM	10/12/2011 10:18	0.016
10740	0.017	0.018	0.02	0.023	10:19:05 AM	10/12/2011 10:19	0.025
10800	0.019	0.019	0.02	0.023	10:20:05 AM	10/12/2011 10:20	0.025
10860	0.016	0.017	0.018	0.019	10:21:05 AM	10/12/2011 10:21	0.02
10920	0.011	0.012	0.012	0.014	10:22:05 AM	10/12/2011 10:22	0.014
10980	0.015	0.015	0.016	0.018	10:23:05 AM	10/12/2011 10:23	0.018
11040	0.014	0.015	0.017	0.02	10:24:05 AM	10/12/2011 10:24	0.02
11100	0.016	0.017	0.018	0.02	10:25:05 AM	10/12/2011 10:25	0.021
11160	0.014	0.015	0.016	0.018	10:26:05 AM	10/12/2011 10:26	0.018
11220	0.015	0.015	0.016	0.019	10:27:05 AM	10/12/2011 10:27	0.019
11280	0.013	0.014	0.015	0.016	10:28:05 AM	10/12/2011 10:28	0.017
11340	0.017	0.018	0.019	0.023	10:29:05 AM	10/12/2011 10:29	0.024
11400	0.015	0.016	0.016	0.018	10:30:05 AM	10/12/2011 10:30	0.019
11460	0.021	0.022	0.023	0.029	10:31:05 AM	10/12/2011 10:31	0.032
11520	0.015	0.015	0.016	0.017	10:32:05 AM	10/12/2011 10:32	0.017
11580	0.017	0.018	0.019	0.021	10:33:05 AM	10/12/2011 10:33	0.022
11640	0.023	0.023	0.025	0.027	10:34:05 AM	10/12/2011 10:34	0.028
11700	0.017	0.018	0.019	0.02	10:35:05 AM	10/12/2011 10:35	0.02
11760	0.016	0.016	0.017	0.019	10:36:05 AM	10/12/2011 10:36	0.019
11820	0.015	0.016	0.017	0.019	10:37:05 AM	10/12/2011 10:37	0.019
11880	0.015	0.016	0.017	0.019	10:38:05 AM	10/12/2011 10:38	0.019
11940	0.019	0.019	0.02	0.022	10:39:05 AM	10/12/2011 10:39	0.022
12000	0.025	0.026	0.027	0.03	10:40:05 AM	10/12/2011 10:40	0.031
12060	0.02	0.021	0.021	0.023	10:41:05 AM	10/12/2011 10:41	0.023
12120	0.012	0.012	0.013	0.015	10:42:05 AM	10/12/2011 10:42	0.015
12180	0.015	0.015	0.016	0.018	10:43:05 AM	10/12/2011 10:43	0.018
12240	0.019	0.019	0.02	0.022	10:44:05 AM	10/12/2011 10:44	0.022
12300	0.016	0.016	0.017	0.019	10:45:05 AM	10/12/2011 10:45	0.02
12360	0.014	0.015	0.016	0.02	10:46:05 AM	10/12/2011 10:46	0.02
12420	0.015	0.016	0.017	0.019	10:47:05 AM	10/12/2011 10:47	0.02
12480	0.013	0.014	0.015	0.018	10:48:05 AM	10/12/2011 10:48	0.019
12540	0.016	0.017	0.018	0.02	10:49:05 AM	10/12/2011 10:49	0.02
12600	0.012	0.013	0.014	0.016	10:50:05 AM	10/12/2011 10:50	0.016
12660	0.012	0.013	0.014	0.015	10:51:05 AM	10/12/2011 10:51	0.015
12720	0.016	0.016	0.017	0.018	10:52:05 AM	10/12/2011 10:52	0.019
12780	0.015	0.015	0.016	0.018	10:53:05 AM	10/12/2011 10:53	0.018
12840	0.012	0.013	0.014	0.016	10:54:05 AM	10/12/2011 10:54	0.016
12900	0.015	0.016	0.017	0.018	10:55:05 AM	10/12/2011 10:55	0.018
12960	0.014	0.015	0.016	0.018	10:56:05 AM	10/12/2011 10:56	0.018
13020	0.015	0.016	0.017	0.02	10:57:05 AM	10/12/2011 10:57	0.022
13080	0.017	0.017	0.018	0.02	10:58:05 AM	10/12/2011 10:58	0.02
13140	0.014	0.014	0.015	0.017	10:59:05 AM	10/12/2011 10:59	0.018
13200	0.016	0.017	0.018	0.02	11:00:05 AM	10/12/2011 11:00	0.02
13260	0.016	0.017	0.017	0.019	11:01:05 AM	10/12/2011 11:01	0.019
13320	0.013	0.014	0.014	0.016	11:02:05 AM	10/12/2011 11:02	0.016
13380	0.013	0.013	0.014	0.016	11:03:05 AM	10/12/2011 11:03	0.016
13440	0.017	0.018	0.019	0.021	11:04:05 AM	10/12/2011 11:04	0.021
13500	0.012	0.013	0.013	0.014	11:05:05 AM	10/12/2011 11:05	0.014
13560	0.013	0.013	0.014	0.016	11:06:05 AM	10/12/2011 11:06	0.016
13620	0.019	0.02	0.021	0.023	11:07:05 AM	10/12/2011 11:07	0.023
13680	0.016	0.016	0.017	0.019	11:08:05 AM	10/12/2011 11:08	0.02
13740	0.017	0.017	0.018	0.02	11:09:05 AM	10/12/2011 11:09	0.021
13800	0.015	0.016	0.016	0.018	11:10:05 AM	10/12/2011 11:10	0.018
13860	0.013	0.013	0.014	0.015	11:11:05 AM	10/12/2011 11:11	0.015
13920	0.014	0.015	0.015	0.018	11:12:05 AM	10/12/2011 11:12	0.018
13980	0.013	0.014	0.015	0.015	11:13:05 AM	10/12/2011 11:13	0.015
14040	0.019	0.02	0.021	0.023	11:14:05 AM	10/12/2011 11:14	0.024
14100	0.015	0.016	0.017	0.018	11:15:05 AM	10/12/2011 11:15	0.019
14160	0.023	0.024	0.025	0.027	11:16:05 AM	10/12/2011 11:16	0.027
14220	0.015	0.016	0.017	0.018	11:17:05 AM	10/12/2011 11:17	0.019
14280	0.018	0.019	0.02	0.021	11:18:05 AM	10/12/2011 11:18	0.021
14340	0.017	0.017	0.018	0.02	11:19:05 AM	10/12/2011 11:19	0.02

14400	0.017	0.017	0.018	0.02	11:20:05 AM	10/12/2011 11:20	0.021
14460	0.013	0.014	0.015	0.016	11:21:05 AM	10/12/2011 11:21	0.017
14520	0.016	0.017	0.018	0.019	11:22:05 AM	10/12/2011 11:22	0.02
14580	0.016	0.017	0.018	0.02	11:23:05 AM	10/12/2011 11:23	0.02
14640	0.014	0.015	0.016	0.017	11:24:05 AM	10/12/2011 11:24	0.017
14700	0.018	0.019	0.02	0.021	11:25:05 AM	10/12/2011 11:25	0.022
14760	0.017	0.017	0.019	0.024	11:26:05 AM	10/12/2011 11:26	0.024
14820	0.017	0.018	0.019	0.021	11:27:05 AM	10/12/2011 11:27	0.022
14880	0.016	0.017	0.018	0.02	11:28:05 AM	10/12/2011 11:28	0.02
14940	0.02	0.02	0.021	0.022	11:29:05 AM	10/12/2011 11:29	0.022
15000	0.018	0.018	0.019	0.02	11:30:05 AM	10/12/2011 11:30	0.021
15060	0.012	0.012	0.013	0.015	11:31:05 AM	10/12/2011 11:31	0.016
15120	0.017	0.018	0.019	0.021	11:32:05 AM	10/12/2011 11:32	0.021
15180	0.016	0.016	0.017	0.019	11:33:05 AM	10/12/2011 11:33	0.019
15240	0.015	0.015	0.016	0.018	11:34:05 AM	10/12/2011 11:34	0.018
15300	0.014	0.015	0.015	0.017	11:35:05 AM	10/12/2011 11:35	0.017
15360	0.015	0.016	0.017	0.02	11:36:05 AM	10/12/2011 11:36	0.02
15420	0.016	0.017	0.018	0.021	11:37:05 AM	10/12/2011 11:37	0.021
15480	0.012	0.012	0.013	0.015	11:38:05 AM	10/12/2011 11:38	0.015
15540	0.01	0.011	0.012	0.013	11:39:05 AM	10/12/2011 11:39	0.013
15600	0.01	0.011	0.012	0.013	11:40:05 AM	10/12/2011 11:40	0.013
15660	0.01	0.011	0.012	0.014	11:41:05 AM	10/12/2011 11:41	0.014
15720	0.01	0.011	0.012	0.014	11:42:05 AM	10/12/2011 11:42	0.015
15780	0.01	0.01	0.011	0.013	11:43:05 AM	10/12/2011 11:43	0.014
15840	0.009	0.009	0.01	0.011	11:44:05 AM	10/12/2011 11:44	0.012
15900	0.009	0.009	0.01	0.011	11:45:05 AM	10/12/2011 11:45	0.012
15960	0.009	0.009	0.01	0.012	11:46:05 AM	10/12/2011 11:46	0.013
16020	0.012	0.013	0.014	0.017	11:47:05 AM	10/12/2011 11:47	0.018
16080	0.009	0.01	0.011	0.013	11:48:05 AM	10/12/2011 11:48	0.015
16140	0.008	0.008	0.009	0.011	11:49:05 AM	10/12/2011 11:49	0.011
16200	0.008	0.009	0.01	0.011	11:50:05 AM	10/12/2011 11:50	0.011
16260	0.009	0.009	0.01	0.012	11:51:05 AM	10/12/2011 11:51	0.013
16320	0.009	0.01	0.011	0.012	11:52:05 AM	10/12/2011 11:52	0.012
16380	0.009	0.01	0.01	0.011	11:53:05 AM	10/12/2011 11:53	0.012
16440	0.009	0.009	0.01	0.012	11:54:05 AM	10/12/2011 11:54	0.012
16500	0.008	0.009	0.009	0.011	11:55:05 AM	10/12/2011 11:55	0.011
16560	0.009	0.009	0.01	0.012	11:56:05 AM	10/12/2011 11:56	0.013
16620	0.014	0.015	0.016	0.022	11:57:05 AM	10/12/2011 11:57	0.022
16680	0.008	0.008	0.009	0.011	11:58:05 AM	10/12/2011 11:58	0.011
16740	0.009	0.009	0.01	0.012	11:59:05 AM	10/12/2011 11:59	0.014
16800	0.009	0.01	0.011	0.013	12:00:05 PM	10/12/2011 12:00	0.014
16860	0.008	0.008	0.009	0.01	12:01:05 PM	10/12/2011 12:01	0.01
16920	0.01	0.01	0.011	0.012	12:02:05 PM	10/12/2011 12:02	0.012
16980	0.01	0.011	0.011	0.013	12:03:05 PM	10/12/2011 12:03	0.013
17040	0.01	0.011	0.012	0.013	12:04:05 PM	10/12/2011 12:04	0.014
17100	0.011	0.011	0.012	0.016	12:05:05 PM	10/12/2011 12:05	0.016
17160	0.009	0.01	0.011	0.012	12:06:05 PM	10/12/2011 12:06	0.012
17220	0.009	0.01	0.011	0.014	12:07:05 PM	10/12/2011 12:07	0.014
17280	0.01	0.011	0.012	0.015	12:08:05 PM	10/12/2011 12:08	0.016
17340	0.011	0.011	0.012	0.014	12:09:05 PM	10/12/2011 12:09	0.015
17400	0.009	0.01	0.01	0.012	12:10:05 PM	10/12/2011 12:10	0.012
17460	0.009	0.01	0.011	0.013	12:11:05 PM	10/12/2011 12:11	0.014
17520	0.008	0.009	0.01	0.012	12:12:05 PM	10/12/2011 12:12	0.012
17580	0.008	0.009	0.01	0.011	12:13:05 PM	10/12/2011 12:13	0.012
17640	0.01	0.01	0.011	0.014	12:14:05 PM	10/12/2011 12:14	0.014
17700	0.01	0.01	0.011	0.013	12:15:05 PM	10/12/2011 12:15	0.014
17760	0.007	0.008	0.009	0.01	12:16:05 PM	10/12/2011 12:16	0.011
17820	0.007	0.008	0.008	0.01	12:17:05 PM	10/12/2011 12:17	0.01
17880	0.008	0.008	0.009	0.011	12:18:05 PM	10/12/2011 12:18	0.012
17940	0.008	0.008	0.009	0.01	12:19:05 PM	10/12/2011 12:19	0.01
18000	0.008	0.009	0.01	0.012	12:20:05 PM	10/12/2011 12:20	0.012
18060	0.008	0.008	0.009	0.009	12:21:05 PM	10/12/2011 12:21	0.009
18120	0.008	0.009	0.009	0.011	12:22:05 PM	10/12/2011 12:22	0.011
18180	0.009	0.009	0.01	0.011	12:23:05 PM	10/12/2011 12:23	0.012
18240	0.009	0.009	0.01	0.011	12:24:05 PM	10/12/2011 12:24	0.011
18300	0.011	0.011	0.013	0.017	12:25:05 PM	10/12/2011 12:25	0.019
18360	0.009	0.009	0.01	0.012	12:26:05 PM	10/12/2011 12:26	0.012
18420	0.009	0.009	0.01	0.011	12:27:05 PM	10/12/2011 12:27	0.011
18480	0.009	0.01	0.011	0.013	12:28:05 PM	10/12/2011 12:28	0.014

18540	0.008	0.008	0.009	0.01	12:29:05 PM	10/12/2011 12:29	0.01
18600	0.008	0.008	0.009	0.009	12:30:05 PM	10/12/2011 12:30	0.009
18660	0.009	0.009	0.01	0.012	12:31:05 PM	10/12/2011 12:31	0.013
18720	0.008	0.009	0.009	0.01	12:32:05 PM	10/12/2011 12:32	0.01
18780	0.008	0.009	0.01	0.012	12:33:05 PM	10/12/2011 12:33	0.013
18840	0.008	0.008	0.009	0.012	12:34:05 PM	10/12/2011 12:34	0.012
18900	0.01	0.01	0.011	0.014	12:35:05 PM	10/12/2011 12:35	0.015
18960	0.008	0.009	0.01	0.012	12:36:05 PM	10/12/2011 12:36	0.012
19020	0.009	0.01	0.01	0.013	12:37:05 PM	10/12/2011 12:37	0.013
19080	0.008	0.008	0.009	0.011	12:38:05 PM	10/12/2011 12:38	0.011
19140	0.008	0.009	0.009	0.011	12:39:05 PM	10/12/2011 12:39	0.011
19200	0.009	0.009	0.01	0.011	12:40:05 PM	10/12/2011 12:40	0.012
19260	0.008	0.009	0.01	0.011	12:41:05 PM	10/12/2011 12:41	0.011
19320	0.009	0.009	0.01	0.011	12:42:05 PM	10/12/2011 12:42	0.011
19380	0.01	0.01	0.011	0.014	12:43:05 PM	10/12/2011 12:43	0.015
19440	0.01	0.01	0.011	0.014	12:44:05 PM	10/12/2011 12:44	0.014
19500	0.009	0.01	0.011	0.013	12:45:05 PM	10/12/2011 12:45	0.013
19560	0.008	0.009	0.01	0.011	12:46:05 PM	10/12/2011 12:46	0.012
19620	0.009	0.009	0.01	0.011	12:47:05 PM	10/12/2011 12:47	0.011
19680	0.009	0.01	0.011	0.012	12:48:05 PM	10/12/2011 12:48	0.012
19740	0.01	0.01	0.011	0.012	12:49:05 PM	10/12/2011 12:49	0.013
19800	0.009	0.01	0.011	0.012	12:50:05 PM	10/12/2011 12:50	0.012
19860	0.009	0.01	0.01	0.012	12:51:05 PM	10/12/2011 12:51	0.012
19920	0.01	0.01	0.011	0.013	12:52:05 PM	10/12/2011 12:52	0.013
19980	0.009	0.01	0.01	0.012	12:53:05 PM	10/12/2011 12:53	0.012
20040	0.008	0.009	0.01	0.011	12:54:05 PM	10/12/2011 12:54	0.011
20100	0.008	0.009	0.01	0.011	12:55:05 PM	10/12/2011 12:55	0.012
20160	0.009	0.009	0.01	0.011	12:56:05 PM	10/12/2011 12:56	0.011
20220	0.009	0.009	0.01	0.012	12:57:05 PM	10/12/2011 12:57	0.012
20280	0.008	0.009	0.009	0.01	12:58:05 PM	10/12/2011 12:58	0.01
20340	0.008	0.008	0.009	0.01	12:59:05 PM	10/12/2011 12:59	0.011
20400	0.008	0.009	0.009	0.01	1:00:05 PM	10/12/2011 13:00	0.01
20460	0.008	0.009	0.009	0.01	1:01:05 PM	10/12/2011 13:01	0.011
20520	0.008	0.008	0.009	0.009	1:02:05 PM	10/12/2011 13:02	0.009
20580	0.008	0.008	0.009	0.01	1:03:05 PM	10/12/2011 13:03	0.01
20640	0.008	0.008	0.009	0.01	1:04:05 PM	10/12/2011 13:04	0.01
20700	0.009	0.009	0.01	0.011	1:05:05 PM	10/12/2011 13:05	0.012
20760	0.008	0.009	0.009	0.01	1:06:05 PM	10/12/2011 13:06	0.01
20820	0.008	0.009	0.009	0.011	1:07:05 PM	10/12/2011 13:07	0.011
20880	0.008	0.009	0.009	0.01	1:08:05 PM	10/12/2011 13:08	0.01
20940	0.009	0.009	0.01	0.011	1:09:05 PM	10/12/2011 13:09	0.012
21000	0.008	0.009	0.009	0.012	1:10:05 PM	10/12/2011 13:10	0.012
21060	0.008	0.009	0.01	0.011	1:11:05 PM	10/12/2011 13:11	0.011
21120	0.009	0.009	0.01	0.012	1:12:05 PM	10/12/2011 13:12	0.013
21180	0.01	0.011	0.012	0.016	1:13:05 PM	10/12/2011 13:13	0.016
21240	0.008	0.008	0.009	0.011	1:14:05 PM	10/12/2011 13:14	0.012
21300	0.009	0.009	0.01	0.013	1:15:05 PM	10/12/2011 13:15	0.013
21360	0.008	0.008	0.009	0.011	1:16:05 PM	10/12/2011 13:16	0.011
21420	0.008	0.009	0.009	0.011	1:17:05 PM	10/12/2011 13:17	0.011
21480	0.008	0.008	0.009	0.01	1:18:05 PM	10/12/2011 13:18	0.01
21540	0.008	0.008	0.009	0.01	1:19:05 PM	10/12/2011 13:19	0.01
21600	0.009	0.01	0.01	0.012	1:20:05 PM	10/12/2011 13:20	0.012
21660	0.011	0.012	0.013	0.015	1:21:05 PM	10/12/2011 13:21	0.016
21720	0.009	0.01	0.01	0.011	1:22:05 PM	10/12/2011 13:22	0.011
21780	0.012	0.012	0.013	0.014	1:23:05 PM	10/12/2011 13:23	0.016
21840	0.011	0.012	0.012	0.014	1:24:05 PM	10/12/2011 13:24	0.014
21900	0.011	0.012	0.012	0.014	1:25:05 PM	10/12/2011 13:25	0.014
21960	0.01	0.01	0.011	0.012	1:26:05 PM	10/12/2011 13:26	0.013
22020	0.012	0.013	0.014	0.016	1:27:05 PM	10/12/2011 13:27	0.016
22080	0.01	0.01	0.011	0.012	1:28:05 PM	10/12/2011 13:28	0.012
22140	0.009	0.01	0.01	0.011	1:29:05 PM	10/12/2011 13:29	0.011
22200	0.01	0.01	0.011	0.013	1:30:05 PM	10/12/2011 13:30	0.013
22260	0.011	0.012	0.013	0.016	1:31:05 PM	10/12/2011 13:31	0.017
22320	0.009	0.01	0.011	0.013	1:32:05 PM	10/12/2011 13:32	0.013
22380	0.009	0.01	0.01	0.012	1:33:05 PM	10/12/2011 13:33	0.012
22440	0.01	0.011	0.012	0.014	1:34:05 PM	10/12/2011 13:34	0.014
22500	0.01	0.01	0.011	0.012	1:35:05 PM	10/12/2011 13:35	0.012
22560	0.011	0.011	0.012	0.014	1:36:05 PM	10/12/2011 13:36	0.015
22620	0.009	0.009	0.01	0.011	1:37:05 PM	10/12/2011 13:37	0.011

22680	0.01	0.01	0.011	0.013	1:38:05 PM	10/12/2011 13:38	0.013
22740	0.009	0.01	0.011	0.012	1:39:05 PM	10/12/2011 13:39	0.012
22800	0.01	0.01	0.011	0.012	1:40:05 PM	10/12/2011 13:40	0.013
22860	0.009	0.01	0.011	0.012	1:41:05 PM	10/12/2011 13:41	0.012
22920	0.01	0.011	0.011	0.013	1:42:05 PM	10/12/2011 13:42	0.013
22980	0.009	0.01	0.011	0.014	1:43:05 PM	10/12/2011 13:43	0.014
23040	0.009	0.009	0.01	0.011	1:44:05 PM	10/12/2011 13:44	0.011
23100	0.008	0.008	0.009	0.009	1:45:05 PM	10/12/2011 13:45	0.009
23160	0.008	0.008	0.009	0.01	1:46:05 PM	10/12/2011 13:46	0.011
23220	0.008	0.008	0.009	0.01	1:47:05 PM	10/12/2011 13:47	0.01
23280	0.009	0.009	0.01	0.011	1:48:05 PM	10/12/2011 13:48	0.011
23340	0.01	0.011	0.011	0.013	1:49:05 PM	10/12/2011 13:49	0.013
23400	0.011	0.011	0.012	0.014	1:50:05 PM	10/12/2011 13:50	0.014
23460	0.013	0.014	0.014	0.015	1:51:05 PM	10/12/2011 13:51	0.016
23520	0.013	0.014	0.015	0.018	1:52:05 PM	10/12/2011 13:52	0.018
23580	0.01	0.01	0.011	0.012	1:53:05 PM	10/12/2011 13:53	0.012
23640	0.011	0.012	0.014	0.017	1:54:05 PM	10/12/2011 13:54	0.018
23700	0.01	0.011	0.012	0.015	1:55:05 PM	10/12/2011 13:55	0.015
23760	0.01	0.011	0.012	0.013	1:56:05 PM	10/12/2011 13:56	0.013
23820	0.009	0.01	0.01	0.012	1:57:05 PM	10/12/2011 13:57	0.012
23880	0.009	0.009	0.01	0.011	1:58:05 PM	10/12/2011 13:58	0.012
23940	0.012	0.012	0.013	0.015	1:59:05 PM	10/12/2011 13:59	0.015
24000	0.009	0.01	0.01	0.012	2:00:05 PM	10/12/2011 14:00	0.012
24060	0.011	0.011	0.012	0.014	2:01:05 PM	10/12/2011 14:01	0.014
24120	0.011	0.012	0.013	0.015	2:02:05 PM	10/12/2011 14:02	0.015
24180	0.009	0.01	0.011	0.012	2:03:05 PM	10/12/2011 14:03	0.012
24240	0.01	0.01	0.011	0.012	2:04:05 PM	10/12/2011 14:04	0.012

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533112903
Firmware Version	2.8
Calibration Date	7/18/2011
Test Name	MANUAL_007
Test Start Time	7:15:16
Test Start Date	10/12/2011
Test Length [D:H:M]	0:06:50
Test Interval [M:S]	1:00
PM1 Average [mg/m3]	0.016
PM1 Minimum [mg/m3]	0.008
PM1 Maximum [mg/m3]	0.37
PM1 TWA [mg/m3]	0.014
PM2.5 Average [mg/m3]	0.017
PM2.5 Minimum [mg/m3]	0.009
PM2.5 Maximum [mg/m3]	0.372
PM2.5 TWA [mg/m3]	0.015
PM4 Average [mg/m3]	0.018
PM4 Minimum [mg/m3]	0.009
PM4 Maximum [mg/m3]	0.38
PM4 TWA [mg/m3]	0.016
PM10 Average [mg/m3]	0.021
PM10 Minimum [mg/m3]	0.01
PM10 Maximum [mg/m3]	0.532
PM10 TWA [mg/m3]	0.018
TOTAL Average [mg/m3]	0.022
TOTAL Minimum [mg/m3]	0.01
TOTAL Maximum [mg/m3]	0.699
TOTAL TWA [mg/m3]	0.019
Photometric User Cal	1
Size Correction User Cal	1
Flow User Cal	1
Errors	
Number of Samples	410

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	7:15:16	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.37	0.372	0.38	0.532	7:16:16	10/12/2011 7:16	0.699		
120	0.012	0.013	0.015	0.017	7:17:16	10/12/2011 7:17	0.019		
180	0.013	0.014	0.015	0.018	7:18:16	10/12/2011 7:18	0.02		
240	0.011	0.012	0.013	0.016	7:19:16	10/12/2011 7:19	0.017		
300	0.011	0.012	0.013	0.015	7:20:16	10/12/2011 7:20	0.016		
360	0.013	0.014	0.015	0.018	7:21:16	10/12/2011 7:21	0.019		
420	0.029	0.03	0.032	0.05	7:22:16	10/12/2011 7:22	0.063		
480	0.011	0.012	0.012	0.014	7:23:16	10/12/2011 7:23	0.015		
540	0.011	0.012	0.013	0.014	7:24:16	10/12/2011 7:24	0.015		
600	0.011	0.012	0.013	0.014	7:25:16	10/12/2011 7:25	0.014		
660	0.011	0.012	0.013	0.016	7:26:16	10/12/2011 7:26	0.017		
720	0.012	0.013	0.014	0.016	7:27:16	10/12/2011 7:27	0.017		
780	0.013	0.014	0.016	0.019	7:28:16	10/12/2011 7:28	0.02		
840	0.011	0.012	0.013	0.014	7:29:16	10/12/2011 7:29	0.014		
900	0.011	0.012	0.013	0.015	7:30:16	10/12/2011 7:30	0.016		
960	0.01	0.011	0.012	0.014	7:31:16	10/12/2011 7:31	0.014		
1020	0.012	0.012	0.013	0.016	7:32:16	10/12/2011 7:32	0.017		
1080	0.01	0.011	0.011	0.012	7:33:16	10/12/2011 7:33	0.013		
1140	0.01	0.011	0.011	0.012	7:34:16	10/12/2011 7:34	0.013		
1200	0.01	0.011	0.012	0.013	7:35:16	10/12/2011 7:35	0.013		
1260	0.012	0.013	0.014	0.014	7:36:16	10/12/2011 7:36	0.015		
1320	0.013	0.015	0.016	0.017	7:37:16	10/12/2011 7:37	0.018		
1380	0.01	0.011	0.012	0.013	7:38:16	10/12/2011 7:38	0.014		
1440	0.012	0.012	0.013	0.015	7:39:16	10/12/2011 7:39	0.016		
1500	0.01	0.011	0.012	0.014	7:40:16	10/12/2011 7:40	0.014		
1560	0.01	0.011	0.012	0.014	7:41:16	10/12/2011 7:41	0.014		
1620	0.009	0.01	0.011	0.012	7:42:16	10/12/2011 7:42	0.012		
1680	0.01	0.011	0.012	0.014	7:43:16	10/12/2011 7:43	0.014		
1740	0.01	0.011	0.012	0.014	7:44:16	10/12/2011 7:44	0.014		
1800	0.011	0.011	0.012	0.014	7:45:16	10/12/2011 7:45	0.015		
1860	0.017	0.018	0.019	0.021	7:46:16	10/12/2011 7:46	0.022		
1920	0.012	0.013	0.014	0.016	7:47:16	10/12/2011 7:47	0.017		

1980	0.012	0.012	0.013	0.017	7:48:16	10/12/2011 7:48	0.017
2040	0.012	0.013	0.014	0.017	7:49:16	10/12/2011 7:49	0.017
2100	0.012	0.012	0.013	0.015	7:50:16	10/12/2011 7:50	0.015
2160	0.011	0.012	0.012	0.014	7:51:16	10/12/2011 7:51	0.014
2220	0.011	0.012	0.013	0.014	7:52:16	10/12/2011 7:52	0.014
2280	0.011	0.011	0.012	0.013	7:53:16	10/12/2011 7:53	0.013
2340	0.01	0.011	0.012	0.014	7:54:16	10/12/2011 7:54	0.014
2400	0.015	0.016	0.018	0.023	7:55:16	10/12/2011 7:55	0.026
2460	0.182	0.183	0.186	0.211	7:56:16	10/12/2011 7:56	0.232
2520	0.009	0.01	0.01	0.012	7:57:16	10/12/2011 7:57	0.012
2580	0.009	0.01	0.01	0.011	7:58:16	10/12/2011 7:58	0.011
2640	0.008	0.009	0.01	0.011	7:59:16	10/12/2011 7:59	0.011
2700	0.008	0.009	0.01	0.011	8:00:16	10/12/2011 8:00	0.011
2760	0.009	0.01	0.01	0.011	8:01:16	10/12/2011 8:01	0.011
2820	0.01	0.011	0.012	0.013	8:02:16	10/12/2011 8:02	0.013
2880	0.014	0.015	0.016	0.018	8:03:16	10/12/2011 8:03	0.018
2940	0.011	0.012	0.013	0.016	8:04:16	10/12/2011 8:04	0.017
3000	0.01	0.011	0.012	0.014	8:05:16	10/12/2011 8:05	0.014
3060	0.01	0.011	0.012	0.014	8:06:16	10/12/2011 8:06	0.015
3120	0.012	0.013	0.014	0.017	8:07:16	10/12/2011 8:07	0.018
3180	0.012	0.013	0.014	0.017	8:08:16	10/12/2011 8:08	0.018
3240	0.013	0.014	0.015	0.018	8:09:16	10/12/2011 8:09	0.019
3300	0.012	0.013	0.015	0.017	8:10:16	10/12/2011 8:10	0.017
3360	0.015	0.016	0.017	0.024	8:11:16	10/12/2011 8:11	0.028
3420	0.013	0.013	0.014	0.018	8:12:16	10/12/2011 8:12	0.021
3480	0.012	0.012	0.013	0.015	8:13:16	10/12/2011 8:13	0.015
3540	0.012	0.013	0.014	0.017	8:14:16	10/12/2011 8:14	0.018
3600	0.013	0.014	0.015	0.018	8:15:16	10/12/2011 8:15	0.019
3660	0.011	0.012	0.013	0.015	8:16:16	10/12/2011 8:16	0.015
3720	0.014	0.015	0.016	0.019	8:17:16	10/12/2011 8:17	0.02
3780	0.012	0.013	0.014	0.016	8:18:16	10/12/2011 8:18	0.017
3840	0.013	0.014	0.015	0.018	8:19:16	10/12/2011 8:19	0.019
3900	0.009	0.01	0.011	0.012	8:20:16	10/12/2011 8:20	0.012
3960	0.01	0.01	0.011	0.013	8:21:16	10/12/2011 8:21	0.013
4020	0.009	0.01	0.011	0.012	8:22:16	10/12/2011 8:22	0.012
4080	0.009	0.01	0.011	0.012	8:23:16	10/12/2011 8:23	0.013
4140	0.011	0.012	0.013	0.016	8:24:16	10/12/2011 8:24	0.016
4200	0.016	0.017	0.019	0.025	8:25:16	10/12/2011 8:25	0.026
4260	0.014	0.015	0.017	0.02	8:26:16	10/12/2011 8:26	0.021
4320	0.012	0.013	0.015	0.018	8:27:16	10/12/2011 8:27	0.019
4380	0.04	0.041	0.043	0.055	8:28:16	10/12/2011 8:28	0.066
4440	0.014	0.016	0.018	0.024	8:29:16	10/12/2011 8:29	0.025
4500	0.016	0.017	0.019	0.026	8:30:16	10/12/2011 8:30	0.028
4560	0.015	0.017	0.019	0.025	8:31:16	10/12/2011 8:31	0.025
4620	0.015	0.016	0.018	0.022	8:32:16	10/12/2011 8:32	0.024
4680	0.016	0.017	0.018	0.021	8:33:16	10/12/2011 8:33	0.022
4740	0.011	0.012	0.013	0.015	8:34:16	10/12/2011 8:34	0.015
4800	0.01	0.01	0.011	0.013	8:35:16	10/12/2011 8:35	0.014
4860	0.013	0.014	0.015	0.019	8:36:16	10/12/2011 8:36	0.02
4920	0.01	0.011	0.012	0.016	8:37:16	10/12/2011 8:37	0.016
4980	0.011	0.011	0.012	0.015	8:38:16	10/12/2011 8:38	0.015
5040	0.011	0.011	0.013	0.015	8:39:16	10/12/2011 8:39	0.015
5100	0.012	0.013	0.014	0.018	8:40:16	10/12/2011 8:40	0.021
5160	0.014	0.015	0.016	0.018	8:41:16	10/12/2011 8:41	0.02
5220	0.017	0.018	0.019	0.022	8:42:16	10/12/2011 8:42	0.023
5280	0.017	0.018	0.018	0.02	8:43:16	10/12/2011 8:43	0.02
5340	0.017	0.018	0.019	0.021	8:44:16	10/12/2011 8:44	0.021
5400	0.011	0.012	0.013	0.015	8:45:16	10/12/2011 8:45	0.015
5460	0.063	0.066	0.07	0.081	8:46:16	10/12/2011 8:46	0.082
5520	0.026	0.027	0.028	0.03	8:47:16	10/12/2011 8:47	0.032
5580	0.014	0.014	0.015	0.017	8:48:16	10/12/2011 8:48	0.018
5640	0.022	0.022	0.024	0.027	8:49:16	10/12/2011 8:49	0.028
5700	0.021	0.022	0.023	0.026	8:50:16	10/12/2011 8:50	0.027
5760	0.023	0.024	0.026	0.029	8:51:16	10/12/2011 8:51	0.029
5820	0.023	0.024	0.025	0.028	8:52:16	10/12/2011 8:52	0.028
5880	0.016	0.017	0.018	0.02	8:53:16	10/12/2011 8:53	0.021
5940	0.017	0.018	0.019	0.022	8:54:16	10/12/2011 8:54	0.022
6000	0.018	0.019	0.02	0.023	8:55:16	10/12/2011 8:55	0.024
6060	0.023	0.025	0.027	0.03	8:56:16	10/12/2011 8:56	0.031

6120	0.018	0.02	0.021	0.026	8:57:16	10/12/2011 8:57	0.027
6180	0.017	0.018	0.019	0.023	8:58:16	10/12/2011 8:58	0.023
6240	0.021	0.022	0.023	0.026	8:59:16	10/12/2011 8:59	0.026
6300	0.022	0.023	0.025	0.027	9:00:16	10/12/2011 9:00	0.028
6360	0.024	0.024	0.026	0.028	9:01:16	10/12/2011 9:01	0.029
6420	0.021	0.022	0.023	0.025	9:02:16	10/12/2011 9:02	0.025
6480	0.023	0.024	0.025	0.027	9:03:16	10/12/2011 9:03	0.028
6540	0.017	0.018	0.019	0.021	9:04:16	10/12/2011 9:04	0.022
6600	0.012	0.012	0.013	0.015	9:05:16	10/12/2011 9:05	0.015
6660	0.012	0.013	0.014	0.017	9:06:16	10/12/2011 9:06	0.017
6720	0.019	0.02	0.02	0.022	9:07:16	10/12/2011 9:07	0.023
6780	0.02	0.021	0.022	0.024	9:08:16	10/12/2011 9:08	0.024
6840	0.018	0.018	0.019	0.02	9:09:16	10/12/2011 9:09	0.022
6900	0.013	0.013	0.014	0.015	9:10:16	10/12/2011 9:10	0.015
6960	0.015	0.016	0.017	0.018	9:11:16	10/12/2011 9:11	0.018
7020	0.015	0.016	0.016	0.018	9:12:16	10/12/2011 9:12	0.019
7080	0.016	0.016	0.017	0.019	9:13:16	10/12/2011 9:13	0.019
7140	0.014	0.015	0.015	0.018	9:14:16	10/12/2011 9:14	0.018
7200	0.013	0.014	0.014	0.016	9:15:16	10/12/2011 9:15	0.017
7260	0.016	0.017	0.018	0.019	9:16:16	10/12/2011 9:16	0.019
7320	0.021	0.022	0.023	0.028	9:17:16	10/12/2011 9:17	0.028
7380	0.019	0.02	0.021	0.023	9:18:16	10/12/2011 9:18	0.023
7440	0.017	0.017	0.018	0.02	9:19:16	10/12/2011 9:19	0.02
7500	0.018	0.019	0.02	0.021	9:20:16	10/12/2011 9:20	0.022
7560	0.022	0.023	0.024	0.025	9:21:16	10/12/2011 9:21	0.026
7620	0.017	0.018	0.019	0.025	9:22:16	10/12/2011 9:22	0.028
7680	0.019	0.019	0.02	0.022	9:23:16	10/12/2011 9:23	0.023
7740	0.018	0.019	0.019	0.021	9:24:16	10/12/2011 9:24	0.022
7800	0.021	0.022	0.023	0.024	9:25:16	10/12/2011 9:25	0.024
7860	0.021	0.022	0.023	0.024	9:26:16	10/12/2011 9:26	0.025
7920	0.018	0.019	0.019	0.021	9:27:16	10/12/2011 9:27	0.022
7980	0.017	0.017	0.018	0.019	9:28:16	10/12/2011 9:28	0.019
8040	0.018	0.019	0.019	0.02	9:29:16	10/12/2011 9:29	0.021
8100	0.019	0.02	0.021	0.022	9:30:16	10/12/2011 9:30	0.023
8160	0.019	0.02	0.022	0.026	9:31:16	10/12/2011 9:31	0.026
8220	0.014	0.014	0.015	0.018	9:32:16	10/12/2011 9:32	0.018
8280	0.023	0.024	0.026	0.03	9:33:16	10/12/2011 9:33	0.033
8340	0.021	0.022	0.024	0.034	9:34:16	10/12/2011 9:34	0.042
8400	0.014	0.015	0.016	0.017	9:35:16	10/12/2011 9:35	0.017
8460	0.013	0.014	0.015	0.016	9:36:16	10/12/2011 9:36	0.016
8520	0.019	0.02	0.02	0.021	9:37:16	10/12/2011 9:37	0.022
8580	0.022	0.023	0.024	0.025	9:38:16	10/12/2011 9:38	0.025
8640	0.015	0.015	0.016	0.017	9:39:16	10/12/2011 9:39	0.017
8700	0.029	0.029	0.03	0.032	9:40:16	10/12/2011 9:40	0.032
8760	0.024	0.025	0.026	0.027	9:41:16	10/12/2011 9:41	0.027
8820	0.025	0.025	0.026	0.028	9:42:16	10/12/2011 9:42	0.028
8880	0.024	0.024	0.025	0.027	9:43:16	10/12/2011 9:43	0.027
8940	0.02	0.02	0.021	0.023	9:44:16	10/12/2011 9:44	0.023
9000	0.021	0.021	0.022	0.025	9:45:16	10/12/2011 9:45	0.026
9060	0.016	0.017	0.018	0.02	9:46:16	10/12/2011 9:46	0.021
9120	0.018	0.019	0.02	0.022	9:47:16	10/12/2011 9:47	0.022
9180	0.016	0.017	0.018	0.022	9:48:16	10/12/2011 9:48	0.023
9240	0.022	0.023	0.024	0.032	9:49:16	10/12/2011 9:49	0.037
9300	0.016	0.017	0.018	0.019	9:50:16	10/12/2011 9:50	0.02
9360	0.019	0.02	0.021	0.024	9:51:16	10/12/2011 9:51	0.024
9420	0.016	0.017	0.018	0.02	9:52:16	10/12/2011 9:52	0.021
9480	0.02	0.02	0.021	0.022	9:53:16	10/12/2011 9:53	0.022
9540	0.024	0.024	0.025	0.027	9:54:16	10/12/2011 9:54	0.027
9600	0.032	0.032	0.033	0.035	9:55:16	10/12/2011 9:55	0.035
9660	0.019	0.019	0.02	0.022	9:56:16	10/12/2011 9:56	0.022
9720	0.022	0.023	0.024	0.025	9:57:16	10/12/2011 9:57	0.025
9780	0.025	0.026	0.027	0.029	9:58:16	10/12/2011 9:58	0.029
9840	0.037	0.038	0.039	0.041	9:59:16	10/12/2011 9:59	0.042
9900	0.022	0.023	0.024	0.026	10:00:16	10/12/2011 10:00	0.026
9960	0.022	0.023	0.024	0.025	10:01:16	10/12/2011 10:01	0.026
10020	0.018	0.019	0.02	0.024	10:02:16	10/12/2011 10:02	0.024
10080	0.019	0.02	0.021	0.024	10:03:16	10/12/2011 10:03	0.025
10140	0.021	0.022	0.023	0.027	10:04:16	10/12/2011 10:04	0.028
10200	0.022	0.023	0.025	0.031	10:05:16	10/12/2011 10:05	0.033

10260	0.016	0.017	0.018	0.021	10:06:16	10/12/2011 10:06	0.021
10320	0.018	0.018	0.019	0.021	10:07:16	10/12/2011 10:07	0.022
10380	0.018	0.019	0.019	0.021	10:08:16	10/12/2011 10:08	0.023
10440	0.017	0.018	0.018	0.02	10:09:16	10/12/2011 10:09	0.02
10500	0.022	0.023	0.024	0.026	10:10:16	10/12/2011 10:10	0.026
10560	0.023	0.024	0.025	0.027	10:11:16	10/12/2011 10:11	0.028
10620	0.023	0.024	0.025	0.028	10:12:16	10/12/2011 10:12	0.031
10680	0.023	0.024	0.024	0.027	10:13:16	10/12/2011 10:13	0.028
10740	0.02	0.021	0.022	0.024	10:14:16	10/12/2011 10:14	0.024
10800	0.02	0.02	0.021	0.023	10:15:16	10/12/2011 10:15	0.024
10860	0.023	0.024	0.025	0.028	10:16:16	10/12/2011 10:16	0.028
10920	0.018	0.019	0.02	0.022	10:17:16	10/12/2011 10:17	0.022
10980	0.016	0.016	0.017	0.019	10:18:16	10/12/2011 10:18	0.019
11040	0.015	0.016	0.017	0.019	10:19:16	10/12/2011 10:19	0.019
11100	0.013	0.014	0.015	0.016	10:20:16	10/12/2011 10:20	0.016
11160	0.019	0.019	0.02	0.022	10:21:16	10/12/2011 10:21	0.022
11220	0.013	0.014	0.014	0.016	10:22:16	10/12/2011 10:22	0.016
11280	0.011	0.012	0.013	0.014	10:23:16	10/12/2011 10:23	0.015
11340	0.017	0.017	0.018	0.02	10:24:16	10/12/2011 10:24	0.02
11400	0.019	0.02	0.02	0.023	10:25:16	10/12/2011 10:25	0.023
11460	0.013	0.014	0.014	0.016	10:26:16	10/12/2011 10:26	0.017
11520	0.013	0.013	0.014	0.018	10:27:16	10/12/2011 10:27	0.018
11580	0.016	0.017	0.018	0.02	10:28:16	10/12/2011 10:28	0.021
11640	0.02	0.02	0.021	0.023	10:29:16	10/12/2011 10:29	0.023
11700	0.021	0.021	0.022	0.023	10:30:16	10/12/2011 10:30	0.023
11760	0.02	0.021	0.021	0.023	10:31:16	10/12/2011 10:31	0.023
11820	0.017	0.018	0.018	0.02	10:32:16	10/12/2011 10:32	0.02
11880	0.019	0.02	0.021	0.023	10:33:16	10/12/2011 10:33	0.023
11940	0.014	0.014	0.015	0.017	10:34:16	10/12/2011 10:34	0.017
12000	0.017	0.018	0.02	0.026	10:35:16	10/12/2011 10:35	0.028
12060	0.023	0.024	0.025	0.028	10:36:16	10/12/2011 10:36	0.028
12120	0.022	0.023	0.023	0.025	10:37:16	10/12/2011 10:37	0.025
12180	0.025	0.026	0.027	0.03	10:38:16	10/12/2011 10:38	0.033
12240	0.021	0.022	0.022	0.024	10:39:16	10/12/2011 10:39	0.024
12300	0.019	0.019	0.02	0.021	10:40:16	10/12/2011 10:40	0.022
12360	0.021	0.022	0.022	0.024	10:41:16	10/12/2011 10:41	0.025
12420	0.024	0.024	0.025	0.026	10:42:16	10/12/2011 10:42	0.027
12480	0.023	0.024	0.024	0.025	10:43:16	10/12/2011 10:43	0.026
12540	0.016	0.017	0.018	0.019	10:44:16	10/12/2011 10:44	0.02
12600	0.017	0.018	0.019	0.022	10:45:16	10/12/2011 10:45	0.022
12660	0.015	0.016	0.017	0.02	10:46:16	10/12/2011 10:46	0.02
12720	0.016	0.017	0.018	0.021	10:47:16	10/12/2011 10:47	0.021
12780	0.017	0.018	0.018	0.021	10:48:16	10/12/2011 10:48	0.021
12840	0.017	0.018	0.018	0.02	10:49:16	10/12/2011 10:49	0.02
12900	0.016	0.017	0.017	0.02	10:50:16	10/12/2011 10:50	0.02
12960	0.018	0.019	0.02	0.022	10:51:16	10/12/2011 10:51	0.022
13020	0.015	0.016	0.017	0.018	10:52:16	10/12/2011 10:52	0.018
13080	0.017	0.017	0.018	0.019	10:53:16	10/12/2011 10:53	0.02
13140	0.015	0.016	0.017	0.018	10:54:16	10/12/2011 10:54	0.019
13200	0.015	0.016	0.017	0.018	10:55:16	10/12/2011 10:55	0.019
13260	0.016	0.017	0.018	0.02	10:56:16	10/12/2011 10:56	0.02
13320	0.013	0.014	0.014	0.015	10:57:16	10/12/2011 10:57	0.016
13380	0.015	0.016	0.017	0.019	10:58:16	10/12/2011 10:58	0.019
13440	0.015	0.016	0.016	0.017	10:59:16	10/12/2011 10:59	0.017
13500	0.012	0.013	0.013	0.015	11:00:16	10/12/2011 11:00	0.015
13560	0.01	0.011	0.012	0.013	11:01:16	10/12/2011 11:01	0.013
13620	0.013	0.013	0.014	0.016	11:02:16	10/12/2011 11:02	0.017
13680	0.014	0.015	0.015	0.016	11:03:16	10/12/2011 11:03	0.016
13740	0.01	0.01	0.011	0.011	11:04:16	10/12/2011 11:04	0.011
13800	0.009	0.01	0.01	0.011	11:05:16	10/12/2011 11:05	0.011
13860	0.013	0.013	0.014	0.015	11:06:16	10/12/2011 11:06	0.016
13920	0.012	0.013	0.013	0.015	11:07:16	10/12/2011 11:07	0.015
13980	0.014	0.015	0.015	0.017	11:08:16	10/12/2011 11:08	0.017
14040	0.017	0.018	0.018	0.019	11:09:16	10/12/2011 11:09	0.02
14100	0.018	0.019	0.019	0.02	11:10:16	10/12/2011 11:10	0.021
14160	0.013	0.013	0.014	0.015	11:11:16	10/12/2011 11:11	0.015
14220	0.016	0.017	0.018	0.024	11:12:16	10/12/2011 11:12	0.03
14280	0.012	0.013	0.013	0.014	11:13:16	10/12/2011 11:13	0.014
14340	0.012	0.013	0.013	0.015	11:14:16	10/12/2011 11:14	0.015

14400	0.012	0.013	0.014	0.017	11:15:16	10/12/2011 11:15	0.017
14460	0.027	0.028	0.028	0.03	11:16:16	10/12/2011 11:16	0.03
14520	0.033	0.034	0.034	0.036	11:17:16	10/12/2011 11:17	0.036
14580	0.023	0.023	0.024	0.025	11:18:16	10/12/2011 11:18	0.025
14640	0.023	0.023	0.024	0.026	11:19:16	10/12/2011 11:19	0.027
14700	0.02	0.021	0.022	0.024	11:20:16	10/12/2011 11:20	0.025
14760	0.014	0.015	0.016	0.017	11:21:16	10/12/2011 11:21	0.017
14820	0.016	0.017	0.017	0.018	11:22:16	10/12/2011 11:22	0.019
14880	0.017	0.018	0.018	0.02	11:23:16	10/12/2011 11:23	0.02
14940	0.016	0.017	0.017	0.019	11:24:16	10/12/2011 11:24	0.02
15000	0.015	0.015	0.016	0.018	11:25:16	10/12/2011 11:25	0.018
15060	0.016	0.016	0.017	0.02	11:26:16	10/12/2011 11:26	0.021
15120	0.016	0.016	0.017	0.018	11:27:16	10/12/2011 11:27	0.018
15180	0.018	0.019	0.019	0.02	11:28:16	10/12/2011 11:28	0.02
15240	0.018	0.019	0.02	0.022	11:29:16	10/12/2011 11:29	0.022
15300	0.013	0.013	0.014	0.016	11:30:16	10/12/2011 11:30	0.017
15360	0.012	0.013	0.014	0.015	11:31:16	10/12/2011 11:31	0.015
15420	0.023	0.023	0.024	0.025	11:32:16	10/12/2011 11:32	0.025
15480	0.02	0.02	0.021	0.022	11:33:16	10/12/2011 11:33	0.022
15540	0.015	0.015	0.016	0.018	11:34:16	10/12/2011 11:34	0.018
15600	0.012	0.013	0.014	0.015	11:35:16	10/12/2011 11:35	0.016
15660	0.044	0.044	0.046	0.057	11:36:16	10/12/2011 11:36	0.063
15720	0.018	0.019	0.021	0.025	11:37:16	10/12/2011 11:37	0.026
15780	0.015	0.015	0.016	0.019	11:38:16	10/12/2011 11:38	0.021
15840	0.012	0.013	0.014	0.018	11:39:16	10/12/2011 11:39	0.023
15900	0.032	0.034	0.038	0.045	11:40:16	10/12/2011 11:40	0.046
15960	0.025	0.028	0.031	0.038	11:41:16	10/12/2011 11:41	0.04
16020	0.011	0.012	0.012	0.014	11:42:16	10/12/2011 11:42	0.015
16080	0.012	0.012	0.014	0.017	11:43:16	10/12/2011 11:43	0.017
16140	0.01	0.011	0.011	0.012	11:44:16	10/12/2011 11:44	0.013
16200	0.01	0.011	0.011	0.012	11:45:16	10/12/2011 11:45	0.013
16260	0.015	0.016	0.017	0.019	11:46:16	10/12/2011 11:46	0.02
16320	0.013	0.014	0.015	0.017	11:47:16	10/12/2011 11:47	0.017
16380	0.01	0.011	0.011	0.013	11:48:16	10/12/2011 11:48	0.013
16440	0.009	0.01	0.01	0.011	11:49:16	10/12/2011 11:49	0.011
16500	0.01	0.011	0.012	0.014	11:50:16	10/12/2011 11:50	0.014
16560	0.01	0.011	0.012	0.013	11:51:16	10/12/2011 11:51	0.013
16620	0.012	0.012	0.013	0.015	11:52:16	10/12/2011 11:52	0.016
16680	0.01	0.01	0.011	0.012	11:53:16	10/12/2011 11:53	0.012
16740	0.018	0.019	0.02	0.033	11:54:16	10/12/2011 11:54	0.039
16800	0.02	0.021	0.022	0.025	11:55:16	10/12/2011 11:55	0.025
16860	0.059	0.063	0.07	0.083	11:56:16	10/12/2011 11:56	0.084
16920	0.049	0.053	0.06	0.074	11:57:16	10/12/2011 11:57	0.075
16980	0.039	0.041	0.045	0.056	11:58:16	10/12/2011 11:58	0.064
17040	0.096	0.107	0.127	0.166	11:59:16	10/12/2011 11:59	0.167
17100	0.079	0.086	0.097	0.12	12:00:16	10/12/2011 12:00	0.122
17160	0.01	0.01	0.011	0.013	12:01:16	10/12/2011 12:01	0.013
17220	0.01	0.011	0.011	0.013	12:02:16	10/12/2011 12:02	0.013
17280	0.01	0.011	0.011	0.013	12:03:16	10/12/2011 12:03	0.014
17340	0.012	0.013	0.014	0.017	12:04:16	10/12/2011 12:04	0.018
17400	0.013	0.014	0.016	0.021	12:05:16	10/12/2011 12:05	0.022
17460	0.009	0.009	0.01	0.012	12:06:16	10/12/2011 12:06	0.012
17520	0.009	0.009	0.01	0.011	12:07:16	10/12/2011 12:07	0.011
17580	0.009	0.01	0.01	0.011	12:08:16	10/12/2011 12:08	0.011
17640	0.012	0.012	0.013	0.014	12:09:16	10/12/2011 12:09	0.014
17700	0.015	0.015	0.016	0.022	12:10:16	10/12/2011 12:10	0.026
17760	0.009	0.01	0.01	0.011	12:11:16	10/12/2011 12:11	0.011
17820	0.01	0.011	0.012	0.013	12:12:16	10/12/2011 12:12	0.013
17880	0.009	0.01	0.01	0.011	12:13:16	10/12/2011 12:13	0.012
17940	0.01	0.01	0.01	0.012	12:14:16	10/12/2011 12:14	0.012
18000	0.009	0.009	0.01	0.011	12:15:16	10/12/2011 12:15	0.011
18060	0.009	0.01	0.01	0.012	12:16:16	10/12/2011 12:16	0.012
18120	0.01	0.01	0.011	0.013	12:17:16	10/12/2011 12:17	0.013
18180	0.009	0.01	0.011	0.012	12:18:16	10/12/2011 12:18	0.013
18240	0.011	0.012	0.013	0.015	12:19:16	10/12/2011 12:19	0.015
18300	0.009	0.01	0.01	0.012	12:20:16	10/12/2011 12:20	0.012
18360	0.009	0.01	0.01	0.011	12:21:16	10/12/2011 12:21	0.011
18420	0.011	0.011	0.012	0.013	12:22:16	10/12/2011 12:22	0.014
18480	0.016	0.017	0.018	0.02	12:23:16	10/12/2011 12:23	0.022

18540	0.009	0.009	0.01	0.011	12:24:16	10/12/2011 12:24	0.011
18600	0.009	0.01	0.01	0.011	12:25:16	10/12/2011 12:25	0.012
18660	0.012	0.013	0.014	0.017	12:26:16	10/12/2011 12:26	0.018
18720	0.008	0.009	0.009	0.01	12:27:16	10/12/2011 12:27	0.01
18780	0.009	0.009	0.01	0.01	12:28:16	10/12/2011 12:28	0.011
18840	0.009	0.009	0.01	0.011	12:29:16	10/12/2011 12:29	0.011
18900	0.008	0.009	0.009	0.01	12:30:16	10/12/2011 12:30	0.011
18960	0.009	0.01	0.01	0.011	12:31:16	10/12/2011 12:31	0.011
19020	0.009	0.009	0.01	0.011	12:32:16	10/12/2011 12:32	0.011
19080	0.008	0.009	0.009	0.01	12:33:16	10/12/2011 12:33	0.01
19140	0.011	0.011	0.012	0.017	12:34:16	10/12/2011 12:34	0.017
19200	0.009	0.01	0.01	0.013	12:35:16	10/12/2011 12:35	0.014
19260	0.009	0.009	0.01	0.012	12:36:16	10/12/2011 12:36	0.012
19320	0.008	0.009	0.009	0.01	12:37:16	10/12/2011 12:37	0.01
19380	0.009	0.009	0.01	0.011	12:38:16	10/12/2011 12:38	0.011
19440	0.01	0.01	0.011	0.011	12:39:16	10/12/2011 12:39	0.011
19500	0.008	0.009	0.009	0.01	12:40:16	10/12/2011 12:40	0.01
19560	0.01	0.01	0.011	0.013	12:41:16	10/12/2011 12:41	0.013
19620	0.01	0.01	0.011	0.012	12:42:16	10/12/2011 12:42	0.012
19680	0.009	0.009	0.01	0.011	12:43:16	10/12/2011 12:43	0.011
19740	0.01	0.01	0.011	0.013	12:44:16	10/12/2011 12:44	0.013
19800	0.009	0.01	0.01	0.012	12:45:16	10/12/2011 12:45	0.012
19860	0.01	0.01	0.011	0.012	12:46:16	10/12/2011 12:46	0.013
19920	0.009	0.01	0.01	0.011	12:47:16	10/12/2011 12:47	0.011
19980	0.01	0.01	0.011	0.011	12:48:16	10/12/2011 12:48	0.012
20040	0.01	0.011	0.011	0.012	12:49:16	10/12/2011 12:49	0.012
20100	0.01	0.011	0.011	0.012	12:50:16	10/12/2011 12:50	0.012
20160	0.011	0.011	0.012	0.012	12:51:16	10/12/2011 12:51	0.012
20220	0.009	0.01	0.01	0.012	12:52:16	10/12/2011 12:52	0.012
20280	0.008	0.009	0.009	0.01	12:53:16	10/12/2011 12:53	0.01
20340	0.009	0.01	0.01	0.011	12:54:16	10/12/2011 12:54	0.011
20400	0.016	0.016	0.017	0.018	12:55:16	10/12/2011 12:55	0.018
20460	0.008	0.009	0.009	0.01	12:56:16	10/12/2011 12:56	0.01
20520	0.009	0.009	0.01	0.01	12:57:16	10/12/2011 12:57	0.011
20580	0.008	0.009	0.009	0.01	12:58:16	10/12/2011 12:58	0.01
20640	0.008	0.009	0.009	0.01	12:59:16	10/12/2011 12:59	0.01
20700	0.008	0.009	0.009	0.01	13:00:16	10/12/2011 13:00	0.01
20760	0.008	0.009	0.009	0.01	13:01:16	10/12/2011 13:01	0.011
20820	0.008	0.009	0.009	0.01	13:02:16	10/12/2011 13:02	0.01
20880	0.009	0.009	0.01	0.011	13:03:16	10/12/2011 13:03	0.011
20940	0.008	0.009	0.009	0.01	13:04:16	10/12/2011 13:04	0.01
21000	0.009	0.009	0.009	0.01	13:05:16	10/12/2011 13:05	0.01
21060	0.009	0.009	0.01	0.011	13:06:16	10/12/2011 13:06	0.011
21120	0.009	0.009	0.01	0.011	13:07:16	10/12/2011 13:07	0.011
21180	0.009	0.01	0.01	0.011	13:08:16	10/12/2011 13:08	0.011
21240	0.008	0.009	0.009	0.01	13:09:16	10/12/2011 13:09	0.01
21300	0.009	0.009	0.01	0.012	13:10:16	10/12/2011 13:10	0.012
21360	0.009	0.009	0.009	0.011	13:11:16	10/12/2011 13:11	0.011
21420	0.01	0.01	0.011	0.013	13:12:16	10/12/2011 13:12	0.014
21480	0.008	0.009	0.009	0.01	13:13:16	10/12/2011 13:13	0.01
21540	0.009	0.009	0.01	0.011	13:14:16	10/12/2011 13:14	0.011
21600	0.008	0.009	0.009	0.011	13:15:16	10/12/2011 13:15	0.011
21660	0.008	0.009	0.009	0.01	13:16:16	10/12/2011 13:16	0.01
21720	0.009	0.009	0.009	0.01	13:17:16	10/12/2011 13:17	0.01
21780	0.009	0.009	0.009	0.01	13:18:16	10/12/2011 13:18	0.01
21840	0.009	0.01	0.01	0.012	13:19:16	10/12/2011 13:19	0.012
21900	0.01	0.01	0.01	0.012	13:20:16	10/12/2011 13:20	0.012
21960	0.009	0.009	0.009	0.01	13:21:16	10/12/2011 13:21	0.01
22020	0.009	0.009	0.01	0.011	13:22:16	10/12/2011 13:22	0.011
22080	0.009	0.009	0.01	0.011	13:23:16	10/12/2011 13:23	0.011
22140	0.01	0.01	0.011	0.011	13:24:16	10/12/2011 13:24	0.012
22200	0.01	0.01	0.011	0.012	13:25:16	10/12/2011 13:25	0.012
22260	0.009	0.01	0.01	0.011	13:26:16	10/12/2011 13:26	0.011
22320	0.009	0.009	0.01	0.011	13:27:16	10/12/2011 13:27	0.011
22380	0.01	0.01	0.011	0.012	13:28:16	10/12/2011 13:28	0.013
22440	0.009	0.01	0.01	0.011	13:29:16	10/12/2011 13:29	0.011
22500	0.01	0.011	0.011	0.012	13:30:16	10/12/2011 13:30	0.012
22560	0.01	0.01	0.01	0.011	13:31:16	10/12/2011 13:31	0.012
22620	0.01	0.011	0.011	0.012	13:32:16	10/12/2011 13:32	0.012

22680	0.01	0.011	0.012	0.014	13:33:16	10/12/2011 13:33	0.014
22740	0.01	0.011	0.011	0.013	13:34:16	10/12/2011 13:34	0.013
22800	0.01	0.011	0.011	0.012	13:35:16	10/12/2011 13:35	0.013
22860	0.009	0.01	0.01	0.012	13:36:16	10/12/2011 13:36	0.012
22920	0.013	0.013	0.015	0.02	13:37:16	10/12/2011 13:37	0.022
22980	0.011	0.011	0.012	0.014	13:38:16	10/12/2011 13:38	0.014
23040	0.018	0.019	0.021	0.027	13:39:16	10/12/2011 13:39	0.028
23100	0.022	0.023	0.023	0.026	13:40:16	10/12/2011 13:40	0.026
23160	0.02	0.021	0.022	0.023	13:41:16	10/12/2011 13:41	0.023
23220	0.01	0.011	0.011	0.012	13:42:16	10/12/2011 13:42	0.012
23280	0.008	0.009	0.009	0.01	13:43:16	10/12/2011 13:43	0.01
23340	0.009	0.009	0.01	0.01	13:44:16	10/12/2011 13:44	0.011
23400	0.009	0.01	0.01	0.011	13:45:16	10/12/2011 13:45	0.012
23460	0.009	0.01	0.01	0.012	13:46:16	10/12/2011 13:46	0.012
23520	0.012	0.013	0.014	0.017	13:47:16	10/12/2011 13:47	0.018
23580	0.012	0.012	0.013	0.014	13:48:16	10/12/2011 13:48	0.015
23640	0.012	0.013	0.014	0.017	13:49:16	10/12/2011 13:49	0.018
23700	0.015	0.016	0.016	0.018	13:50:16	10/12/2011 13:50	0.018
23760	0.015	0.015	0.016	0.018	13:51:16	10/12/2011 13:51	0.018
23820	0.01	0.011	0.011	0.013	13:52:16	10/12/2011 13:52	0.013
23880	0.01	0.011	0.011	0.013	13:53:16	10/12/2011 13:53	0.013
23940	0.044	0.045	0.047	0.061	13:54:16	10/12/2011 13:54	0.076
24000	0.013	0.013	0.014	0.015	13:55:16	10/12/2011 13:55	0.016
24060	0.017	0.018	0.019	0.021	13:56:16	10/12/2011 13:56	0.023
24120	0.011	0.012	0.012	0.013	13:57:16	10/12/2011 13:57	0.014
24180	0.013	0.014	0.014	0.016	13:58:16	10/12/2011 13:58	0.017
24240	0.01	0.011	0.011	0.012	13:59:16	10/12/2011 13:59	0.012
24300	0.011	0.012	0.012	0.014	14:00:16	10/12/2011 14:00	0.014
24360	0.014	0.014	0.015	0.017	14:01:16	10/12/2011 14:01	0.017
24420	0.013	0.013	0.014	0.016	14:02:16	10/12/2011 14:02	0.017
24480	0.018	0.019	0.02	0.025	14:03:16	10/12/2011 14:03	0.027
24540	0.016	0.017	0.018	0.023	14:04:16	10/12/2011 14:04	0.024
24600	0.014	0.015	0.017	0.021	14:05:16	10/12/2011 14:05	0.023

AECOM

Client: National Grid
Location: Lowe's
Date: 10/13/11
Field Personnel: J. Ehlen

Project: Metropolitan
Project Number: 60137361
Weather: ~60°F, cloudy, light rain, breezy
Ambient Noise: ~80 dB

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
745	0.5	0.016	0.0	0.0	0.384	93.8	Drilling SB-25
800	0.6	0.011	0.0	0.0	0.026	91.6	" Slight Napt odor from canal
814	0.3	0.014	0.1	0.1	0.012	93.5	"
835	0.2	0.012	0.1	0.1	0.012	94.0	"
845	0.3	0.014	0.1	0.1	0.017	94.5	"
859	0.3	0.014	0.1	0.1	0.016	93.6	"
917	0.2	0.018	0.1	0.2	0.020	93.1	"
942	0.3	0.015	0.1	0.2	0.019	94.2	"
1002	0.0	0.014	0.1	0.2	0.014	93.9	"
1016	0.0	0.015	0.2	0.2	0.019	95.5	"
1030	0.1	0.016	0.1	0.2	0.018	94.1	"
1044	0.0	0.014	0.1	0.2	0.017	95.1	"
1058	0.0	0.017	0.1	0.2	0.018	95.6	"
1345	0.0	0.032	0.1	0.3	0.029	92.7	Backfilling well.
1400	0.0	0.029	0.1	0.3	0.024	91.9	"
1500	0.0	0.029	0.1	0.3	0.030	92.9	"
1525	0.0	0.035	0.1	0.3	0.035	92.8	"
1600	0.0	0.035	0.1	0.3	0.037	91.0	"
1630	0.0	0.034	0.2	0.4	0.053	90.7	"

=========Event #34 information (begin)=========
==========
[Event #34 name:]--[Event #34]2011-10-13 08:00<-->2011-10-13 16:35
[Event start time:]--2011-10-13 08:00:38[Event end time:]--2011-10-13 16:35:38
==========Event #34 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624
Data Points: 515 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)
Measurement Gas : Isobutene
Calibration Time : 2011-10-13 07:02:002011-10-13 07:02:002011-10-13 07:02:00
Drift Value : --- --- ---
Low Alarm Levels : 50.000 50.000 50.000
High Alarm Levels : 100.000 100.000 100.000
Span Value : 100.000 100.000 100.000
Correction Factor : 1.00 1.00 1.00
Over Alarm Levels : 15000.000 15000.000 15000.000
==========Event #34 data informations==========

LINE#	Date/Time	PID-Max(ppm)	PID-Min(ppm)	PID-Avg(ppm)
1	10/13/2011 8:01	0.593	0.164	0.528
2	10/13/2011 8:02	0.636	0.574	0.608
3	10/13/2011 8:03	0.726	0.627	0.676
4	10/13/2011 8:04	0.745	0.674	0.703
5	10/13/2011 8:05	0.748	0.671	0.709
6	10/13/2011 8:06	0.751	0.706	0.722
7	10/13/2011 8:07	0.747	0.71	0.728
8	10/13/2011 8:08	0.724	0.689	0.705
9	10/13/2011 8:09	0.712	0.664	0.691
10	10/13/2011 8:10	0.688	0.607	0.656
11	10/13/2011 8:11	0.744	0.566	0.618
12	10/13/2011 8:12	0.73	0.581	0.637
13	10/13/2011 8:13	0.775	0.571	0.628
14	10/13/2011 8:14	0.732	0.55	0.609
15	10/13/2011 8:15	0.701	0.527	0.574
16	10/13/2011 8:16	0.73	0.545	0.595
17	10/13/2011 8:17	0.716	0.526	0.575
18	10/13/2011 8:18	0.705	0.477	0.549
19	10/13/2011 8:19	0.663	0.466	0.522
20	10/13/2011 8:20	0.617	0.43	0.492
21	10/13/2011 8:21	0.606	0.378	0.461
22	10/13/2011 8:22	0.57	0.363	0.417
23	10/13/2011 8:23	0.561	0.381	0.456
24	10/13/2011 8:24	0.538	0.332	0.41
25	10/13/2011 8:25	0.529	0.337	0.41
26	10/13/2011 8:26	0.537	0.32	0.41
27	10/13/2011 8:27	0.505	0.33	0.407
28	10/13/2011 8:28	0.512	0.318	0.397
29	10/13/2011 8:29	0.474	0.296	0.358
30	10/13/2011 8:30	0.474	0.278	0.373
31	10/13/2011 8:31	0.477	0.274	0.352
32	10/13/2011 8:32	0.493	0.265	0.355
33	10/13/2011 8:33	0.46	0.237	0.334
34	10/13/2011 8:34	0.444	0.255	0.365
35	10/13/2011 8:35	0.457	0.326	0.382
36	10/13/2011 8:36	0.362	0.186	0.248
37	10/13/2011 8:37	0.405	0.174	0.289
38	10/13/2011 8:38	0.39	0.296	0.342
39	10/13/2011 8:39	0.355	0.246	0.309
40	10/13/2011 8:40	0.356	0.165	0.219
41	10/13/2011 8:41	0.291	0.125	0.184
42	10/13/2011 8:42	0.331	0.114	0.243
43	10/13/2011 8:43	0.303	0.11	0.198
44	10/13/2011 8:44	0.29	0.11	0.202
45	10/13/2011 8:45	0.265	0.086	0.151
46	10/13/2011 8:46	0.252	0.062	0.113
47	10/13/2011 8:47	0.24	0.014	0.127
48	10/13/2011 8:48	0.383	0.026	0.128

49	10/13/2011 8:49	0.571	0.275	0.398
50	10/13/2011 8:50	0.534	0.322	0.404
51	10/13/2011 8:51	0.526	0.231	0.334
52	10/13/2011 8:52	0.515	0.14	0.261
53	10/13/2011 8:53	0.529	0.269	0.383
54	10/13/2011 8:54	0.342	0.18	0.27
55	10/13/2011 8:55	0.483	0.313	0.395
56	10/13/2011 8:56	0.518	0.293	0.38
57	10/13/2011 8:57	0.455	0.127	0.318
58	10/13/2011 8:58	0.494	0.124	0.359
59	10/13/2011 8:59	0.518	0.409	0.471
60	10/13/2011 9:00	0.493	0.297	0.374
61	10/13/2011 9:01	0.344	0.314	0.328
62	10/13/2011 9:02	0.369	0.322	0.346
63	10/13/2011 9:03	0.361	0.315	0.326
64	10/13/2011 9:04	0.332	0.296	0.31
65	10/13/2011 9:05	0.482	0.291	0.337
66	10/13/2011 9:06	0.334	0.294	0.309
67	10/13/2011 9:07	0.339	0.293	0.311
68	10/13/2011 9:08	0.33	0.288	0.304
69	10/13/2011 9:09	0.327	0.26	0.293
70	10/13/2011 9:10	0.317	0.279	0.296
71	10/13/2011 9:11	0.452	0.274	0.313
72	10/13/2011 9:12	0.332	0.267	0.297
73	10/13/2011 9:13	0.452	0.277	0.334
74	10/13/2011 9:14	0.468	0.255	0.333
75	10/13/2011 9:15	0.324	0.264	0.295
76	10/13/2011 9:16	0.47	0.281	0.359
77	10/13/2011 9:17	0.464	0.268	0.322
78	10/13/2011 9:18	0.374	0.269	0.298
79	10/13/2011 9:19	0.473	0.264	0.369
80	10/13/2011 9:20	0.45	0.273	0.332
81	10/13/2011 9:21	0.457	0.28	0.327
82	10/13/2011 9:22	0.421	0.254	0.316
83	10/13/2011 9:23	0.449	0.255	0.317
84	10/13/2011 9:24	0.444	0.262	0.288
85	10/13/2011 9:25	0.428	0.242	0.29
86	10/13/2011 9:26	0.406	0.217	0.273
87	10/13/2011 9:27	0.338	0.227	0.266
88	10/13/2011 9:28	0.457	0.264	0.333
89	10/13/2011 9:29	0.406	0.215	0.267
90	10/13/2011 9:30	0.413	0.222	0.291
91	10/13/2011 9:31	0.416	0.217	0.279
92	10/13/2011 9:32	0.387	0.236	0.278
93	10/13/2011 9:33	0.394	0.224	0.284
94	10/13/2011 9:34	0.408	0.207	0.309
95	10/13/2011 9:35	0.269	0.214	0.236
96	10/13/2011 9:36	0.384	0.192	0.303
97	10/13/2011 9:37	0.396	0.202	0.29
98	10/13/2011 9:38	0.372	0.19	0.252
99	10/13/2011 9:39	0.365	0.18	0.272
100	10/13/2011 9:40	0.362	0.192	0.284
101	10/13/2011 9:41	0.379	0.206	0.294
102	10/13/2011 9:42	0.358	0.183	0.246
103	10/13/2011 9:43	0.379	0.192	0.271
104	10/13/2011 9:44	0.368	0.195	0.252
105	10/13/2011 9:45	0.338	0.168	0.212
106	10/13/2011 9:46	0.335	0.149	0.258
107	10/13/2011 9:47	0.354	0.174	0.245
108	10/13/2011 9:48	0.36	0.181	0.264
109	10/13/2011 9:49	0.379	0.161	0.268
110	10/13/2011 9:50	0.386	0.201	0.283
111	10/13/2011 9:51	0.336	0.167	0.247
112	10/13/2011 9:52	0.327	0.151	0.218
113	10/13/2011 9:53	0.328	0.151	0.247
114	10/13/2011 9:54	0.325	0.156	0.248
115	10/13/2011 9:55	0.35	0.17	0.263
116	10/13/2011 9:56	0.353	0.172	0.247
117	10/13/2011 9:57	0.339	0.2	0.26

118	10/13/2011 9:58	0.458	0.21	0.283
119	10/13/2011 9:59	0.382	0.168	0.282
120	10/13/2011 10:00	0.347	0.15	0.25
121	10/13/2011 10:01	0.345	0.154	0.252
122	10/13/2011 10:02	0.34	0.188	0.275
123	10/13/2011 10:03	0.33	0.168	0.237
124	10/13/2011 10:04	0.3	0.12	0.207
125	10/13/2011 10:05	0.29	0.144	0.223
126	10/13/2011 10:06	0.314	0.129	0.245
127	10/13/2011 10:07	0.336	0.116	0.214
128	10/13/2011 10:08	0.302	0.113	0.21
129	10/13/2011 10:09	0.28	0.098	0.194
130	10/13/2011 10:10	0.29	0.151	0.216
131	10/13/2011 10:11	0.324	0.142	0.237
132	10/13/2011 10:12	0.3	0.148	0.228
133	10/13/2011 10:13	0.307	0.154	0.235
134	10/13/2011 10:14	0.298	0.133	0.215
135	10/13/2011 10:15	0.298	0.003	0.185
136	10/13/2011 10:16	0.106	0	0.031
137	10/13/2011 10:17	0.285	0.018	0.201
138	10/13/2011 10:18	0.297	0.146	0.216
139	10/13/2011 10:19	0.267	0.127	0.196
140	10/13/2011 10:20	0.123	0	0.008
141	10/13/2011 10:21	0	0	0
142	10/13/2011 10:22	0	0	0
143	10/13/2011 10:23	0	0	0
144	10/13/2011 10:24	0	0	0
145	10/13/2011 10:25	0	0	0
146	10/13/2011 10:26	0	0	0
147	10/13/2011 10:27	0	0	0
148	10/13/2011 10:28	0.107	0	0.042
149	10/13/2011 10:29	0.144	0	0.063
150	10/13/2011 10:30	0.255	0.05	0.155
151	10/13/2011 10:31	0.235	0.121	0.175
152	10/13/2011 10:32	0.248	0.094	0.164
153	10/13/2011 10:33	0.244	0.104	0.175
154	10/13/2011 10:34	0.253	0.096	0.183
155	10/13/2011 10:35	0.232	0.117	0.168
156	10/13/2011 10:36	0.23	0.094	0.16
157	10/13/2011 10:37	0.209	0.053	0.127
158	10/13/2011 10:38	0.198	0.091	0.143
159	10/13/2011 10:39	0.22	0.068	0.147
160	10/13/2011 10:40	0.216	0.084	0.155
161	10/13/2011 10:41	0.216	0.084	0.155
162	10/13/2011 10:42	0.2	0.074	0.126
163	10/13/2011 10:43	0.211	0.056	0.127
164	10/13/2011 10:44	0.224	0.06	0.141
165	10/13/2011 10:45	0.207	0.033	0.121
166	10/13/2011 10:46	0.182	0.042	0.117
167	10/13/2011 10:47	0.176	0.004	0.092
168	10/13/2011 10:48	0.182	0.055	0.118
169	10/13/2011 10:49	0.161	0.04	0.104
170	10/13/2011 10:50	0.149	0.008	0.081
171	10/13/2011 10:51	0.157	0.026	0.086
172	10/13/2011 10:52	0.171	0.025	0.11
173	10/13/2011 10:53	0.175	0.073	0.125
174	10/13/2011 10:54	0.196	0.058	0.121
175	10/13/2011 10:55	0.171	0.045	0.111
176	10/13/2011 10:56	0.184	0.058	0.123
177	10/13/2011 10:57	0.185	0.058	0.119
178	10/13/2011 10:58	0.189	0.036	0.114
179	10/13/2011 10:59	0.155	0.046	0.1
180	10/13/2011 11:00	0.217	0.031	0.127
181	10/13/2011 11:01	0.194	0.022	0.113
182	10/13/2011 11:02	0.183	0.029	0.115
183	10/13/2011 11:03	0.194	0.034	0.117
184	10/13/2011 11:04	0.162	0	0.051
185	10/13/2011 11:05	0.2	0.049	0.138
186	10/13/2011 11:06	0.197	0.041	0.126

187	10/13/2011 11:07	0.194	0.038	0.115
188	10/13/2011 11:08	0.156	0.001	0.094
189	10/13/2011 11:09	0.15	0.01	0.082
190	10/13/2011 11:10	0.117	0	0.055
191	10/13/2011 11:11	0.182	0.037	0.111
192	10/13/2011 11:12	0.178	0.065	0.118
193	10/13/2011 11:13	0.207	0.008	0.11
194	10/13/2011 11:14	0.251	0.091	0.16
195	10/13/2011 11:15	0.203	0.05	0.134
196	10/13/2011 11:16	0.218	0.086	0.15
197	10/13/2011 11:17	0.193	0.091	0.145
198	10/13/2011 11:18	0.199	0.054	0.128
199	10/13/2011 11:19	0.209	0.077	0.142
200	10/13/2011 11:20	0.237	0.092	0.159
201	10/13/2011 11:21	0.269	0.104	0.193
202	10/13/2011 11:22	0.348	0.112	0.194
203	10/13/2011 11:23	0.279	0.072	0.172
204	10/13/2011 11:24	0.212	0.031	0.122
205	10/13/2011 11:25	0.227	0.069	0.143
206	10/13/2011 11:26	0.178	0.043	0.116
207	10/13/2011 11:27	0.197	0.015	0.109
208	10/13/2011 11:28	0.149	0.015	0.087
209	10/13/2011 11:29	0.149	0.001	0.076
210	10/13/2011 11:30	0.154	0.011	0.084
211	10/13/2011 11:31	0.168	0.032	0.1
212	10/13/2011 11:32	0.143	0.008	0.075
213	10/13/2011 11:33	0.166	0.021	0.091
214	10/13/2011 11:34	0.121	0.003	0.064
215	10/13/2011 11:35	0.123	0.015	0.06
216	10/13/2011 11:36	0.139	0.013	0.079
217	10/13/2011 11:37	0.093	0	0.041
218	10/13/2011 11:38	0.142	0.011	0.074
219	10/13/2011 11:39	0.144	0.029	0.087
220	10/13/2011 11:40	0.155	0.033	0.078
221	10/13/2011 11:41	0.145	0.009	0.089
222	10/13/2011 11:42	0.173	0.031	0.103
223	10/13/2011 11:43	0.105	0	0.032
224	10/13/2011 11:44	0.08	0	0.028
225	10/13/2011 11:45	0.054	0	0.015
226	10/13/2011 11:46	0.044	0	0.014
227	10/13/2011 11:47	0.021	0	0.005
228	10/13/2011 11:48	0.021	0	0.002
229	10/13/2011 11:49	0.013	0	0.001
230	10/13/2011 11:50	0.003	0	0
231	10/13/2011 11:51	0	0	0
232	10/13/2011 11:52	0.005	0	0
233	10/13/2011 11:53	0.003	0	0
234	10/13/2011 11:54	0.006	0	0
235	10/13/2011 11:55	0	0	0
236	10/13/2011 11:56	0.005	0	0
237	10/13/2011 11:57	0	0	0
238	10/13/2011 11:58	0	0	0
239	10/13/2011 11:59	0	0	0
240	10/13/2011 12:00	0	0	0
241	10/13/2011 12:01	0	0	0
242	10/13/2011 12:02	0	0	0
243	10/13/2011 12:03	0	0	0
244	10/13/2011 12:04	0	0	0
245	10/13/2011 12:05	0	0	0
246	10/13/2011 12:06	0	0	0
247	10/13/2011 12:07	0	0	0
248	10/13/2011 12:08	0	0	0
249	10/13/2011 12:09	0	0	0
250	10/13/2011 12:10	0	0	0
251	10/13/2011 12:11	0	0	0
252	10/13/2011 12:12	0	0	0
253	10/13/2011 12:13	0	0	0
254	10/13/2011 12:14	0	0	0
255	10/13/2011 12:15	0	0	0

256	10/13/2011 12:16	0	0	0
257	10/13/2011 12:17	0	0	0
258	10/13/2011 12:18	0	0	0
259	10/13/2011 12:19	0	0	0
260	10/13/2011 12:20	0	0	0
261	10/13/2011 12:21	0	0	0
262	10/13/2011 12:22	0	0	0
263	10/13/2011 12:23	0	0	0
264	10/13/2011 12:24	0	0	0
265	10/13/2011 12:25	0	0	0
266	10/13/2011 12:26	0	0	0
267	10/13/2011 12:27	0	0	0
268	10/13/2011 12:28	0	0	0
269	10/13/2011 12:29	0	0	0
270	10/13/2011 12:30	0	0	0
271	10/13/2011 12:31	0	0	0
272	10/13/2011 12:32	0	0	0
273	10/13/2011 12:33	0	0	0
274	10/13/2011 12:34	0	0	0
275	10/13/2011 12:35	0	0	0
276	10/13/2011 12:36	0	0	0
277	10/13/2011 12:37	0	0	0
278	10/13/2011 12:38	0	0	0
279	10/13/2011 12:39	0	0	0
280	10/13/2011 12:40	0	0	0
281	10/13/2011 12:41	0	0	0
282	10/13/2011 12:42	0	0	0
283	10/13/2011 12:43	0	0	0
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287	10/13/2011 12:47	0	0	0
288	10/13/2011 12:48	0	0	0
289	10/13/2011 12:49	0	0	0
290	10/13/2011 12:50	0	0	0
291	10/13/2011 12:51	0	0	0
292	10/13/2011 12:52	0	0	0
293	10/13/2011 12:53	0	0	0
294	10/13/2011 12:54	0	0	0
295	10/13/2011 12:55	0	0	0
296	10/13/2011 12:56	0	0	0
297	10/13/2011 12:57	0	0	0
298	10/13/2011 12:58	0	0	0
299	10/13/2011 12:59	0	0	0
300	10/13/2011 13:00	0	0	0
301	10/13/2011 13:01	0	0	0
302	10/13/2011 13:02	0	0	0
303	10/13/2011 13:03	0	0	0
304	10/13/2011 13:04	0	0	0
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306	10/13/2011 13:06	0	0	0
307	10/13/2011 13:07	0	0	0
308	10/13/2011 13:08	0	0	0
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313	10/13/2011 13:13	0	0	0
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316	10/13/2011 13:16	0	0	0
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318	10/13/2011 13:18	0	0	0
319	10/13/2011 13:19	0	0	0
320	10/13/2011 13:20	0	0	0
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322	10/13/2011 13:22	0	0	0
323	10/13/2011 13:23	0	0	0
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325	10/13/2011 13:25	0	0	0
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330	10/13/2011 13:30	0	0	0
331	10/13/2011 13:31	0	0	0
332	10/13/2011 13:32	0	0	0
333	10/13/2011 13:33	0	0	0
334	10/13/2011 13:34	0	0	0
335	10/13/2011 13:35	0	0	0
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342	10/13/2011 13:42	0	0	0
343	10/13/2011 13:43	0	0	0
344	10/13/2011 13:44	0	0	0
345	10/13/2011 13:45	0	0	0
346	10/13/2011 13:46	0	0	0
347	10/13/2011 13:47	0	0	0
348	10/13/2011 13:48	0	0	0
349	10/13/2011 13:49	0	0	0
350	10/13/2011 13:50	0	0	0
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352	10/13/2011 13:52	0	0	0
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356	10/13/2011 13:56	0	0	0
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358	10/13/2011 13:58	0	0	0
359	10/13/2011 13:59	0	0	0
360	10/13/2011 14:00	0	0	0
361	10/13/2011 14:01	0	0	0
362	10/13/2011 14:02	0	0	0
363	10/13/2011 14:03	0	0	0
364	10/13/2011 14:04	0	0	0
365	10/13/2011 14:05	0	0	0
366	10/13/2011 14:06	0	0	0
367	10/13/2011 14:07	0	0	0
368	10/13/2011 14:08	0	0	0
369	10/13/2011 14:09	0	0	0
370	10/13/2011 14:10	0	0	0
371	10/13/2011 14:11	0	0	0
372	10/13/2011 14:12	0	0	0
373	10/13/2011 14:13	0	0	0
374	10/13/2011 14:14	0	0	0
375	10/13/2011 14:15	0	0	0
376	10/13/2011 14:16	0	0	0
377	10/13/2011 14:17	0	0	0
378	10/13/2011 14:18	0	0	0
379	10/13/2011 14:19	0	0	0
380	10/13/2011 14:20	0	0	0
381	10/13/2011 14:21	0	0	0
382	10/13/2011 14:22	0	0	0
383	10/13/2011 14:23	0	0	0
384	10/13/2011 14:24	0	0	0
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386	10/13/2011 14:26	0	0	0
387	10/13/2011 14:27	0	0	0
388	10/13/2011 14:28	0	0	0
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391	10/13/2011 14:31	0	0	0
392	10/13/2011 14:32	0	0	0
393	10/13/2011 14:33	0	0	0

394	10/13/2011 14:34	0	0	0
395	10/13/2011 14:35	0	0	0
396	10/13/2011 14:36	0	0	0
397	10/13/2011 14:37	0	0	0
398	10/13/2011 14:38	0	0	0
399	10/13/2011 14:39	0	0	0
400	10/13/2011 14:40	0	0	0
401	10/13/2011 14:41	0	0	0
402	10/13/2011 14:42	0	0	0
403	10/13/2011 14:43	0	0	0
404	10/13/2011 14:44	0	0	0
405	10/13/2011 14:45	0	0	0
406	10/13/2011 14:46	0	0	0
407	10/13/2011 14:47	0	0	0
408	10/13/2011 14:48	0	0	0
409	10/13/2011 14:49	0	0	0
410	10/13/2011 14:50	0	0	0
411	10/13/2011 14:51	0	0	0
412	10/13/2011 14:52	0	0	0
413	10/13/2011 14:53	0	0	0
414	10/13/2011 14:54	0	0	0
415	10/13/2011 14:55	0	0	0
416	10/13/2011 14:56	0	0	0
417	10/13/2011 14:57	0	0	0
418	10/13/2011 14:58	0	0	0
419	10/13/2011 14:59	0	0	0
420	10/13/2011 15:00	0	0	0
421	10/13/2011 15:01	0	0	0
422	10/13/2011 15:02	0	0	0
423	10/13/2011 15:03	0	0	0
424	10/13/2011 15:04	0	0	0
425	10/13/2011 15:05	0	0	0
426	10/13/2011 15:06	0	0	0
427	10/13/2011 15:07	0	0	0
428	10/13/2011 15:08	0	0	0
429	10/13/2011 15:09	0	0	0
430	10/13/2011 15:10	0	0	0
431	10/13/2011 15:11	0	0	0
432	10/13/2011 15:12	0	0	0
433	10/13/2011 15:13	0	0	0
434	10/13/2011 15:14	0	0	0
435	10/13/2011 15:15	0	0	0
436	10/13/2011 15:16	0	0	0
437	10/13/2011 15:17	0	0	0
438	10/13/2011 15:18	0	0	0
439	10/13/2011 15:19	0	0	0
440	10/13/2011 15:20	0	0	0
441	10/13/2011 15:21	0	0	0
442	10/13/2011 15:22	0	0	0
443	10/13/2011 15:23	0	0	0
444	10/13/2011 15:24	0	0	0
445	10/13/2011 15:25	0	0	0
446	10/13/2011 15:26	0	0	0
447	10/13/2011 15:27	0	0	0
448	10/13/2011 15:28	0	0	0
449	10/13/2011 15:29	0	0	0
450	10/13/2011 15:30	0	0	0
451	10/13/2011 15:31	0	0	0
452	10/13/2011 15:32	0	0	0
453	10/13/2011 15:33	0	0	0
454	10/13/2011 15:34	0	0	0
455	10/13/2011 15:35	0	0	0
456	10/13/2011 15:36	0	0	0
457	10/13/2011 15:37	0	0	0
458	10/13/2011 15:38	0	0	0
459	10/13/2011 15:39	0	0	0
460	10/13/2011 15:40	0	0	0
461	10/13/2011 15:41	0	0	0
462	10/13/2011 15:42	0	0	0

463	10/13/2011 15:43	0	0	0
464	10/13/2011 15:44	0	0	0
465	10/13/2011 15:45	0	0	0
466	10/13/2011 15:46	0	0	0
467	10/13/2011 15:47	0	0	0
468	10/13/2011 15:48	0	0	0
469	10/13/2011 15:49	0	0	0
470	10/13/2011 15:50	0	0	0
471	10/13/2011 15:51	0	0	0
472	10/13/2011 15:52	0	0	0
473	10/13/2011 15:53	0	0	0
474	10/13/2011 15:54	0	0	0
475	10/13/2011 15:55	0	0	0
476	10/13/2011 15:56	0	0	0
477	10/13/2011 15:57	0	0	0
478	10/13/2011 15:58	0	0	0
479	10/13/2011 15:59	0	0	0
480	10/13/2011 16:00	0	0	0
481	10/13/2011 16:01	0	0	0
482	10/13/2011 16:02	0	0	0
483	10/13/2011 16:03	0	0	0
484	10/13/2011 16:04	0	0	0
485	10/13/2011 16:05	0	0	0
486	10/13/2011 16:06	0	0	0
487	10/13/2011 16:07	0	0	0
488	10/13/2011 16:08	0	0	0
489	10/13/2011 16:09	0	0	0
490	10/13/2011 16:10	0	0	0
491	10/13/2011 16:11	0	0	0
492	10/13/2011 16:12	0	0	0
493	10/13/2011 16:13	0	0	0
494	10/13/2011 16:14	0	0	0
495	10/13/2011 16:15	0	0	0
496	10/13/2011 16:16	0	0	0
497	10/13/2011 16:17	0	0	0
498	10/13/2011 16:18	0	0	0
499	10/13/2011 16:19	0	0	0
500	10/13/2011 16:20	0	0	0
501	10/13/2011 16:21	0	0	0
502	10/13/2011 16:22	0	0	0
503	10/13/2011 16:23	0	0	0
504	10/13/2011 16:24	0	0	0
505	10/13/2011 16:25	0	0	0
506	10/13/2011 16:26	0	0	0
507	10/13/2011 16:27	0	0	0
508	10/13/2011 16:28	0	0	0
509	10/13/2011 16:29	0	0	0
510	10/13/2011 16:30	0	0	0
511	10/13/2011 16:31	0	0	0
512	10/13/2011 16:32	0	0	0
513	10/13/2011 16:33	0	0	0
514	10/13/2011 16:34	0	0	0
515	10/13/2011 16:35	0	0	0

==========Event #34 information (end)==========

=========Event #24 information (begin)=========
==========
[Event #24 name:]--[Event #24]2011-10-13 08:07<-->2011-10-13 16:48
[Event start time:]--2011-10-13 08:07:02[Event end time:]--2011-10-13 16:48:02
==========Event #24 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367
Data Points: 521 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID(ppb)
Measurement Gas : Isobutene
Calibration Time : 2011-10-13 07:12:00
Drift Value : ---
Low Alarm Levels : 25847
High Alarm Levels : 51694
Span Value : 100000
Correction Factor : 1.00
Over Alarm Levels : 15000000
==========Event #24 data informations==========

LINE#	Date/Time	PID(ppm)	PID(ppb)
1	10/13/2011 8:08	0.018	18
2	10/13/2011 8:09	0.019	19
3	10/13/2011 8:10	0.023	23
4	10/13/2011 8:11	0.022	22
5	10/13/2011 8:12	0.019	19
6	10/13/2011 8:13	0.027	27
7	10/13/2011 8:14	0.021	21
8	10/13/2011 8:15	0.018	18
9	10/13/2011 8:16	0.021	21
10	10/13/2011 8:17	0.031	31
11	10/13/2011 8:18	0.03	30
12	10/13/2011 8:19	0.031	31
13	10/13/2011 8:20	0.031	31
14	10/13/2011 8:21	0.037	37
15	10/13/2011 8:22	0.038	38
16	10/13/2011 8:23	0.053	53
17	10/13/2011 8:24	0.054	54
18	10/13/2011 8:25	0.048	48
19	10/13/2011 8:26	0.042	42
20	10/13/2011 8:27	0.051	51
21	10/13/2011 8:28	0.058	58
22	10/13/2011 8:29	0.05	50
23	10/13/2011 8:30	0.059	59
24	10/13/2011 8:31	0.06	60
25	10/13/2011 8:32	0.063	63
26	10/13/2011 8:33	0.062	62
27	10/13/2011 8:34	0.061	61
28	10/13/2011 8:35	0.064	64
29	10/13/2011 8:36	0.064	64
30	10/13/2011 8:37	0.07	70
31	10/13/2011 8:38	0.073	73
32	10/13/2011 8:39	0.077	77
33	10/13/2011 8:40	0.074	74
34	10/13/2011 8:41	0.075	75
35	10/13/2011 8:42	0.078	78
36	10/13/2011 8:43	0.079	79
37	10/13/2011 8:44	0.079	79
38	10/13/2011 8:45	0.089	89
39	10/13/2011 8:46	0.088	88
40	10/13/2011 8:47	0.086	86
41	10/13/2011 8:48	0.095	95
42	10/13/2011 8:49	0.096	96
43	10/13/2011 8:50	0.094	94
44	10/13/2011 8:51	0.102	102
45	10/13/2011 8:52	0.122	122
46	10/13/2011 8:53	0.108	108
47	10/13/2011 8:54	0.099	99
48	10/13/2011 8:55	0.1	100

49	10/13/2011 8:56	0.104	104
50	10/13/2011 8:57	0.109	109
51	10/13/2011 8:58	0.106	106
52	10/13/2011 8:59	0.111	111
53	10/13/2011 9:00	0.113	113
54	10/13/2011 9:01	0.124	124
55	10/13/2011 9:02	0.122	122
56	10/13/2011 9:03	0.115	115
57	10/13/2011 9:04	0.117	117
58	10/13/2011 9:05	0.149	149
59	10/13/2011 9:06	0.121	121
60	10/13/2011 9:07	0.121	121
61	10/13/2011 9:08	0.122	122
62	10/13/2011 9:09	0.122	122
63	10/13/2011 9:10	0.121	121
64	10/13/2011 9:11	0.125	125
65	10/13/2011 9:12	0.132	132
66	10/13/2011 9:13	0.155	155
67	10/13/2011 9:14	0.145	145
68	10/13/2011 9:15	0.137	137
69	10/13/2011 9:16	0.144	144
70	10/13/2011 9:17	0.136	136
71	10/13/2011 9:18	0.136	136
72	10/13/2011 9:19	0.147	147
73	10/13/2011 9:20	0.139	139
74	10/13/2011 9:21	0.145	145
75	10/13/2011 9:22	0.142	142
76	10/13/2011 9:23	0.148	148
77	10/13/2011 9:24	0.148	148
78	10/13/2011 9:25	0.173	173
79	10/13/2011 9:26	0.162	162
80	10/13/2011 9:27	0.159	159
81	10/13/2011 9:28	0.158	158
82	10/13/2011 9:29	0.171	171
83	10/13/2011 9:30	0.168	168
84	10/13/2011 9:31	0.162	162
85	10/13/2011 9:32	0.167	167
86	10/13/2011 9:33	0.162	162
87	10/13/2011 9:34	0.168	168
88	10/13/2011 9:35	0.206	206
89	10/13/2011 9:36	0.174	174
90	10/13/2011 9:37	0.166	166
91	10/13/2011 9:38	0.169	169
92	10/13/2011 9:39	0.187	187
93	10/13/2011 9:40	0.226	226
94	10/13/2011 9:41	0.171	171
95	10/13/2011 9:42	0.171	171
96	10/13/2011 9:43	0.173	173
97	10/13/2011 9:44	0.175	175
98	10/13/2011 9:45	0.174	174
99	10/13/2011 9:46	0.171	171
100	10/13/2011 9:47	0.178	178
101	10/13/2011 9:48	0.179	179
102	10/13/2011 9:49	0.179	179
103	10/13/2011 9:50	0.182	182
104	10/13/2011 9:51	0.187	187
105	10/13/2011 9:52	0.192	192
106	10/13/2011 9:53	0.19	190
107	10/13/2011 9:54	0.181	181
108	10/13/2011 9:55	0.179	179
109	10/13/2011 9:56	0.179	179
110	10/13/2011 9:57	0.177	177
111	10/13/2011 9:58	0.182	182
112	10/13/2011 9:59	0.188	188
113	10/13/2011 10:00	0.182	182
114	10/13/2011 10:01	0.183	183
115	10/13/2011 10:02	0.181	181
116	10/13/2011 10:03	0.187	187
117	10/13/2011 10:04	0.185	185

118	10/13/2011 10:05	0.184	184
119	10/13/2011 10:06	0.187	187
120	10/13/2011 10:07	0.188	188
121	10/13/2011 10:08	0.201	201
122	10/13/2011 10:09	0.248	248
123	10/13/2011 10:10	0.199	199
124	10/13/2011 10:11	0.187	187
125	10/13/2011 10:12	0.2	200
126	10/13/2011 10:13	0.215	215
127	10/13/2011 10:14	0.2	200
128	10/13/2011 10:15	0.194	194
129	10/13/2011 10:16	0.19	190
130	10/13/2011 10:17	0.193	193
131	10/13/2011 10:18	0.196	196
132	10/13/2011 10:19	0.198	198
133	10/13/2011 10:20	0.202	202
134	10/13/2011 10:21	0.199	199
135	10/13/2011 10:22	0.198	198
136	10/13/2011 10:23	0.196	196
137	10/13/2011 10:24	0.205	205
138	10/13/2011 10:25	0.202	202
139	10/13/2011 10:26	0.202	202
140	10/13/2011 10:27	0.201	201
141	10/13/2011 10:28	0.198	198
142	10/13/2011 10:29	0.202	202
143	10/13/2011 10:30	0.203	203
144	10/13/2011 10:31	0.204	204
145	10/13/2011 10:32	0.206	206
146	10/13/2011 10:33	0.205	205
147	10/13/2011 10:34	0.205	205
148	10/13/2011 10:35	0.207	207
149	10/13/2011 10:36	0.208	208
150	10/13/2011 10:37	0.208	208
151	10/13/2011 10:38	0.209	209
152	10/13/2011 10:39	0.207	207
153	10/13/2011 10:40	0.208	208
154	10/13/2011 10:41	0.211	211
155	10/13/2011 10:42	0.208	208
156	10/13/2011 10:43	0.21	210
157	10/13/2011 10:44	0.209	209
158	10/13/2011 10:45	0.21	210
159	10/13/2011 10:46	0.21	210
160	10/13/2011 10:47	0.221	221
161	10/13/2011 10:48	0.215	215
162	10/13/2011 10:49	0.215	215
163	10/13/2011 10:50	0.214	214
164	10/13/2011 10:51	0.214	214
165	10/13/2011 10:52	0.218	218
166	10/13/2011 10:53	0.217	217
167	10/13/2011 10:54	0.225	225
168	10/13/2011 10:55	0.221	221
169	10/13/2011 10:56	0.224	224
170	10/13/2011 10:57	0.217	217
171	10/13/2011 10:58	0.226	226
172	10/13/2011 10:59	0.215	215
173	10/13/2011 11:00	0.214	214
174	10/13/2011 11:01	0.215	215
175	10/13/2011 11:02	0.216	216
176	10/13/2011 11:03	0.222	222
177	10/13/2011 11:04	0.227	227
178	10/13/2011 11:05	0.23	230
179	10/13/2011 11:06	0.224	224
180	10/13/2011 11:07	0.23	230
181	10/13/2011 11:08	0.228	228
182	10/13/2011 11:09	0.228	228
183	10/13/2011 11:10	0.231	231
184	10/13/2011 11:11	0.229	229
185	10/13/2011 11:12	0.229	229
186	10/13/2011 11:13	0.237	237

187	10/13/2011 11:14	0.239	239
188	10/13/2011 11:15	0.245	245
189	10/13/2011 11:16	0.244	244
190	10/13/2011 11:17	0.242	242
191	10/13/2011 11:18	0.237	237
192	10/13/2011 11:19	0.238	238
193	10/13/2011 11:20	0.244	244
194	10/13/2011 11:21	0.247	247
195	10/13/2011 11:22	0.248	248
196	10/13/2011 11:23	0.259	259
197	10/13/2011 11:24	0.249	249
198	10/13/2011 11:25	0.24	240
199	10/13/2011 11:26	0.234	234
200	10/13/2011 11:27	0.235	235
201	10/13/2011 11:28	0.239	239
202	10/13/2011 11:29	0.239	239
203	10/13/2011 11:30	0.251	251
204	10/13/2011 11:31	0.258	258
205	10/13/2011 11:32	0.251	251
206	10/13/2011 11:33	0.248	248
207	10/13/2011 11:34	0.245	245
208	10/13/2011 11:35	0.26	260
209	10/13/2011 11:36	0.248	248
210	10/13/2011 11:37	0.247	247
211	10/13/2011 11:38	0.246	246
212	10/13/2011 11:39	0.244	244
213	10/13/2011 11:40	0.243	243
214	10/13/2011 11:41	0.242	242
215	10/13/2011 11:42	0.243	243
216	10/13/2011 11:43	0.244	244
217	10/13/2011 11:44	0.247	247
218	10/13/2011 11:45	0.245	245
219	10/13/2011 11:46	0.249	249
220	10/13/2011 11:47	0.249	249
221	10/13/2011 11:48	0.245	245
222	10/13/2011 11:49	0.245	245
223	10/13/2011 11:50	0.25	250
224	10/13/2011 11:51	0.249	249
225	10/13/2011 11:52	0.249	249
226	10/13/2011 11:53	0.25	250
227	10/13/2011 11:54	0.248	248
228	10/13/2011 11:55	0.245	245
229	10/13/2011 11:56	0.24	240
230	10/13/2011 11:57	0.241	241
231	10/13/2011 11:58	0.242	242
232	10/13/2011 11:59	0.244	244
233	10/13/2011 12:00	0.242	242
234	10/13/2011 12:01	0.245	245
235	10/13/2011 12:02	0.252	252
236	10/13/2011 12:03	0.253	253
237	10/13/2011 12:04	0.257	257
238	10/13/2011 12:05	0.257	257
239	10/13/2011 12:06	0.252	252
240	10/13/2011 12:07	0.256	256
241	10/13/2011 12:08	0.254	254
242	10/13/2011 12:09	0.251	251
243	10/13/2011 12:10	0.255	255
244	10/13/2011 12:11	0.254	254
245	10/13/2011 12:12	0.251	251
246	10/13/2011 12:13	0.253	253
247	10/13/2011 12:14	0.254	254
248	10/13/2011 12:15	0.251	251
249	10/13/2011 12:16	0.247	247
250	10/13/2011 12:17	0.247	247
251	10/13/2011 12:18	0.25	250
252	10/13/2011 12:19	0.249	249
253	10/13/2011 12:20	0.249	249
254	10/13/2011 12:21	0.245	245
255	10/13/2011 12:22	0.249	249

256	10/13/2011 12:23	0.249	249
257	10/13/2011 12:24	0.249	249
258	10/13/2011 12:25	0.25	250
259	10/13/2011 12:26	0.25	250
260	10/13/2011 12:27	0.249	249
261	10/13/2011 12:28	0.251	251
262	10/13/2011 12:29	0.249	249
263	10/13/2011 12:30	0.251	251
264	10/13/2011 12:31	0.251	251
265	10/13/2011 12:32	0.247	247
266	10/13/2011 12:33	0.247	247
267	10/13/2011 12:34	0.248	248
268	10/13/2011 12:35	0.25	250
269	10/13/2011 12:36	0.249	249
270	10/13/2011 12:37	0.248	248
271	10/13/2011 12:38	0.249	249
272	10/13/2011 12:39	0.248	248
273	10/13/2011 12:40	0.247	247
274	10/13/2011 12:41	0.25	250
275	10/13/2011 12:42	0.249	249
276	10/13/2011 12:43	0.252	252
277	10/13/2011 12:44	0.255	255
278	10/13/2011 12:45	0.25	250
279	10/13/2011 12:46	0.253	253
280	10/13/2011 12:47	0.255	255
281	10/13/2011 12:48	0.255	255
282	10/13/2011 12:49	0.257	257
283	10/13/2011 12:50	0.261	261
284	10/13/2011 12:51	0.261	261
285	10/13/2011 12:52	0.267	267
286	10/13/2011 12:53	0.261	261
287	10/13/2011 12:54	0.26	260
288	10/13/2011 12:55	0.263	263
289	10/13/2011 12:56	0.262	262
290	10/13/2011 12:57	0.259	259
291	10/13/2011 12:58	0.261	261
292	10/13/2011 12:59	0.293	293
293	10/13/2011 13:00	0.282	282
294	10/13/2011 13:01	0.274	274
295	10/13/2011 13:02	0.277	277
296	10/13/2011 13:03	0.275	275
297	10/13/2011 13:04	0.279	279
298	10/13/2011 13:05	0.287	287
299	10/13/2011 13:06	0.303	303
300	10/13/2011 13:07	0.28	280
301	10/13/2011 13:08	0.275	275
302	10/13/2011 13:09	0.28	280
303	10/13/2011 13:10	0.275	275
304	10/13/2011 13:11	0.262	262
305	10/13/2011 13:12	0.263	263
306	10/13/2011 13:13	0.263	263
307	10/13/2011 13:14	0.263	263
308	10/13/2011 13:15	0.274	274
309	10/13/2011 13:16	0.272	272
310	10/13/2011 13:17	0.282	282
311	10/13/2011 13:18	0.287	287
312	10/13/2011 13:19	0.275	275
313	10/13/2011 13:20	0.276	276
314	10/13/2011 13:21	0.283	283
315	10/13/2011 13:22	0.279	279
316	10/13/2011 13:23	0.271	271
317	10/13/2011 13:24	0.268	268
318	10/13/2011 13:25	0.264	264
319	10/13/2011 13:26	0.264	264
320	10/13/2011 13:27	0.26	260
321	10/13/2011 13:28	0.258	258
322	10/13/2011 13:29	0.259	259
323	10/13/2011 13:30	0.258	258
324	10/13/2011 13:31	0.261	261

325	10/13/2011 13:32	0.259	259
326	10/13/2011 13:33	0.259	259
327	10/13/2011 13:34	0.259	259
328	10/13/2011 13:35	0.264	264
329	10/13/2011 13:36	0.26	260
330	10/13/2011 13:37	0.257	257
331	10/13/2011 13:38	0.258	258
332	10/13/2011 13:39	0.258	258
333	10/13/2011 13:40	0.254	254
334	10/13/2011 13:41	0.258	258
335	10/13/2011 13:42	0.261	261
336	10/13/2011 13:43	0.277	277
337	10/13/2011 13:44	0.275	275
338	10/13/2011 13:45	0.284	284
339	10/13/2011 13:46	0.284	284
340	10/13/2011 13:47	0.284	284
341	10/13/2011 13:48	0.286	286
342	10/13/2011 13:49	0.287	287
343	10/13/2011 13:50	0.274	274
344	10/13/2011 13:51	0.27	270
345	10/13/2011 13:52	0.281	281
346	10/13/2011 13:53	0.275	275
347	10/13/2011 13:54	0.279	279
348	10/13/2011 13:55	0.278	278
349	10/13/2011 13:56	0.274	274
350	10/13/2011 13:57	0.276	276
351	10/13/2011 13:58	0.288	288
352	10/13/2011 13:59	0.291	291
353	10/13/2011 14:00	0.287	287
354	10/13/2011 14:01	0.291	291
355	10/13/2011 14:02	0.309	309
356	10/13/2011 14:03	0.302	302
357	10/13/2011 14:04	0.303	303
358	10/13/2011 14:05	0.298	298
359	10/13/2011 14:06	0.294	294
360	10/13/2011 14:07	0.344	344
361	10/13/2011 14:08	0.284	284
362	10/13/2011 14:09	0.285	285
363	10/13/2011 14:10	0.291	291
364	10/13/2011 14:11	0.296	296
365	10/13/2011 14:12	0.3	300
366	10/13/2011 14:13	0.316	316
367	10/13/2011 14:14	0.286	286
368	10/13/2011 14:15	0.282	282
369	10/13/2011 14:16	0.3	300
370	10/13/2011 14:17	0.305	305
371	10/13/2011 14:18	0.289	289
372	10/13/2011 14:19	0.278	278
373	10/13/2011 14:20	0.281	281
374	10/13/2011 14:21	0.289	289
375	10/13/2011 14:22	0.295	295
376	10/13/2011 14:23	0.302	302
377	10/13/2011 14:24	0.318	318
378	10/13/2011 14:25	0.307	307
379	10/13/2011 14:26	0.31	310
380	10/13/2011 14:27	0.311	311
381	10/13/2011 14:28	0.313	313
382	10/13/2011 14:29	0.313	313
383	10/13/2011 14:30	0.316	316
384	10/13/2011 14:31	0.311	311
385	10/13/2011 14:32	0.3	300
386	10/13/2011 14:33	0.29	290
387	10/13/2011 14:34	0.296	296
388	10/13/2011 14:35	0.304	304
389	10/13/2011 14:36	0.309	309
390	10/13/2011 14:37	0.316	316
391	10/13/2011 14:38	0.329	329
392	10/13/2011 14:39	0.317	317
393	10/13/2011 14:40	0.316	316

394	10/13/2011 14:41	0.306	306
395	10/13/2011 14:42	0.291	291
396	10/13/2011 14:43	0.288	288
397	10/13/2011 14:44	0.294	294
398	10/13/2011 14:45	0.295	295
399	10/13/2011 14:46	0.318	318
400	10/13/2011 14:47	0.349	349
401	10/13/2011 14:48	0.352	352
402	10/13/2011 14:49	0.308	308
403	10/13/2011 14:50	0.306	306
404	10/13/2011 14:51	0.309	309
405	10/13/2011 14:52	0.303	303
406	10/13/2011 14:53	0.3	300
407	10/13/2011 14:54	0.298	298
408	10/13/2011 14:55	0.304	304
409	10/13/2011 14:56	0.316	316
410	10/13/2011 14:57	0.304	304
411	10/13/2011 14:58	0.309	309
412	10/13/2011 14:59	0.307	307
413	10/13/2011 15:00	0.313	313
414	10/13/2011 15:01	0.318	318
415	10/13/2011 15:02	0.328	328
416	10/13/2011 15:03	0.334	334
417	10/13/2011 15:04	0.333	333
418	10/13/2011 15:05	0.321	321
419	10/13/2011 15:06	0.324	324
420	10/13/2011 15:07	0.311	311
421	10/13/2011 15:08	0.336	336
422	10/13/2011 15:09	0.324	324
423	10/13/2011 15:10	0.315	315
424	10/13/2011 15:11	0.318	318
425	10/13/2011 15:12	0.331	331
426	10/13/2011 15:13	0.326	326
427	10/13/2011 15:14	0.311	311
428	10/13/2011 15:15	0.332	332
429	10/13/2011 15:16	0.367	367
430	10/13/2011 15:17	0.376	376
431	10/13/2011 15:18	0.356	356
432	10/13/2011 15:19	0.336	336
433	10/13/2011 15:20	0.33	330
434	10/13/2011 15:21	0.329	329
435	10/13/2011 15:22	0.327	327
436	10/13/2011 15:23	0.33	330
437	10/13/2011 15:24	0.319	319
438	10/13/2011 15:25	0.318	318
439	10/13/2011 15:26	0.316	316
440	10/13/2011 15:27	0.327	327
441	10/13/2011 15:28	0.324	324
442	10/13/2011 15:29	0.323	323
443	10/13/2011 15:30	0.323	323
444	10/13/2011 15:31	0.325	325
445	10/13/2011 15:32	0.317	317
446	10/13/2011 15:33	0.316	316
447	10/13/2011 15:34	0.318	318
448	10/13/2011 15:35	0.317	317
449	10/13/2011 15:36	0.322	322
450	10/13/2011 15:37	0.314	314
451	10/13/2011 15:38	0.326	326
452	10/13/2011 15:39	0.334	334
453	10/13/2011 15:40	0.331	331
454	10/13/2011 15:41	0.327	327
455	10/13/2011 15:42	0.313	313
456	10/13/2011 15:43	0.322	322
457	10/13/2011 15:44	0.322	322
458	10/13/2011 15:45	0.327	327
459	10/13/2011 15:46	0.331	331
460	10/13/2011 15:47	0.326	326
461	10/13/2011 15:48	0.32	320
462	10/13/2011 15:49	0.327	327

463	10/13/2011 15:50	0.326	326
464	10/13/2011 15:51	0.322	322
465	10/13/2011 15:52	0.331	331
466	10/13/2011 15:53	0.323	323
467	10/13/2011 15:54	0.32	320
468	10/13/2011 15:55	0.316	316
469	10/13/2011 15:56	0.322	322
470	10/13/2011 15:57	0.317	317
471	10/13/2011 15:58	0.317	317
472	10/13/2011 15:59	0.322	322
473	10/13/2011 16:00	0.327	327
474	10/13/2011 16:01	0.332	332
475	10/13/2011 16:02	0.337	337
476	10/13/2011 16:03	0.358	358
477	10/13/2011 16:04	0.333	333
478	10/13/2011 16:05	0.329	329
479	10/13/2011 16:06	0.325	325
480	10/13/2011 16:07	0.324	324
481	10/13/2011 16:08	0.334	334
482	10/13/2011 16:09	0.34	340
483	10/13/2011 16:10	0.336	336
484	10/13/2011 16:11	0.335	335
485	10/13/2011 16:12	0.335	335
486	10/13/2011 16:13	0.342	342
487	10/13/2011 16:14	0.339	339
488	10/13/2011 16:15	0.338	338
489	10/13/2011 16:16	0.342	342
490	10/13/2011 16:17	0.343	343
491	10/13/2011 16:18	0.344	344
492	10/13/2011 16:19	0.343	343
493	10/13/2011 16:20	0.358	358
494	10/13/2011 16:21	0.365	365
495	10/13/2011 16:22	0.363	363
496	10/13/2011 16:23	0.347	347
497	10/13/2011 16:24	0.346	346
498	10/13/2011 16:25	0.354	354
499	10/13/2011 16:26	0.359	359
500	10/13/2011 16:27	0.37	370
501	10/13/2011 16:28	0.364	364
502	10/13/2011 16:29	0.367	367
503	10/13/2011 16:30	0.367	367
504	10/13/2011 16:31	0.36	360
505	10/13/2011 16:32	0.359	359
506	10/13/2011 16:33	0.368	368
507	10/13/2011 16:34	0.371	371
508	10/13/2011 16:35	0.369	369
509	10/13/2011 16:36	0.374	374
510	10/13/2011 16:37	0.422	422
511	10/13/2011 16:38	0.405	405
512	10/13/2011 16:39	0.375	375
513	10/13/2011 16:40	0.369	369
514	10/13/2011 16:41	0.359	359
515	10/13/2011 16:42	0.362	362
516	10/13/2011 16:43	0.38	380
517	10/13/2011 16:44	0.37	370
518	10/13/2011 16:45	0.37	370
519	10/13/2011 16:46	0.39	390
520	10/13/2011 16:47	0.394	394
521	10/13/2011 16:48	0.378	378

==========Event #24 information (end)==========

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533101806
Firmware Version	2.8
Calibration Date	5/19/2011
Test Name	MANUAL_008
Test Start Time	7:49:28 AM
Test Start Date	10/13/2011
Test Length [D:H:M	0:08:35
Test Interval [M:S]	1:00
PM1 Average [mg/r	0.019
PM1 Minimum [mg	0.008
PM1 Maximum [mg	0.038
PM1 TWA [mg/m3]	0.018
PM2.5 Average [mg	0.019
PM2.5 Minimum [m	0.008
PM2.5 Maximum [r	0.039
PM2.5 TWA [mg/m	0.018
PM4 Average [mg/r	0.02
PM4 Minimum [mg	0.008
PM4 Maximum [mg	0.04
PM4 TWA [mg/m3]	0.019
PM10 Average [mg,	0.021
PM10 Minimum [m	0.009
PM10 Maximum [m	0.043
PM10 TWA [mg/m3	0.02
TOTAL Average [mg	0.021
TOTAL Minimum [m	0.009
TOTAL Maximum [r	0.044
TOTAL TWA [mg/m	0.02
Photometric User C	1
Size Correction Use	1
Flow User Cal	1
Errors	
Number of Samples	515

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	7:49:28 AM	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.011	0.011	0.012	0.014	7:50:28 AM	10/13/2011 7:50	0.018		
120	0.01	0.01	0.01	0.01	7:51:28 AM	10/13/2011 7:51	0.01		
180	0.015	0.015	0.015	0.016	7:52:28 AM	10/13/2011 7:52	0.017		
240	0.01	0.01	0.01	0.01	7:53:28 AM	10/13/2011 7:53	0.01		
300	0.01	0.01	0.01	0.011	7:54:28 AM	10/13/2011 7:54	0.011		
360	0.01	0.01	0.01	0.01	7:55:28 AM	10/13/2011 7:55	0.01		
420	0.009	0.009	0.009	0.01	7:56:28 AM	10/13/2011 7:56	0.01		
480	0.009	0.009	0.009	0.009	7:57:28 AM	10/13/2011 7:57	0.009		
540	0.009	0.009	0.009	0.009	7:58:28 AM	10/13/2011 7:58	0.009		
600	0.009	0.009	0.009	0.009	7:59:28 AM	10/13/2011 7:59	0.009		
660	0.011	0.011	0.011	0.012	8:00:28 AM	10/13/2011 8:00	0.013		
720	0.01	0.011	0.011	0.011	8:01:28 AM	10/13/2011 8:01	0.011		
780	0.009	0.009	0.009	0.009	8:02:28 AM	10/13/2011 8:02	0.009		
840	0.008	0.008	0.009	0.009	8:03:28 AM	10/13/2011 8:03	0.009		
900	0.008	0.008	0.008	0.009	8:04:28 AM	10/13/2011 8:04	0.009		
960	0.008	0.009	0.009	0.009	8:05:28 AM	10/13/2011 8:05	0.009		
1020	0.008	0.009	0.009	0.009	8:06:28 AM	10/13/2011 8:06	0.009		
1080	0.011	0.011	0.011	0.012	8:07:28 AM	10/13/2011 8:07	0.012		
1140	0.01	0.011	0.011	0.011	8:08:28 AM	10/13/2011 8:08	0.011		
1200	0.01	0.01	0.01	0.011	8:09:28 AM	10/13/2011 8:09	0.011		
1260	0.01	0.01	0.01	0.01	8:10:28 AM	10/13/2011 8:10	0.01		
1320	0.011	0.011	0.011	0.012	8:11:28 AM	10/13/2011 8:11	0.012		
1380	0.01	0.01	0.011	0.011	8:12:28 AM	10/13/2011 8:12	0.012		
1440	0.01	0.01	0.01	0.01	8:13:28 AM	10/13/2011 8:13	0.01		
1500	0.014	0.014	0.014	0.015	8:14:28 AM	10/13/2011 8:14	0.015		
1560	0.012	0.012	0.012	0.014	8:15:28 AM	10/13/2011 8:15	0.014		
1620	0.011	0.012	0.012	0.013	8:16:28 AM	10/13/2011 8:16	0.013		
1680	0.011	0.011	0.012	0.012	8:17:28 AM	10/13/2011 8:17	0.012		
1740	0.01	0.01	0.011	0.011	8:18:28 AM	10/13/2011 8:18	0.011		
1800	0.01	0.011	0.011	0.011	8:19:28 AM	10/13/2011 8:19	0.011		
1860	0.01	0.011	0.011	0.011	8:20:28 AM	10/13/2011 8:20	0.011		
1920	0.011	0.011	0.011	0.012	8:21:28 AM	10/13/2011 8:21	0.012		

1980	0.011	0.011	0.011	0.012	8:22:28 AM	10/13/2011 8:22	0.012
2040	0.011	0.011	0.012	0.012	8:23:28 AM	10/13/2011 8:23	0.013
2100	0.012	0.012	0.012	0.013	8:24:28 AM	10/13/2011 8:24	0.013
2160	0.011	0.011	0.012	0.012	8:25:28 AM	10/13/2011 8:25	0.012
2220	0.011	0.011	0.011	0.012	8:26:28 AM	10/13/2011 8:26	0.012
2280	0.01	0.01	0.011	0.011	8:27:28 AM	10/13/2011 8:27	0.011
2340	0.01	0.01	0.011	0.011	8:28:28 AM	10/13/2011 8:28	0.011
2400	0.012	0.012	0.012	0.013	8:29:28 AM	10/13/2011 8:29	0.013
2460	0.011	0.011	0.011	0.012	8:30:28 AM	10/13/2011 8:30	0.012
2520	0.01	0.01	0.011	0.011	8:31:28 AM	10/13/2011 8:31	0.011
2580	0.01	0.01	0.01	0.011	8:32:28 AM	10/13/2011 8:32	0.011
2640	0.01	0.01	0.011	0.011	8:33:28 AM	10/13/2011 8:33	0.011
2700	0.011	0.011	0.011	0.012	8:34:28 AM	10/13/2011 8:34	0.012
2760	0.011	0.011	0.011	0.012	8:35:28 AM	10/13/2011 8:35	0.012
2820	0.011	0.011	0.012	0.013	8:36:28 AM	10/13/2011 8:36	0.013
2880	0.011	0.011	0.011	0.012	8:37:28 AM	10/13/2011 8:37	0.013
2940	0.011	0.011	0.011	0.012	8:38:28 AM	10/13/2011 8:38	0.012
3000	0.011	0.011	0.011	0.012	8:39:28 AM	10/13/2011 8:39	0.012
3060	0.011	0.012	0.012	0.013	8:40:28 AM	10/13/2011 8:40	0.013
3120	0.012	0.012	0.013	0.013	8:41:28 AM	10/13/2011 8:41	0.013
3180	0.011	0.011	0.011	0.012	8:42:28 AM	10/13/2011 8:42	0.012
3240	0.01	0.011	0.011	0.011	8:43:28 AM	10/13/2011 8:43	0.011
3300	0.013	0.014	0.015	0.016	8:44:28 AM	10/13/2011 8:44	0.016
3360	0.011	0.012	0.012	0.013	8:45:28 AM	10/13/2011 8:45	0.013
3420	0.011	0.011	0.012	0.013	8:46:28 AM	10/13/2011 8:46	0.013
3480	0.011	0.012	0.012	0.012	8:47:28 AM	10/13/2011 8:47	0.013
3540	0.011	0.012	0.012	0.012	8:48:28 AM	10/13/2011 8:48	0.012
3600	0.011	0.011	0.012	0.012	8:49:28 AM	10/13/2011 8:49	0.012
3660	0.011	0.011	0.012	0.012	8:50:28 AM	10/13/2011 8:50	0.012
3720	0.011	0.012	0.012	0.013	8:51:28 AM	10/13/2011 8:51	0.013
3780	0.012	0.012	0.012	0.013	8:52:28 AM	10/13/2011 8:52	0.013
3840	0.012	0.013	0.013	0.013	8:53:28 AM	10/13/2011 8:53	0.013
3900	0.012	0.013	0.013	0.013	8:54:28 AM	10/13/2011 8:54	0.013
3960	0.012	0.013	0.013	0.013	8:55:28 AM	10/13/2011 8:55	0.013
4020	0.013	0.013	0.013	0.013	8:56:28 AM	10/13/2011 8:56	0.013
4080	0.012	0.012	0.013	0.013	8:57:28 AM	10/13/2011 8:57	0.013
4140	0.013	0.013	0.013	0.014	8:58:28 AM	10/13/2011 8:58	0.014
4200	0.017	0.017	0.018	0.019	8:59:28 AM	10/13/2011 8:59	0.021
4260	0.013	0.014	0.014	0.015	9:00:28 AM	10/13/2011 9:00	0.015
4320	0.014	0.014	0.014	0.015	9:01:28 AM	10/13/2011 9:01	0.016
4380	0.017	0.017	0.018	0.018	9:02:28 AM	10/13/2011 9:02	0.018
4440	0.014	0.014	0.015	0.015	9:03:28 AM	10/13/2011 9:03	0.015
4500	0.015	0.015	0.016	0.017	9:04:28 AM	10/13/2011 9:04	0.017
4560	0.015	0.015	0.015	0.016	9:05:28 AM	10/13/2011 9:05	0.016
4620	0.015	0.016	0.016	0.017	9:06:28 AM	10/13/2011 9:06	0.017
4680	0.016	0.017	0.017	0.019	9:07:28 AM	10/13/2011 9:07	0.019
4740	0.016	0.017	0.017	0.018	9:08:28 AM	10/13/2011 9:08	0.018
4800	0.016	0.017	0.017	0.018	9:09:28 AM	10/13/2011 9:09	0.018
4860	0.018	0.018	0.019	0.019	9:10:28 AM	10/13/2011 9:10	0.019
4920	0.017	0.018	0.018	0.019	9:11:28 AM	10/13/2011 9:11	0.019
4980	0.018	0.018	0.019	0.019	9:12:28 AM	10/13/2011 9:12	0.019
5040	0.018	0.018	0.018	0.019	9:13:28 AM	10/13/2011 9:13	0.019
5100	0.017	0.018	0.018	0.019	9:14:28 AM	10/13/2011 9:14	0.019
5160	0.017	0.017	0.018	0.019	9:15:28 AM	10/13/2011 9:15	0.019
5220	0.018	0.019	0.019	0.021	9:16:28 AM	10/13/2011 9:16	0.021
5280	0.018	0.019	0.019	0.02	9:17:28 AM	10/13/2011 9:17	0.02
5340	0.016	0.016	0.017	0.018	9:18:28 AM	10/13/2011 9:18	0.018
5400	0.016	0.016	0.017	0.017	9:19:28 AM	10/13/2011 9:19	0.017
5460	0.016	0.016	0.017	0.018	9:20:28 AM	10/13/2011 9:20	0.018
5520	0.016	0.016	0.016	0.017	9:21:28 AM	10/13/2011 9:21	0.017
5580	0.015	0.015	0.016	0.016	9:22:28 AM	10/13/2011 9:22	0.016
5640	0.014	0.014	0.015	0.015	9:23:28 AM	10/13/2011 9:23	0.015
5700	0.015	0.015	0.016	0.016	9:24:28 AM	10/13/2011 9:24	0.016
5760	0.015	0.015	0.015	0.016	9:25:28 AM	10/13/2011 9:25	0.016
5820	0.015	0.015	0.015	0.016	9:26:28 AM	10/13/2011 9:26	0.016
5880	0.014	0.014	0.014	0.015	9:27:28 AM	10/13/2011 9:27	0.015
5940	0.014	0.014	0.015	0.015	9:28:28 AM	10/13/2011 9:28	0.015
6000	0.015	0.015	0.016	0.016	9:29:28 AM	10/13/2011 9:29	0.017
6060	0.015	0.015	0.016	0.016	9:30:28 AM	10/13/2011 9:30	0.016

6120	0.015	0.015	0.015	0.016	9:31:28 AM	10/13/2011 9:31	0.016
6180	0.015	0.015	0.015	0.016	9:32:28 AM	10/13/2011 9:32	0.016
6240	0.013	0.014	0.014	0.014	9:33:28 AM	10/13/2011 9:33	0.015
6300	0.012	0.013	0.013	0.013	9:34:28 AM	10/13/2011 9:34	0.013
6360	0.013	0.013	0.014	0.014	9:35:28 AM	10/13/2011 9:35	0.015
6420	0.014	0.014	0.014	0.015	9:36:28 AM	10/13/2011 9:36	0.015
6480	0.014	0.014	0.014	0.015	9:37:28 AM	10/13/2011 9:37	0.015
6540	0.014	0.014	0.014	0.015	9:38:28 AM	10/13/2011 9:38	0.015
6600	0.013	0.014	0.014	0.014	9:39:28 AM	10/13/2011 9:39	0.014
6660	0.013	0.014	0.014	0.014	9:40:28 AM	10/13/2011 9:40	0.014
6720	0.013	0.014	0.014	0.015	9:41:28 AM	10/13/2011 9:41	0.015
6780	0.013	0.013	0.013	0.014	9:42:28 AM	10/13/2011 9:42	0.014
6840	0.012	0.012	0.013	0.013	9:43:28 AM	10/13/2011 9:43	0.013
6900	0.014	0.014	0.015	0.015	9:44:28 AM	10/13/2011 9:44	0.015
6960	0.014	0.014	0.014	0.015	9:45:28 AM	10/13/2011 9:45	0.016
7020	0.021	0.021	0.022	0.022	9:46:28 AM	10/13/2011 9:46	0.022
7080	0.012	0.012	0.013	0.013	9:47:28 AM	10/13/2011 9:47	0.013
7140	0.011	0.011	0.012	0.012	9:48:28 AM	10/13/2011 9:48	0.012
7200	0.01	0.011	0.011	0.011	9:49:28 AM	10/13/2011 9:49	0.011
7260	0.011	0.011	0.012	0.012	9:50:28 AM	10/13/2011 9:50	0.012
7320	0.011	0.011	0.011	0.012	9:51:28 AM	10/13/2011 9:51	0.012
7380	0.01	0.01	0.011	0.011	9:52:28 AM	10/13/2011 9:52	0.011
7440	0.011	0.011	0.011	0.011	9:53:28 AM	10/13/2011 9:53	0.011
7500	0.011	0.011	0.011	0.012	9:54:28 AM	10/13/2011 9:54	0.012
7560	0.011	0.011	0.011	0.011	9:55:28 AM	10/13/2011 9:55	0.011
7620	0.011	0.012	0.012	0.012	9:56:28 AM	10/13/2011 9:56	0.012
7680	0.011	0.012	0.012	0.012	9:57:28 AM	10/13/2011 9:57	0.013
7740	0.011	0.012	0.012	0.012	9:58:28 AM	10/13/2011 9:58	0.012
7800	0.012	0.012	0.012	0.013	9:59:28 AM	10/13/2011 9:59	0.013
7860	0.013	0.013	0.014	0.014	10:00:28 AM	10/13/2011 10:00	0.014
7920	0.013	0.014	0.014	0.014	10:01:28 AM	10/13/2011 10:01	0.014
7980	0.012	0.012	0.012	0.013	10:02:28 AM	10/13/2011 10:02	0.013
8040	0.012	0.012	0.012	0.013	10:03:28 AM	10/13/2011 10:03	0.013
8100	0.013	0.013	0.013	0.014	10:04:28 AM	10/13/2011 10:04	0.015
8160	0.012	0.013	0.013	0.013	10:05:28 AM	10/13/2011 10:05	0.013
8220	0.013	0.013	0.013	0.014	10:06:28 AM	10/13/2011 10:06	0.014
8280	0.012	0.012	0.012	0.013	10:07:28 AM	10/13/2011 10:07	0.013
8340	0.012	0.012	0.013	0.013	10:08:28 AM	10/13/2011 10:08	0.013
8400	0.012	0.012	0.013	0.013	10:09:28 AM	10/13/2011 10:09	0.013
8460	0.012	0.013	0.013	0.013	10:10:28 AM	10/13/2011 10:10	0.013
8520	0.012	0.013	0.013	0.013	10:11:28 AM	10/13/2011 10:11	0.013
8580	0.013	0.013	0.014	0.015	10:12:28 AM	10/13/2011 10:12	0.015
8640	0.012	0.012	0.013	0.013	10:13:28 AM	10/13/2011 10:13	0.013
8700	0.012	0.013	0.013	0.013	10:14:28 AM	10/13/2011 10:14	0.013
8760	0.013	0.014	0.014	0.015	10:15:28 AM	10/13/2011 10:15	0.015
8820	0.014	0.014	0.014	0.015	10:16:28 AM	10/13/2011 10:16	0.015
8880	0.014	0.014	0.015	0.016	10:17:28 AM	10/13/2011 10:17	0.016
8940	0.014	0.014	0.015	0.015	10:18:28 AM	10/13/2011 10:18	0.015
9000	0.014	0.015	0.015	0.016	10:19:28 AM	10/13/2011 10:19	0.016
9060	0.014	0.015	0.015	0.016	10:20:28 AM	10/13/2011 10:20	0.016
9120	0.013	0.014	0.014	0.015	10:21:28 AM	10/13/2011 10:21	0.015
9180	0.013	0.014	0.014	0.015	10:22:28 AM	10/13/2011 10:22	0.015
9240	0.014	0.014	0.014	0.015	10:23:28 AM	10/13/2011 10:23	0.015
9300	0.014	0.014	0.015	0.015	10:24:28 AM	10/13/2011 10:24	0.015
9360	0.016	0.017	0.017	0.018	10:25:28 AM	10/13/2011 10:25	0.018
9420	0.015	0.015	0.016	0.016	10:26:28 AM	10/13/2011 10:26	0.016
9480	0.013	0.013	0.014	0.014	10:27:28 AM	10/13/2011 10:27	0.014
9540	0.013	0.014	0.014	0.015	10:28:28 AM	10/13/2011 10:28	0.015
9600	0.013	0.014	0.014	0.015	10:29:28 AM	10/13/2011 10:29	0.015
9660	0.014	0.015	0.015	0.016	10:30:28 AM	10/13/2011 10:30	0.016
9720	0.012	0.013	0.013	0.014	10:31:28 AM	10/13/2011 10:31	0.014
9780	0.013	0.013	0.014	0.015	10:32:28 AM	10/13/2011 10:32	0.015
9840	0.012	0.013	0.013	0.014	10:33:28 AM	10/13/2011 10:33	0.014
9900	0.012	0.013	0.013	0.014	10:34:28 AM	10/13/2011 10:34	0.014
9960	0.013	0.013	0.014	0.014	10:35:28 AM	10/13/2011 10:35	0.014
10020	0.013	0.013	0.013	0.014	10:36:28 AM	10/13/2011 10:36	0.014
10080	0.012	0.013	0.013	0.013	10:37:28 AM	10/13/2011 10:37	0.013
10140	0.013	0.013	0.014	0.014	10:38:28 AM	10/13/2011 10:38	0.014
10200	0.014	0.014	0.014	0.015	10:39:28 AM	10/13/2011 10:39	0.015

10260	0.015	0.015	0.016	0.016	10:40:28 AM	10/13/2011 10:40	0.016
10320	0.014	0.015	0.015	0.015	10:41:28 AM	10/13/2011 10:41	0.015
10380	0.014	0.014	0.015	0.015	10:42:28 AM	10/13/2011 10:42	0.016
10440	0.015	0.015	0.015	0.016	10:43:28 AM	10/13/2011 10:43	0.016
10500	0.015	0.015	0.016	0.016	10:44:28 AM	10/13/2011 10:44	0.016
10560	0.02	0.02	0.022	0.023	10:45:28 AM	10/13/2011 10:45	0.024
10620	0.017	0.017	0.018	0.019	10:46:28 AM	10/13/2011 10:46	0.02
10680	0.015	0.015	0.016	0.017	10:47:28 AM	10/13/2011 10:47	0.017
10740	0.016	0.017	0.018	0.019	10:48:28 AM	10/13/2011 10:48	0.02
10800	0.015	0.016	0.017	0.018	10:49:28 AM	10/13/2011 10:49	0.018
10860	0.018	0.019	0.02	0.022	10:50:28 AM	10/13/2011 10:50	0.022
10920	0.022	0.023	0.024	0.027	10:51:28 AM	10/13/2011 10:51	0.027
10980	0.02	0.021	0.021	0.022	10:52:28 AM	10/13/2011 10:52	0.022
11040	0.019	0.019	0.019	0.02	10:53:28 AM	10/13/2011 10:53	0.02
11100	0.017	0.018	0.018	0.019	10:54:28 AM	10/13/2011 10:54	0.02
11160	0.015	0.015	0.016	0.016	10:55:28 AM	10/13/2011 10:55	0.016
11220	0.016	0.016	0.017	0.018	10:56:28 AM	10/13/2011 10:56	0.018
11280	0.015	0.015	0.016	0.017	10:57:28 AM	10/13/2011 10:57	0.017
11340	0.015	0.016	0.016	0.017	10:58:28 AM	10/13/2011 10:58	0.017
11400	0.016	0.016	0.017	0.018	10:59:28 AM	10/13/2011 10:59	0.018
11460	0.016	0.016	0.017	0.019	11:00:28 AM	10/13/2011 11:00	0.019
11520	0.015	0.016	0.016	0.018	11:01:28 AM	10/13/2011 11:01	0.018
11580	0.016	0.016	0.016	0.017	11:02:28 AM	10/13/2011 11:02	0.017
11640	0.016	0.016	0.017	0.018	11:03:28 AM	10/13/2011 11:03	0.018
11700	0.017	0.017	0.018	0.019	11:04:28 AM	10/13/2011 11:04	0.019
11760	0.017	0.017	0.018	0.019	11:05:28 AM	10/13/2011 11:05	0.019
11820	0.018	0.018	0.019	0.02	11:06:28 AM	10/13/2011 11:06	0.02
11880	0.018	0.018	0.019	0.02	11:07:28 AM	10/13/2011 11:07	0.02
11940	0.018	0.018	0.019	0.02	11:08:28 AM	10/13/2011 11:08	0.02
12000	0.017	0.017	0.018	0.019	11:09:28 AM	10/13/2011 11:09	0.019
12060	0.023	0.024	0.024	0.025	11:10:28 AM	10/13/2011 11:10	0.025
12120	0.019	0.019	0.02	0.02	11:11:28 AM	10/13/2011 11:11	0.02
12180	0.028	0.028	0.029	0.03	11:12:28 AM	10/13/2011 11:12	0.03
12240	0.02	0.02	0.021	0.022	11:13:28 AM	10/13/2011 11:13	0.022
12300	0.017	0.018	0.018	0.019	11:14:28 AM	10/13/2011 11:14	0.02
12360	0.017	0.017	0.018	0.019	11:15:28 AM	10/13/2011 11:15	0.019
12420	0.016	0.016	0.017	0.018	11:16:28 AM	10/13/2011 11:16	0.018
12480	0.016	0.016	0.016	0.017	11:17:28 AM	10/13/2011 11:17	0.017
12540	0.016	0.016	0.017	0.017	11:18:28 AM	10/13/2011 11:18	0.018
12600	0.016	0.016	0.017	0.017	11:19:28 AM	10/13/2011 11:19	0.018
12660	0.016	0.016	0.017	0.018	11:20:28 AM	10/13/2011 11:20	0.018
12720	0.016	0.017	0.017	0.018	11:21:28 AM	10/13/2011 11:21	0.018
12780	0.015	0.016	0.016	0.017	11:22:28 AM	10/13/2011 11:22	0.017
12840	0.016	0.016	0.016	0.017	11:23:28 AM	10/13/2011 11:23	0.017
12900	0.015	0.016	0.016	0.017	11:24:28 AM	10/13/2011 11:24	0.017
12960	0.015	0.015	0.016	0.016	11:25:28 AM	10/13/2011 11:25	0.016
13020	0.015	0.016	0.016	0.017	11:26:28 AM	10/13/2011 11:26	0.017
13080	0.016	0.017	0.017	0.018	11:27:28 AM	10/13/2011 11:27	0.018
13140	0.016	0.017	0.017	0.018	11:28:28 AM	10/13/2011 11:28	0.018
13200	0.017	0.017	0.017	0.018	11:29:28 AM	10/13/2011 11:29	0.018
13260	0.017	0.017	0.018	0.019	11:30:28 AM	10/13/2011 11:30	0.019
13320	0.016	0.016	0.017	0.018	11:31:28 AM	10/13/2011 11:31	0.018
13380	0.015	0.016	0.016	0.017	11:32:28 AM	10/13/2011 11:32	0.017
13440	0.015	0.015	0.015	0.016	11:33:28 AM	10/13/2011 11:33	0.016
13500	0.015	0.015	0.015	0.016	11:34:28 AM	10/13/2011 11:34	0.016
13560	0.014	0.014	0.014	0.015	11:35:28 AM	10/13/2011 11:35	0.015
13620	0.013	0.013	0.014	0.014	11:36:28 AM	10/13/2011 11:36	0.014
13680	0.013	0.013	0.014	0.014	11:37:28 AM	10/13/2011 11:37	0.014
13740	0.012	0.012	0.012	0.013	11:38:28 AM	10/13/2011 11:38	0.013
13800	0.013	0.013	0.014	0.014	11:39:28 AM	10/13/2011 11:39	0.014
13860	0.019	0.02	0.02	0.021	11:40:28 AM	10/13/2011 11:40	0.022
13920	0.019	0.019	0.02	0.021	11:41:28 AM	10/13/2011 11:41	0.021
13980	0.015	0.016	0.016	0.018	11:42:28 AM	10/13/2011 11:42	0.018
14040	0.014	0.015	0.015	0.016	11:43:28 AM	10/13/2011 11:43	0.016
14100	0.014	0.015	0.015	0.016	11:44:28 AM	10/13/2011 11:44	0.016
14160	0.013	0.014	0.014	0.014	11:45:28 AM	10/13/2011 11:45	0.014
14220	0.013	0.014	0.014	0.015	11:46:28 AM	10/13/2011 11:46	0.015
14280	0.014	0.015	0.015	0.016	11:47:28 AM	10/13/2011 11:47	0.017
14340	0.015	0.015	0.016	0.017	11:48:28 AM	10/13/2011 11:48	0.017

14400	0.014	0.015	0.015	0.016	11:49:28 AM	10/13/2011 11:49	0.016
14460	0.014	0.014	0.015	0.015	11:50:28 AM	10/13/2011 11:50	0.015
14520	0.015	0.015	0.016	0.016	11:51:28 AM	10/13/2011 11:51	0.017
14580	0.015	0.016	0.016	0.017	11:52:28 AM	10/13/2011 11:52	0.017
14640	0.015	0.015	0.015	0.016	11:53:28 AM	10/13/2011 11:53	0.016
14700	0.014	0.015	0.015	0.015	11:54:28 AM	10/13/2011 11:54	0.015
14760	0.014	0.014	0.015	0.015	11:55:28 AM	10/13/2011 11:55	0.015
14820	0.014	0.014	0.015	0.015	11:56:28 AM	10/13/2011 11:56	0.015
14880	0.014	0.014	0.015	0.015	11:57:28 AM	10/13/2011 11:57	0.015
14940	0.014	0.014	0.014	0.015	11:58:28 AM	10/13/2011 11:58	0.015
15000	0.013	0.013	0.014	0.014	11:59:28 AM	10/13/2011 11:59	0.014
15060	0.013	0.014	0.014	0.015	12:00:28 PM	10/13/2011 12:00	0.015
15120	0.015	0.015	0.016	0.016	12:01:28 PM	10/13/2011 12:01	0.016
15180	0.014	0.014	0.015	0.016	12:02:28 PM	10/13/2011 12:02	0.016
15240	0.014	0.014	0.015	0.016	12:03:28 PM	10/13/2011 12:03	0.016
15300	0.014	0.014	0.015	0.015	12:04:28 PM	10/13/2011 12:04	0.016
15360	0.014	0.015	0.015	0.016	12:05:28 PM	10/13/2011 12:05	0.016
15420	0.014	0.014	0.015	0.015	12:06:28 PM	10/13/2011 12:06	0.015
15480	0.013	0.014	0.014	0.015	12:07:28 PM	10/13/2011 12:07	0.015
15540	0.014	0.014	0.015	0.015	12:08:28 PM	10/13/2011 12:08	0.016
15600	0.014	0.014	0.015	0.015	12:09:28 PM	10/13/2011 12:09	0.015
15660	0.014	0.014	0.014	0.015	12:10:28 PM	10/13/2011 12:10	0.015
15720	0.014	0.014	0.015	0.015	12:11:28 PM	10/13/2011 12:11	0.015
15780	0.014	0.015	0.015	0.016	12:12:28 PM	10/13/2011 12:12	0.016
15840	0.013	0.013	0.014	0.014	12:13:28 PM	10/13/2011 12:13	0.014
15900	0.013	0.013	0.014	0.014	12:14:28 PM	10/13/2011 12:14	0.015
15960	0.012	0.013	0.013	0.013	12:15:28 PM	10/13/2011 12:15	0.014
16020	0.012	0.012	0.013	0.013	12:16:28 PM	10/13/2011 12:16	0.014
16080	0.012	0.012	0.013	0.014	12:17:28 PM	10/13/2011 12:17	0.014
16140	0.013	0.013	0.014	0.015	12:18:28 PM	10/13/2011 12:18	0.015
16200	0.012	0.013	0.013	0.014	12:19:28 PM	10/13/2011 12:19	0.014
16260	0.013	0.014	0.014	0.015	12:20:28 PM	10/13/2011 12:20	0.015
16320	0.014	0.014	0.014	0.015	12:21:28 PM	10/13/2011 12:21	0.015
16380	0.013	0.013	0.014	0.014	12:22:28 PM	10/13/2011 12:22	0.014
16440	0.013	0.013	0.014	0.015	12:23:28 PM	10/13/2011 12:23	0.015
16500	0.015	0.015	0.016	0.017	12:24:28 PM	10/13/2011 12:24	0.017
16560	0.014	0.015	0.015	0.016	12:25:28 PM	10/13/2011 12:25	0.016
16620	0.016	0.016	0.017	0.019	12:26:28 PM	10/13/2011 12:26	0.019
16680	0.017	0.017	0.018	0.019	12:27:28 PM	10/13/2011 12:27	0.019
16740	0.016	0.017	0.017	0.019	12:28:28 PM	10/13/2011 12:28	0.019
16800	0.016	0.017	0.017	0.019	12:29:28 PM	10/13/2011 12:29	0.02
16860	0.015	0.016	0.017	0.018	12:30:28 PM	10/13/2011 12:30	0.018
16920	0.014	0.015	0.015	0.016	12:31:28 PM	10/13/2011 12:31	0.016
16980	0.015	0.015	0.016	0.017	12:32:28 PM	10/13/2011 12:32	0.017
17040	0.015	0.016	0.016	0.017	12:33:28 PM	10/13/2011 12:33	0.017
17100	0.015	0.015	0.016	0.017	12:34:28 PM	10/13/2011 12:34	0.017
17160	0.014	0.015	0.015	0.016	12:35:28 PM	10/13/2011 12:35	0.016
17220	0.015	0.016	0.017	0.017	12:36:28 PM	10/13/2011 12:36	0.018
17280	0.016	0.016	0.017	0.018	12:37:28 PM	10/13/2011 12:37	0.018
17340	0.015	0.015	0.016	0.016	12:38:28 PM	10/13/2011 12:38	0.016
17400	0.017	0.017	0.018	0.019	12:39:28 PM	10/13/2011 12:39	0.019
17460	0.017	0.017	0.018	0.019	12:40:28 PM	10/13/2011 12:40	0.019
17520	0.015	0.016	0.016	0.017	12:41:28 PM	10/13/2011 12:41	0.017
17580	0.016	0.017	0.017	0.018	12:42:28 PM	10/13/2011 12:42	0.018
17640	0.017	0.018	0.018	0.019	12:43:28 PM	10/13/2011 12:43	0.019
17700	0.017	0.017	0.018	0.02	12:44:28 PM	10/13/2011 12:44	0.02
17760	0.017	0.017	0.017	0.018	12:45:28 PM	10/13/2011 12:45	0.018
17820	0.016	0.016	0.017	0.018	12:46:28 PM	10/13/2011 12:46	0.018
17880	0.017	0.017	0.017	0.018	12:47:28 PM	10/13/2011 12:47	0.018
17940	0.017	0.018	0.018	0.019	12:48:28 PM	10/13/2011 12:48	0.02
18000	0.017	0.017	0.018	0.018	12:49:28 PM	10/13/2011 12:49	0.018
18060	0.017	0.017	0.017	0.018	12:50:28 PM	10/13/2011 12:50	0.018
18120	0.016	0.017	0.017	0.017	12:51:28 PM	10/13/2011 12:51	0.018
18180	0.018	0.019	0.02	0.024	12:52:28 PM	10/13/2011 12:52	0.024
18240	0.018	0.019	0.021	0.026	12:53:28 PM	10/13/2011 12:53	0.026
18300	0.016	0.016	0.017	0.017	12:54:28 PM	10/13/2011 12:54	0.018
18360	0.015	0.015	0.016	0.017	12:55:28 PM	10/13/2011 12:55	0.017
18420	0.015	0.016	0.016	0.017	12:56:28 PM	10/13/2011 12:56	0.017
18480	0.016	0.016	0.017	0.017	12:57:28 PM	10/13/2011 12:57	0.017

18540	0.015	0.016	0.016	0.018	12:58:28 PM	10/13/2011 12:58	0.018
18600	0.021	0.021	0.021	0.022	12:59:28 PM	10/13/2011 12:59	0.022
18660	0.014	0.014	0.015	0.015	1:00:28 PM	10/13/2011 13:00	0.015
18720	0.016	0.016	0.017	0.019	1:01:28 PM	10/13/2011 13:01	0.019
18780	0.017	0.017	0.018	0.02	1:02:28 PM	10/13/2011 13:02	0.02
18840	0.017	0.018	0.019	0.02	1:03:28 PM	10/13/2011 13:03	0.02
18900	0.017	0.018	0.019	0.021	1:04:28 PM	10/13/2011 13:04	0.021
18960	0.017	0.018	0.019	0.02	1:05:28 PM	10/13/2011 13:05	0.02
19020	0.017	0.018	0.019	0.02	1:06:28 PM	10/13/2011 13:06	0.021
19080	0.017	0.017	0.018	0.019	1:07:28 PM	10/13/2011 13:07	0.019
19140	0.017	0.017	0.018	0.019	1:08:28 PM	10/13/2011 13:08	0.019
19200	0.017	0.018	0.018	0.021	1:09:28 PM	10/13/2011 13:09	0.021
19260	0.02	0.021	0.022	0.025	1:10:28 PM	10/13/2011 13:10	0.025
19320	0.033	0.035	0.038	0.043	1:11:28 PM	10/13/2011 13:11	0.044
19380	0.026	0.027	0.029	0.032	1:12:28 PM	10/13/2011 13:12	0.032
19440	0.019	0.02	0.02	0.022	1:13:28 PM	10/13/2011 13:13	0.022
19500	0.022	0.023	0.024	0.026	1:14:28 PM	10/13/2011 13:14	0.026
19560	0.021	0.022	0.023	0.025	1:15:28 PM	10/13/2011 13:15	0.025
19620	0.021	0.022	0.023	0.025	1:16:28 PM	10/13/2011 13:16	0.025
19680	0.023	0.024	0.026	0.028	1:17:28 PM	10/13/2011 13:17	0.029
19740	0.02	0.02	0.021	0.022	1:18:28 PM	10/13/2011 13:18	0.022
19800	0.018	0.019	0.02	0.021	1:19:28 PM	10/13/2011 13:19	0.021
19860	0.017	0.017	0.018	0.019	1:20:28 PM	10/13/2011 13:20	0.019
19920	0.022	0.022	0.023	0.026	1:21:28 PM	10/13/2011 13:21	0.026
19980	0.024	0.025	0.026	0.028	1:22:28 PM	10/13/2011 13:22	0.029
20040	0.018	0.019	0.019	0.022	1:23:28 PM	10/13/2011 13:23	0.022
20100	0.019	0.02	0.021	0.023	1:24:28 PM	10/13/2011 13:24	0.024
20160	0.018	0.019	0.02	0.022	1:25:28 PM	10/13/2011 13:25	0.023
20220	0.019	0.019	0.02	0.021	1:26:28 PM	10/13/2011 13:26	0.021
20280	0.018	0.019	0.019	0.02	1:27:28 PM	10/13/2011 13:27	0.021
20340	0.018	0.018	0.019	0.02	1:28:28 PM	10/13/2011 13:28	0.02
20400	0.019	0.019	0.02	0.021	1:29:28 PM	10/13/2011 13:29	0.021
20460	0.018	0.018	0.019	0.02	1:30:28 PM	10/13/2011 13:30	0.02
20520	0.019	0.019	0.02	0.021	1:31:28 PM	10/13/2011 13:31	0.021
20580	0.019	0.02	0.021	0.022	1:32:28 PM	10/13/2011 13:32	0.022
20640	0.018	0.019	0.019	0.021	1:33:28 PM	10/13/2011 13:33	0.021
20700	0.019	0.019	0.02	0.021	1:34:28 PM	10/13/2011 13:34	0.022
20760	0.02	0.021	0.021	0.023	1:35:28 PM	10/13/2011 13:35	0.023
20820	0.021	0.021	0.022	0.023	1:36:28 PM	10/13/2011 13:36	0.024
20880	0.02	0.021	0.021	0.023	1:37:28 PM	10/13/2011 13:37	0.023
20940	0.021	0.021	0.022	0.024	1:38:28 PM	10/13/2011 13:38	0.024
21000	0.025	0.026	0.027	0.03	1:39:28 PM	10/13/2011 13:39	0.031
21060	0.025	0.026	0.028	0.031	1:40:28 PM	10/13/2011 13:40	0.031
21120	0.033	0.033	0.034	0.036	1:41:28 PM	10/13/2011 13:41	0.036
21180	0.024	0.024	0.025	0.027	1:42:28 PM	10/13/2011 13:42	0.027
21240	0.022	0.023	0.023	0.025	1:43:28 PM	10/13/2011 13:43	0.025
21300	0.023	0.023	0.024	0.025	1:44:28 PM	10/13/2011 13:44	0.026
21360	0.023	0.023	0.024	0.027	1:45:28 PM	10/13/2011 13:45	0.027
21420	0.023	0.023	0.024	0.027	1:46:28 PM	10/13/2011 13:46	0.027
21480	0.021	0.022	0.023	0.024	1:47:28 PM	10/13/2011 13:47	0.024
21540	0.022	0.022	0.023	0.024	1:48:28 PM	10/13/2011 13:48	0.024
21600	0.021	0.021	0.022	0.023	1:49:28 PM	10/13/2011 13:49	0.023
21660	0.022	0.022	0.023	0.024	1:50:28 PM	10/13/2011 13:50	0.025
21720	0.021	0.022	0.023	0.024	1:51:28 PM	10/13/2011 13:51	0.024
21780	0.021	0.021	0.022	0.023	1:52:28 PM	10/13/2011 13:52	0.023
21840	0.02	0.021	0.021	0.022	1:53:28 PM	10/13/2011 13:53	0.022
21900	0.022	0.022	0.023	0.025	1:54:28 PM	10/13/2011 13:54	0.027
21960	0.025	0.025	0.026	0.03	1:55:28 PM	10/13/2011 13:55	0.032
22020	0.023	0.024	0.024	0.025	1:56:28 PM	10/13/2011 13:56	0.026
22080	0.023	0.024	0.024	0.026	1:57:28 PM	10/13/2011 13:57	0.026
22140	0.024	0.024	0.025	0.027	1:58:28 PM	10/13/2011 13:58	0.027
22200	0.023	0.024	0.025	0.026	1:59:28 PM	10/13/2011 13:59	0.026
22260	0.025	0.025	0.026	0.027	2:00:28 PM	10/13/2011 14:00	0.027
22320	0.026	0.026	0.027	0.03	2:01:28 PM	10/13/2011 14:01	0.03
22380	0.026	0.026	0.027	0.028	2:02:28 PM	10/13/2011 14:02	0.028
22440	0.026	0.027	0.028	0.029	2:03:28 PM	10/13/2011 14:03	0.03
22500	0.026	0.026	0.027	0.029	2:04:28 PM	10/13/2011 14:04	0.029
22560	0.025	0.025	0.026	0.028	2:05:28 PM	10/13/2011 14:05	0.028
22620	0.025	0.026	0.027	0.029	2:06:28 PM	10/13/2011 14:06	0.031

22680	0.026	0.027	0.028	0.03	2:07:28 PM	10/13/2011 14:07	0.03
22740	0.026	0.026	0.028	0.031	2:08:28 PM	10/13/2011 14:08	0.031
22800	0.022	0.023	0.024	0.025	2:09:28 PM	10/13/2011 14:09	0.026
22860	0.022	0.022	0.023	0.024	2:10:28 PM	10/13/2011 14:10	0.024
22920	0.022	0.023	0.024	0.026	2:11:28 PM	10/13/2011 14:11	0.026
22980	0.022	0.023	0.023	0.025	2:12:28 PM	10/13/2011 14:12	0.025
23040	0.023	0.024	0.025	0.026	2:13:28 PM	10/13/2011 14:13	0.027
23100	0.024	0.024	0.025	0.027	2:14:28 PM	10/13/2011 14:14	0.027
23160	0.024	0.025	0.026	0.027	2:15:28 PM	10/13/2011 14:15	0.027
23220	0.027	0.028	0.029	0.031	2:16:28 PM	10/13/2011 14:16	0.032
23280	0.026	0.027	0.028	0.029	2:17:28 PM	10/13/2011 14:17	0.029
23340	0.025	0.025	0.026	0.028	2:18:28 PM	10/13/2011 14:18	0.028
23400	0.024	0.024	0.025	0.026	2:19:28 PM	10/13/2011 14:19	0.027
23460	0.024	0.025	0.026	0.028	2:20:28 PM	10/13/2011 14:20	0.028
23520	0.024	0.025	0.026	0.027	2:21:28 PM	10/13/2011 14:21	0.027
23580	0.024	0.024	0.025	0.026	2:22:28 PM	10/13/2011 14:22	0.027
23640	0.023	0.023	0.024	0.025	2:23:28 PM	10/13/2011 14:23	0.025
23700	0.024	0.024	0.025	0.026	2:24:28 PM	10/13/2011 14:24	0.026
23760	0.025	0.025	0.026	0.028	2:25:28 PM	10/13/2011 14:25	0.028
23820	0.025	0.025	0.026	0.028	2:26:28 PM	10/13/2011 14:26	0.029
23880	0.024	0.024	0.025	0.027	2:27:28 PM	10/13/2011 14:27	0.027
23940	0.023	0.024	0.024	0.025	2:28:28 PM	10/13/2011 14:28	0.025
24000	0.023	0.023	0.024	0.025	2:29:28 PM	10/13/2011 14:29	0.025
24060	0.023	0.023	0.024	0.026	2:30:28 PM	10/13/2011 14:30	0.026
24120	0.024	0.025	0.025	0.026	2:31:28 PM	10/13/2011 14:31	0.027
24180	0.024	0.025	0.026	0.026	2:32:28 PM	10/13/2011 14:32	0.026
24240	0.024	0.024	0.025	0.026	2:33:28 PM	10/13/2011 14:33	0.026
24300	0.024	0.024	0.025	0.026	2:34:28 PM	10/13/2011 14:34	0.026
24360	0.03	0.031	0.032	0.036	2:35:28 PM	10/13/2011 14:35	0.036
24420	0.027	0.028	0.029	0.031	2:36:28 PM	10/13/2011 14:36	0.031
24480	0.025	0.026	0.026	0.028	2:37:28 PM	10/13/2011 14:37	0.028
24540	0.026	0.027	0.027	0.029	2:38:28 PM	10/13/2011 14:38	0.029
24600	0.026	0.027	0.027	0.029	2:39:28 PM	10/13/2011 14:39	0.029
24660	0.025	0.025	0.026	0.028	2:40:28 PM	10/13/2011 14:40	0.028
24720	0.026	0.026	0.027	0.029	2:41:28 PM	10/13/2011 14:41	0.029
24780	0.025	0.025	0.026	0.027	2:42:28 PM	10/13/2011 14:42	0.027
24840	0.024	0.025	0.025	0.027	2:43:28 PM	10/13/2011 14:43	0.027
24900	0.024	0.024	0.025	0.026	2:44:28 PM	10/13/2011 14:44	0.027
24960	0.025	0.026	0.027	0.029	2:45:28 PM	10/13/2011 14:45	0.029
25020	0.025	0.026	0.027	0.028	2:46:28 PM	10/13/2011 14:46	0.028
25080	0.025	0.026	0.027	0.029	2:47:28 PM	10/13/2011 14:47	0.029
25140	0.025	0.025	0.026	0.028	2:48:28 PM	10/13/2011 14:48	0.028
25200	0.025	0.026	0.027	0.029	2:49:28 PM	10/13/2011 14:49	0.029
25260	0.025	0.025	0.026	0.028	2:50:28 PM	10/13/2011 14:50	0.028
25320	0.024	0.025	0.026	0.027	2:51:28 PM	10/13/2011 14:51	0.027
25380	0.025	0.026	0.027	0.03	2:52:28 PM	10/13/2011 14:52	0.03
25440	0.026	0.027	0.028	0.03	2:53:28 PM	10/13/2011 14:53	0.031
25500	0.026	0.026	0.027	0.03	2:54:28 PM	10/13/2011 14:54	0.03
25560	0.025	0.026	0.027	0.03	2:55:28 PM	10/13/2011 14:55	0.031
25620	0.028	0.029	0.03	0.035	2:56:28 PM	10/13/2011 14:56	0.036
25680	0.027	0.028	0.03	0.035	2:57:28 PM	10/13/2011 14:57	0.037
25740	0.028	0.029	0.03	0.034	2:58:28 PM	10/13/2011 14:58	0.035
25800	0.029	0.03	0.031	0.036	2:59:28 PM	10/13/2011 14:59	0.037
25860	0.028	0.029	0.03	0.032	3:00:28 PM	10/13/2011 15:00	0.033
25920	0.029	0.03	0.031	0.033	3:01:28 PM	10/13/2011 15:01	0.033
25980	0.028	0.029	0.03	0.031	3:02:28 PM	10/13/2011 15:02	0.031
26040	0.028	0.028	0.029	0.031	3:03:28 PM	10/13/2011 15:03	0.031
26100	0.028	0.029	0.03	0.032	3:04:28 PM	10/13/2011 15:04	0.032
26160	0.029	0.029	0.03	0.032	3:05:28 PM	10/13/2011 15:05	0.033
26220	0.029	0.029	0.03	0.032	3:06:28 PM	10/13/2011 15:06	0.032
26280	0.029	0.03	0.031	0.033	3:07:28 PM	10/13/2011 15:07	0.033
26340	0.029	0.03	0.031	0.033	3:08:28 PM	10/13/2011 15:08	0.033
26400	0.029	0.03	0.031	0.032	3:09:28 PM	10/13/2011 15:09	0.032
26460	0.029	0.03	0.03	0.032	3:10:28 PM	10/13/2011 15:10	0.032
26520	0.03	0.031	0.031	0.032	3:11:28 PM	10/13/2011 15:11	0.033
26580	0.031	0.031	0.032	0.034	3:12:28 PM	10/13/2011 15:12	0.035
26640	0.031	0.031	0.032	0.034	3:13:28 PM	10/13/2011 15:13	0.035
26700	0.029	0.03	0.031	0.033	3:14:28 PM	10/13/2011 15:14	0.033
26760	0.03	0.031	0.032	0.034	3:15:28 PM	10/13/2011 15:15	0.034

26820	0.031	0.031	0.032	0.034	3:16:28 PM	10/13/2011 15:16	0.035
26880	0.03	0.031	0.032	0.033	3:17:28 PM	10/13/2011 15:17	0.033
26940	0.03	0.031	0.032	0.033	3:18:28 PM	10/13/2011 15:18	0.033
27000	0.032	0.032	0.034	0.035	3:19:28 PM	10/13/2011 15:19	0.035
27060	0.033	0.034	0.035	0.037	3:20:28 PM	10/13/2011 15:20	0.037
27120	0.033	0.034	0.035	0.036	3:21:28 PM	10/13/2011 15:21	0.036
27180	0.031	0.032	0.033	0.035	3:22:28 PM	10/13/2011 15:22	0.035
27240	0.031	0.032	0.033	0.034	3:23:28 PM	10/13/2011 15:23	0.035
27300	0.031	0.032	0.033	0.035	3:24:28 PM	10/13/2011 15:24	0.036
27360	0.03	0.031	0.032	0.033	3:25:28 PM	10/13/2011 15:25	0.034
27420	0.031	0.032	0.033	0.034	3:26:28 PM	10/13/2011 15:26	0.035
27480	0.032	0.033	0.033	0.035	3:27:28 PM	10/13/2011 15:27	0.036
27540	0.032	0.033	0.034	0.035	3:28:28 PM	10/13/2011 15:28	0.035
27600	0.031	0.031	0.032	0.034	3:29:28 PM	10/13/2011 15:29	0.034
27660	0.031	0.032	0.033	0.035	3:30:28 PM	10/13/2011 15:30	0.035
27720	0.031	0.031	0.033	0.034	3:31:28 PM	10/13/2011 15:31	0.034
27780	0.031	0.032	0.033	0.034	3:32:28 PM	10/13/2011 15:32	0.034
27840	0.031	0.031	0.033	0.034	3:33:28 PM	10/13/2011 15:33	0.034
27900	0.03	0.031	0.032	0.033	3:34:28 PM	10/13/2011 15:34	0.033
27960	0.03	0.031	0.031	0.033	3:35:28 PM	10/13/2011 15:35	0.033
28020	0.031	0.031	0.032	0.033	3:36:28 PM	10/13/2011 15:36	0.034
28080	0.031	0.032	0.033	0.035	3:37:28 PM	10/13/2011 15:37	0.035
28140	0.032	0.033	0.034	0.036	3:38:28 PM	10/13/2011 15:38	0.036
28200	0.033	0.034	0.035	0.037	3:39:28 PM	10/13/2011 15:39	0.037
28260	0.038	0.039	0.04	0.042	3:40:28 PM	10/13/2011 15:40	0.042
28320	0.032	0.032	0.034	0.035	3:41:28 PM	10/13/2011 15:41	0.035
28380	0.038	0.039	0.04	0.041	3:42:28 PM	10/13/2011 15:42	0.042
28440	0.037	0.038	0.039	0.04	3:43:28 PM	10/13/2011 15:43	0.04
28500	0.034	0.034	0.035	0.036	3:44:28 PM	10/13/2011 15:44	0.036
28560	0.037	0.037	0.038	0.039	3:45:28 PM	10/13/2011 15:45	0.039
28620	0.036	0.036	0.037	0.038	3:46:28 PM	10/13/2011 15:46	0.038
28680	0.034	0.034	0.035	0.037	3:47:28 PM	10/13/2011 15:47	0.037
28740	0.033	0.033	0.034	0.035	3:48:28 PM	10/13/2011 15:48	0.035
28800	0.032	0.033	0.033	0.035	3:49:28 PM	10/13/2011 15:49	0.035
28860	0.033	0.033	0.034	0.035	3:50:28 PM	10/13/2011 15:50	0.036
28920	0.033	0.033	0.034	0.035	3:51:28 PM	10/13/2011 15:51	0.035
28980	0.033	0.033	0.034	0.035	3:52:28 PM	10/13/2011 15:52	0.035
29040	0.032	0.033	0.033	0.034	3:53:28 PM	10/13/2011 15:53	0.034
29100	0.032	0.032	0.033	0.034	3:54:28 PM	10/13/2011 15:54	0.034
29160	0.032	0.033	0.033	0.034	3:55:28 PM	10/13/2011 15:55	0.034
29220	0.033	0.034	0.034	0.036	3:56:28 PM	10/13/2011 15:56	0.036
29280	0.033	0.033	0.034	0.035	3:57:28 PM	10/13/2011 15:57	0.035
29340	0.031	0.031	0.032	0.033	3:58:28 PM	10/13/2011 15:58	0.033
29400	0.031	0.031	0.032	0.032	3:59:28 PM	10/13/2011 15:59	0.032
29460	0.031	0.031	0.031	0.032	4:00:28 PM	10/13/2011 16:00	0.032
29520	0.031	0.032	0.032	0.033	4:01:28 PM	10/13/2011 16:01	0.033
29580	0.032	0.032	0.033	0.033	4:02:28 PM	10/13/2011 16:02	0.033
29640	0.032	0.033	0.033	0.034	4:03:28 PM	10/13/2011 16:03	0.034
29700	0.032	0.033	0.033	0.034	4:04:28 PM	10/13/2011 16:04	0.034
29760	0.034	0.034	0.035	0.036	4:05:28 PM	10/13/2011 16:05	0.036
29820	0.034	0.035	0.035	0.036	4:06:28 PM	10/13/2011 16:06	0.036
29880	0.032	0.033	0.033	0.034	4:07:28 PM	10/13/2011 16:07	0.035
29940	0.032	0.032	0.033	0.033	4:08:28 PM	10/13/2011 16:08	0.033
30000	0.031	0.031	0.032	0.032	4:09:28 PM	10/13/2011 16:09	0.032
30060	0.031	0.031	0.032	0.033	4:10:28 PM	10/13/2011 16:10	0.033
30120	0.031	0.031	0.032	0.032	4:11:28 PM	10/13/2011 16:11	0.033
30180	0.031	0.031	0.032	0.033	4:12:28 PM	10/13/2011 16:12	0.033
30240	0.03	0.031	0.031	0.032	4:13:28 PM	10/13/2011 16:13	0.032
30300	0.03	0.03	0.031	0.031	4:14:28 PM	10/13/2011 16:14	0.031
30360	0.03	0.031	0.031	0.032	4:15:28 PM	10/13/2011 16:15	0.032
30420	0.03	0.03	0.031	0.031	4:16:28 PM	10/13/2011 16:16	0.032
30480	0.03	0.03	0.031	0.031	4:17:28 PM	10/13/2011 16:17	0.031
30540	0.03	0.03	0.03	0.031	4:18:28 PM	10/13/2011 16:18	0.031
30600	0.031	0.031	0.031	0.032	4:19:28 PM	10/13/2011 16:19	0.032
30660	0.031	0.031	0.032	0.033	4:20:28 PM	10/13/2011 16:20	0.033
30720	0.03	0.03	0.031	0.032	4:21:28 PM	10/13/2011 16:21	0.032
30780	0.03	0.031	0.031	0.032	4:22:28 PM	10/13/2011 16:22	0.032
30840	0.031	0.031	0.032	0.033	4:23:28 PM	10/13/2011 16:23	0.033
30900	0.031	0.031	0.032	0.033	4:24:28 PM	10/13/2011 16:24	0.033

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533112903
Firmware Version	2.8
Calibration Date	7/18/2011
Test Name	MANUAL_008
Test Start Time	7:45:16
Test Start Date	10/13/2011
Test Length [D:H:M]	0:08:40
Test Interval [M:S]	1:00
PM1 Average [mg/m3]	0.021
PM1 Minimum [mg/m3]	0.008
PM1 Maximum [mg/m3]	0.193
PM1 TWA [mg/m3]	0.02
PM2.5 Average [mg/m3]	0.022
PM2.5 Minimum [mg/m3]	0.009
PM2.5 Maximum [mg/m3]	0.194
PM2.5 TWA [mg/m3]	0.021
PM4 Average [mg/m3]	0.022
PM4 Minimum [mg/m3]	0.009
PM4 Maximum [mg/m3]	0.198
PM4 TWA [mg/m3]	0.021
PM10 Average [mg/m3]	0.023
PM10 Minimum [mg/m3]	0.009
PM10 Maximum [mg/m3]	0.277
PM10 TWA [mg/m3]	0.022
TOTAL Average [mg/m3]	0.024
TOTAL Minimum [mg/m3]	0.009
TOTAL Maximum [mg/m3]	0.391
TOTAL TWA [mg/m3]	0.023
Photometric User Cal	1
Size Correction User Cal	1
Flow User Cal	1
Errors	
Number of Samples	520

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	7:45:16	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.193	0.194	0.198	0.277	7:46:16	10/13/2011 7:46	0.391		
120	0.013	0.013	0.013	0.015	7:47:16	10/13/2011 7:47	0.016		
180	0.034	0.035	0.036	0.044	7:48:16	10/13/2011 7:48	0.059		
240	0.012	0.012	0.013	0.013	7:49:16	10/13/2011 7:49	0.013		
300	0.012	0.012	0.013	0.013	7:50:16	10/13/2011 7:50	0.013		
360	0.012	0.012	0.013	0.013	7:51:16	10/13/2011 7:51	0.013		
420	0.012	0.012	0.012	0.012	7:52:16	10/13/2011 7:52	0.012		
480	0.012	0.012	0.012	0.013	7:53:16	10/13/2011 7:53	0.013		
540	0.013	0.013	0.013	0.013	7:54:16	10/13/2011 7:54	0.013		
600	0.012	0.012	0.013	0.013	7:55:16	10/13/2011 7:55	0.013		
660	0.012	0.012	0.012	0.013	7:56:16	10/13/2011 7:56	0.013		
720	0.011	0.011	0.011	0.011	7:57:16	10/13/2011 7:57	0.011		
780	0.02	0.021	0.021	0.023	7:58:16	10/13/2011 7:58	0.027		
840	0.059	0.059	0.06	0.069	7:59:16	10/13/2011 7:59	0.083		
900	0.012	0.012	0.013	0.013	8:00:16	10/13/2011 8:00	0.013		
960	0.011	0.012	0.012	0.012	8:01:16	10/13/2011 8:01	0.012		
1020	0.009	0.01	0.01	0.01	8:02:16	10/13/2011 8:02	0.01		
1080	0.008	0.009	0.009	0.009	8:03:16	10/13/2011 8:03	0.009		
1140	0.009	0.009	0.01	0.01	8:04:16	10/13/2011 8:04	0.01		
1200	0.01	0.01	0.01	0.01	8:05:16	10/13/2011 8:05	0.01		
1260	0.009	0.009	0.009	0.01	8:06:16	10/13/2011 8:06	0.01		
1320	0.011	0.011	0.012	0.013	8:07:16	10/13/2011 8:07	0.013		
1380	0.012	0.012	0.012	0.013	8:08:16	10/13/2011 8:08	0.013		
1440	0.011	0.011	0.011	0.011	8:09:16	10/13/2011 8:09	0.011		
1500	0.011	0.011	0.011	0.012	8:10:16	10/13/2011 8:10	0.012		
1560	0.01	0.01	0.011	0.011	8:11:16	10/13/2011 8:11	0.011		
1620	0.011	0.011	0.012	0.012	8:12:16	10/13/2011 8:12	0.012		
1680	0.012	0.012	0.012	0.014	8:13:16	10/13/2011 8:13	0.015		
1740	0.013	0.013	0.013	0.017	8:14:16	10/13/2011 8:14	0.026		
1800	0.012	0.012	0.012	0.013	8:15:16	10/13/2011 8:15	0.013		
1860	0.012	0.012	0.013	0.014	8:16:16	10/13/2011 8:16	0.014		
1920	0.011	0.011	0.011	0.011	8:17:16	10/13/2011 8:17	0.011		

1980	0.012	0.012	0.012	0.013	8:18:16	10/13/2011 8:18	0.013
2040	0.011	0.011	0.012	0.012	8:19:16	10/13/2011 8:19	0.012
2100	0.012	0.012	0.012	0.013	8:20:16	10/13/2011 8:20	0.013
2160	0.013	0.013	0.013	0.014	8:21:16	10/13/2011 8:21	0.014
2220	0.015	0.015	0.015	0.016	8:22:16	10/13/2011 8:22	0.016
2280	0.046	0.046	0.047	0.05	8:23:16	10/13/2011 8:23	0.055
2340	0.013	0.014	0.014	0.019	8:24:16	10/13/2011 8:24	0.026
2400	0.012	0.012	0.013	0.013	8:25:16	10/13/2011 8:25	0.013
2460	0.011	0.012	0.012	0.012	8:26:16	10/13/2011 8:26	0.013
2520	0.01	0.011	0.011	0.011	8:27:16	10/13/2011 8:27	0.011
2580	0.011	0.011	0.011	0.012	8:28:16	10/13/2011 8:28	0.012
2640	0.014	0.014	0.015	0.016	8:29:16	10/13/2011 8:29	0.016
2700	0.011	0.012	0.012	0.013	8:30:16	10/13/2011 8:30	0.013
2760	0.01	0.01	0.011	0.011	8:31:16	10/13/2011 8:31	0.011
2820	0.01	0.01	0.01	0.011	8:32:16	10/13/2011 8:32	0.011
2880	0.011	0.011	0.011	0.011	8:33:16	10/13/2011 8:33	0.011
2940	0.042	0.043	0.044	0.054	8:34:16	10/13/2011 8:34	0.062
3000	0.011	0.011	0.011	0.012	8:35:16	10/13/2011 8:35	0.012
3060	0.012	0.012	0.012	0.013	8:36:16	10/13/2011 8:36	0.013
3120	0.012	0.012	0.012	0.013	8:37:16	10/13/2011 8:37	0.013
3180	0.013	0.013	0.013	0.014	8:38:16	10/13/2011 8:38	0.014
3240	0.012	0.012	0.013	0.013	8:39:16	10/13/2011 8:39	0.013
3300	0.013	0.013	0.014	0.015	8:40:16	10/13/2011 8:40	0.015
3360	0.013	0.013	0.014	0.014	8:41:16	10/13/2011 8:41	0.014
3420	0.012	0.012	0.012	0.013	8:42:16	10/13/2011 8:42	0.013
3480	0.013	0.013	0.014	0.014	8:43:16	10/13/2011 8:43	0.014
3540	0.015	0.015	0.016	0.018	8:44:16	10/13/2011 8:44	0.019
3600	0.012	0.012	0.013	0.013	8:45:16	10/13/2011 8:45	0.013
3660	0.012	0.012	0.012	0.012	8:46:16	10/13/2011 8:46	0.012
3720	0.012	0.012	0.013	0.013	8:47:16	10/13/2011 8:47	0.013
3780	0.012	0.012	0.012	0.013	8:48:16	10/13/2011 8:48	0.013
3840	0.012	0.012	0.012	0.013	8:49:16	10/13/2011 8:49	0.013
3900	0.013	0.013	0.013	0.014	8:50:16	10/13/2011 8:50	0.014
3960	0.012	0.012	0.013	0.013	8:51:16	10/13/2011 8:51	0.014
4020	0.012	0.012	0.012	0.013	8:52:16	10/13/2011 8:52	0.013
4080	0.012	0.012	0.013	0.013	8:53:16	10/13/2011 8:53	0.013
4140	0.012	0.012	0.012	0.012	8:54:16	10/13/2011 8:54	0.013
4200	0.013	0.013	0.014	0.014	8:55:16	10/13/2011 8:55	0.014
4260	0.013	0.013	0.014	0.014	8:56:16	10/13/2011 8:56	0.014
4320	0.058	0.058	0.059	0.072	8:57:16	10/13/2011 8:57	0.087
4380	0.014	0.014	0.014	0.015	8:58:16	10/13/2011 8:58	0.015
4440	0.014	0.015	0.015	0.015	8:59:16	10/13/2011 8:59	0.016
4500	0.015	0.015	0.016	0.016	9:00:16	10/13/2011 9:00	0.016
4560	0.015	0.015	0.016	0.016	9:01:16	10/13/2011 9:01	0.016
4620	0.015	0.016	0.016	0.016	9:02:16	10/13/2011 9:02	0.016
4680	0.016	0.016	0.016	0.017	9:03:16	10/13/2011 9:03	0.017
4740	0.016	0.016	0.017	0.018	9:04:16	10/13/2011 9:04	0.018
4800	0.016	0.016	0.016	0.017	9:05:16	10/13/2011 9:05	0.017
4860	0.017	0.018	0.018	0.019	9:06:16	10/13/2011 9:06	0.019
4920	0.02	0.02	0.02	0.021	9:07:16	10/13/2011 9:07	0.022
4980	0.018	0.018	0.019	0.019	9:08:16	10/13/2011 9:08	0.02
5040	0.018	0.018	0.019	0.019	9:09:16	10/13/2011 9:09	0.019
5100	0.018	0.018	0.018	0.019	9:10:16	10/13/2011 9:10	0.02
5160	0.018	0.018	0.019	0.019	9:11:16	10/13/2011 9:11	0.019
5220	0.02	0.021	0.021	0.022	9:12:16	10/13/2011 9:12	0.022
5280	0.018	0.018	0.019	0.019	9:13:16	10/13/2011 9:13	0.02
5340	0.018	0.018	0.018	0.019	9:14:16	10/13/2011 9:14	0.019
5400	0.017	0.018	0.018	0.018	9:15:16	10/13/2011 9:15	0.018
5460	0.018	0.018	0.019	0.019	9:16:16	10/13/2011 9:16	0.02
5520	0.031	0.032	0.032	0.034	9:17:16	10/13/2011 9:17	0.039
5580	0.016	0.016	0.016	0.017	9:18:16	10/13/2011 9:18	0.017
5640	0.016	0.016	0.017	0.017	9:19:16	10/13/2011 9:19	0.017
5700	0.016	0.016	0.016	0.017	9:20:16	10/13/2011 9:20	0.017
5760	0.016	0.016	0.016	0.017	9:21:16	10/13/2011 9:21	0.017
5820	0.015	0.015	0.016	0.016	9:22:16	10/13/2011 9:22	0.016
5880	0.015	0.015	0.015	0.016	9:23:16	10/13/2011 9:23	0.016
5940	0.015	0.015	0.016	0.016	9:24:16	10/13/2011 9:24	0.016
6000	0.016	0.016	0.017	0.017	9:25:16	10/13/2011 9:25	0.019
6060	0.018	0.018	0.019	0.019	9:26:16	10/13/2011 9:26	0.019

6120	0.019	0.019	0.02	0.02	9:27:16	10/13/2011 9:27	0.021
6180	0.019	0.019	0.019	0.02	9:28:16	10/13/2011 9:28	0.02
6240	0.018	0.018	0.018	0.019	9:29:16	10/13/2011 9:29	0.019
6300	0.017	0.017	0.017	0.018	9:30:16	10/13/2011 9:30	0.018
6360	0.016	0.016	0.017	0.017	9:31:16	10/13/2011 9:31	0.017
6420	0.016	0.017	0.017	0.018	9:32:16	10/13/2011 9:32	0.018
6480	0.015	0.015	0.016	0.016	9:33:16	10/13/2011 9:33	0.016
6540	0.015	0.015	0.015	0.016	9:34:16	10/13/2011 9:34	0.016
6600	0.015	0.015	0.016	0.016	9:35:16	10/13/2011 9:35	0.016
6660	0.016	0.016	0.017	0.017	9:36:16	10/13/2011 9:36	0.018
6720	0.015	0.016	0.016	0.016	9:37:16	10/13/2011 9:37	0.016
6780	0.015	0.015	0.016	0.016	9:38:16	10/13/2011 9:38	0.016
6840	0.015	0.015	0.016	0.016	9:39:16	10/13/2011 9:39	0.016
6900	0.015	0.016	0.016	0.016	9:40:16	10/13/2011 9:40	0.017
6960	0.015	0.015	0.015	0.015	9:41:16	10/13/2011 9:41	0.015
7020	0.014	0.014	0.014	0.014	9:42:16	10/13/2011 9:42	0.014
7080	0.019	0.02	0.02	0.022	9:43:16	10/13/2011 9:43	0.024
7140	0.014	0.014	0.015	0.015	9:44:16	10/13/2011 9:44	0.015
7200	0.015	0.015	0.015	0.016	9:45:16	10/13/2011 9:45	0.016
7260	0.028	0.028	0.028	0.029	9:46:16	10/13/2011 9:46	0.029
7320	0.013	0.013	0.013	0.013	9:47:16	10/13/2011 9:47	0.014
7380	0.012	0.012	0.012	0.013	9:48:16	10/13/2011 9:48	0.013
7440	0.012	0.012	0.012	0.013	9:49:16	10/13/2011 9:49	0.013
7500	0.013	0.013	0.014	0.014	9:50:16	10/13/2011 9:50	0.014
7560	0.012	0.012	0.012	0.013	9:51:16	10/13/2011 9:51	0.013
7620	0.012	0.012	0.012	0.012	9:52:16	10/13/2011 9:52	0.013
7680	0.011	0.011	0.012	0.012	9:53:16	10/13/2011 9:53	0.012
7740	0.011	0.011	0.011	0.012	9:54:16	10/13/2011 9:54	0.012
7800	0.012	0.013	0.013	0.013	9:55:16	10/13/2011 9:55	0.013
7860	0.013	0.013	0.013	0.014	9:56:16	10/13/2011 9:56	0.014
7920	0.012	0.012	0.013	0.013	9:57:16	10/13/2011 9:57	0.013
7980	0.012	0.013	0.013	0.013	9:58:16	10/13/2011 9:58	0.014
8040	0.012	0.013	0.013	0.013	9:59:16	10/13/2011 9:59	0.013
8100	0.013	0.013	0.013	0.013	10:00:16	10/13/2011 10:00	0.014
8160	0.013	0.013	0.013	0.014	10:01:16	10/13/2011 10:01	0.014
8220	0.013	0.013	0.013	0.013	10:02:16	10/13/2011 10:02	0.013
8280	0.017	0.018	0.018	0.02	10:03:16	10/13/2011 10:03	0.02
8340	0.013	0.014	0.014	0.014	10:04:16	10/13/2011 10:04	0.014
8400	0.013	0.014	0.014	0.014	10:05:16	10/13/2011 10:05	0.014
8460	0.013	0.014	0.014	0.015	10:06:16	10/13/2011 10:06	0.015
8520	0.013	0.013	0.014	0.014	10:07:16	10/13/2011 10:07	0.014
8580	0.014	0.014	0.014	0.015	10:08:16	10/13/2011 10:08	0.015
8640	0.014	0.014	0.014	0.015	10:09:16	10/13/2011 10:09	0.015
8700	0.014	0.014	0.015	0.015	10:10:16	10/13/2011 10:10	0.015
8760	0.014	0.014	0.015	0.015	10:11:16	10/13/2011 10:11	0.015
8820	0.014	0.015	0.015	0.015	10:12:16	10/13/2011 10:12	0.015
8880	0.015	0.015	0.015	0.016	10:13:16	10/13/2011 10:13	0.016
8940	0.015	0.015	0.016	0.016	10:14:16	10/13/2011 10:14	0.016
9000	0.016	0.016	0.017	0.017	10:15:16	10/13/2011 10:15	0.017
9060	0.028	0.029	0.03	0.039	10:16:16	10/13/2011 10:16	0.044
9120	0.017	0.017	0.017	0.018	10:17:16	10/13/2011 10:17	0.018
9180	0.018	0.018	0.019	0.019	10:18:16	10/13/2011 10:18	0.019
9240	0.019	0.02	0.02	0.021	10:19:16	10/13/2011 10:19	0.021
9300	0.02	0.021	0.022	0.023	10:20:16	10/13/2011 10:20	0.023
9360	0.018	0.018	0.019	0.02	10:21:16	10/13/2011 10:21	0.02
9420	0.017	0.017	0.017	0.018	10:22:16	10/13/2011 10:22	0.018
9480	0.017	0.017	0.018	0.019	10:23:16	10/13/2011 10:23	0.019
9540	0.02	0.021	0.021	0.022	10:24:16	10/13/2011 10:24	0.023
9600	0.02	0.021	0.021	0.022	10:25:16	10/13/2011 10:25	0.023
9660	0.018	0.019	0.019	0.02	10:26:16	10/13/2011 10:26	0.02
9720	0.017	0.017	0.018	0.018	10:27:16	10/13/2011 10:27	0.018
9780	0.017	0.018	0.019	0.019	10:28:16	10/13/2011 10:28	0.02
9840	0.018	0.018	0.019	0.019	10:29:16	10/13/2011 10:29	0.02
9900	0.051	0.052	0.053	0.064	10:30:16	10/13/2011 10:30	0.075
9960	0.018	0.018	0.018	0.019	10:31:16	10/13/2011 10:31	0.02
10020	0.017	0.018	0.018	0.019	10:32:16	10/13/2011 10:32	0.019
10080	0.018	0.018	0.019	0.02	10:33:16	10/13/2011 10:33	0.02
10140	0.015	0.015	0.015	0.016	10:34:16	10/13/2011 10:34	0.016
10200	0.016	0.016	0.016	0.017	10:35:16	10/13/2011 10:35	0.017

10260	0.018	0.019	0.019	0.02	10:36:16	10/13/2011 10:36	0.021
10320	0.017	0.018	0.019	0.02	10:37:16	10/13/2011 10:37	0.021
10380	0.016	0.017	0.017	0.018	10:38:16	10/13/2011 10:38	0.018
10440	0.017	0.017	0.018	0.018	10:39:16	10/13/2011 10:39	0.019
10500	0.018	0.018	0.019	0.02	10:40:16	10/13/2011 10:40	0.02
10560	0.016	0.016	0.016	0.017	10:41:16	10/13/2011 10:41	0.017
10620	0.017	0.017	0.018	0.019	10:42:16	10/13/2011 10:42	0.019
10680	0.02	0.021	0.022	0.023	10:43:16	10/13/2011 10:43	0.023
10740	0.017	0.017	0.018	0.019	10:44:16	10/13/2011 10:44	0.019
10800	0.02	0.02	0.021	0.023	10:45:16	10/13/2011 10:45	0.024
10860	0.019	0.02	0.02	0.021	10:46:16	10/13/2011 10:46	0.021
10920	0.018	0.018	0.019	0.02	10:47:16	10/13/2011 10:47	0.02
10980	0.016	0.017	0.017	0.019	10:48:16	10/13/2011 10:48	0.019
11040	0.017	0.017	0.018	0.02	10:49:16	10/13/2011 10:49	0.02
11100	0.021	0.022	0.023	0.025	10:50:16	10/13/2011 10:50	0.025
11160	0.023	0.024	0.025	0.026	10:51:16	10/13/2011 10:51	0.027
11220	0.021	0.021	0.022	0.023	10:52:16	10/13/2011 10:52	0.023
11280	0.02	0.02	0.021	0.021	10:53:16	10/13/2011 10:53	0.022
11340	0.017	0.018	0.018	0.019	10:54:16	10/13/2011 10:54	0.019
11400	0.015	0.016	0.016	0.016	10:55:16	10/13/2011 10:55	0.016
11460	0.015	0.016	0.016	0.016	10:56:16	10/13/2011 10:56	0.016
11520	0.016	0.016	0.017	0.017	10:57:16	10/13/2011 10:57	0.018
11580	0.016	0.016	0.017	0.017	10:58:16	10/13/2011 10:58	0.018
11640	0.017	0.017	0.017	0.018	10:59:16	10/13/2011 10:59	0.018
11700	0.017	0.017	0.017	0.018	11:00:16	10/13/2011 11:00	0.018
11760	0.016	0.017	0.017	0.018	11:01:16	10/13/2011 11:01	0.018
11820	0.017	0.017	0.017	0.018	11:02:16	10/13/2011 11:02	0.018
11880	0.017	0.017	0.018	0.018	11:03:16	10/13/2011 11:03	0.019
11940	0.018	0.019	0.019	0.02	11:04:16	10/13/2011 11:04	0.02
12000	0.018	0.019	0.019	0.02	11:05:16	10/13/2011 11:05	0.02
12060	0.018	0.019	0.019	0.02	11:06:16	10/13/2011 11:06	0.02
12120	0.02	0.02	0.02	0.021	11:07:16	10/13/2011 11:07	0.021
12180	0.019	0.02	0.02	0.021	11:08:16	10/13/2011 11:08	0.021
12240	0.018	0.019	0.019	0.019	11:09:16	10/13/2011 11:09	0.019
12300	0.018	0.019	0.019	0.02	11:10:16	10/13/2011 11:10	0.02
12360	0.019	0.019	0.019	0.02	11:11:16	10/13/2011 11:11	0.021
12420	0.022	0.023	0.023	0.025	11:12:16	10/13/2011 11:12	0.025
12480	0.02	0.02	0.021	0.022	11:13:16	10/13/2011 11:13	0.023
12540	0.019	0.019	0.02	0.021	11:14:16	10/13/2011 11:14	0.022
12600	0.018	0.019	0.019	0.02	11:15:16	10/13/2011 11:15	0.02
12660	0.017	0.018	0.018	0.019	11:16:16	10/13/2011 11:16	0.019
12720	0.018	0.018	0.018	0.019	11:17:16	10/13/2011 11:17	0.019
12780	0.018	0.018	0.019	0.019	11:18:16	10/13/2011 11:18	0.02
12840	0.018	0.018	0.019	0.019	11:19:16	10/13/2011 11:19	0.019
12900	0.018	0.018	0.018	0.019	11:20:16	10/13/2011 11:20	0.02
12960	0.018	0.018	0.019	0.019	11:21:16	10/13/2011 11:21	0.019
13020	0.017	0.017	0.018	0.018	11:22:16	10/13/2011 11:22	0.018
13080	0.017	0.018	0.018	0.019	11:23:16	10/13/2011 11:23	0.019
13140	0.017	0.017	0.017	0.018	11:24:16	10/13/2011 11:24	0.018
13200	0.016	0.016	0.017	0.017	11:25:16	10/13/2011 11:25	0.018
13260	0.016	0.017	0.017	0.018	11:26:16	10/13/2011 11:26	0.018
13320	0.017	0.017	0.018	0.018	11:27:16	10/13/2011 11:27	0.018
13380	0.017	0.018	0.018	0.019	11:28:16	10/13/2011 11:28	0.019
13440	0.017	0.018	0.018	0.019	11:29:16	10/13/2011 11:29	0.019
13500	0.018	0.018	0.018	0.019	11:30:16	10/13/2011 11:30	0.019
13560	0.017	0.017	0.017	0.018	11:31:16	10/13/2011 11:31	0.018
13620	0.016	0.017	0.017	0.018	11:32:16	10/13/2011 11:32	0.018
13680	0.015	0.015	0.016	0.016	11:33:16	10/13/2011 11:33	0.016
13740	0.015	0.016	0.016	0.016	11:34:16	10/13/2011 11:34	0.017
13800	0.014	0.014	0.015	0.015	11:35:16	10/13/2011 11:35	0.015
13860	0.013	0.014	0.014	0.014	11:36:16	10/13/2011 11:36	0.014
13920	0.013	0.013	0.013	0.014	11:37:16	10/13/2011 11:37	0.014
13980	0.013	0.014	0.014	0.014	11:38:16	10/13/2011 11:38	0.014
14040	0.014	0.014	0.014	0.015	11:39:16	10/13/2011 11:39	0.015
14100	0.015	0.015	0.016	0.016	11:40:16	10/13/2011 11:40	0.016
14160	0.016	0.016	0.017	0.017	11:41:16	10/13/2011 11:41	0.017
14220	0.015	0.015	0.015	0.016	11:42:16	10/13/2011 11:42	0.016
14280	0.014	0.015	0.015	0.016	11:43:16	10/13/2011 11:43	0.016
14340	0.014	0.015	0.015	0.016	11:44:16	10/13/2011 11:44	0.016

14400	0.014	0.015	0.015	0.015	11:45:16	10/13/2011 11:45	0.016
14460	0.015	0.015	0.015	0.016	11:46:16	10/13/2011 11:46	0.016
14520	0.015	0.015	0.016	0.016	11:47:16	10/13/2011 11:47	0.016
14580	0.016	0.016	0.016	0.017	11:48:16	10/13/2011 11:48	0.017
14640	0.015	0.016	0.016	0.017	11:49:16	10/13/2011 11:49	0.017
14700	0.016	0.016	0.017	0.017	11:50:16	10/13/2011 11:50	0.017
14760	0.017	0.017	0.018	0.018	11:51:16	10/13/2011 11:51	0.019
14820	0.017	0.017	0.017	0.018	11:52:16	10/13/2011 11:52	0.018
14880	0.016	0.016	0.017	0.017	11:53:16	10/13/2011 11:53	0.017
14940	0.016	0.017	0.017	0.018	11:54:16	10/13/2011 11:54	0.018
15000	0.015	0.016	0.016	0.016	11:55:16	10/13/2011 11:55	0.016
15060	0.016	0.016	0.017	0.017	11:56:16	10/13/2011 11:56	0.017
15120	0.016	0.017	0.017	0.018	11:57:16	10/13/2011 11:57	0.018
15180	0.015	0.015	0.016	0.016	11:58:16	10/13/2011 11:58	0.016
15240	0.015	0.016	0.016	0.016	11:59:16	10/13/2011 11:59	0.016
15300	0.016	0.016	0.016	0.017	12:00:16	10/13/2011 12:00	0.017
15360	0.016	0.017	0.017	0.018	12:01:16	10/13/2011 12:01	0.018
15420	0.016	0.016	0.016	0.017	12:02:16	10/13/2011 12:02	0.017
15480	0.016	0.016	0.016	0.017	12:03:16	10/13/2011 12:03	0.017
15540	0.016	0.016	0.016	0.017	12:04:16	10/13/2011 12:04	0.017
15600	0.016	0.017	0.017	0.017	12:05:16	10/13/2011 12:05	0.017
15660	0.015	0.016	0.016	0.016	12:06:16	10/13/2011 12:06	0.016
15720	0.016	0.016	0.016	0.017	12:07:16	10/13/2011 12:07	0.017
15780	0.016	0.016	0.016	0.017	12:08:16	10/13/2011 12:08	0.017
15840	0.016	0.016	0.016	0.017	12:09:16	10/13/2011 12:09	0.017
15900	0.016	0.016	0.017	0.017	12:10:16	10/13/2011 12:10	0.017
15960	0.017	0.018	0.018	0.019	12:11:16	10/13/2011 12:11	0.019
16020	0.016	0.016	0.016	0.017	12:12:16	10/13/2011 12:12	0.017
16080	0.016	0.017	0.017	0.018	12:13:16	10/13/2011 12:13	0.018
16140	0.016	0.016	0.017	0.018	12:14:16	10/13/2011 12:14	0.018
16200	0.016	0.016	0.017	0.018	12:15:16	10/13/2011 12:15	0.018
16260	0.014	0.014	0.015	0.015	12:16:16	10/13/2011 12:16	0.015
16320	0.014	0.015	0.015	0.015	12:17:16	10/13/2011 12:17	0.015
16380	0.014	0.015	0.015	0.016	12:18:16	10/13/2011 12:18	0.016
16440	0.014	0.014	0.015	0.015	12:19:16	10/13/2011 12:19	0.016
16500	0.015	0.015	0.015	0.016	12:20:16	10/13/2011 12:20	0.016
16560	0.015	0.015	0.015	0.016	12:21:16	10/13/2011 12:21	0.016
16620	0.014	0.014	0.015	0.015	12:22:16	10/13/2011 12:22	0.015
16680	0.015	0.015	0.015	0.016	12:23:16	10/13/2011 12:23	0.016
16740	0.015	0.015	0.016	0.017	12:24:16	10/13/2011 12:24	0.017
16800	0.016	0.016	0.017	0.017	12:25:16	10/13/2011 12:25	0.018
16860	0.016	0.016	0.017	0.017	12:26:16	10/13/2011 12:26	0.017
16920	0.017	0.017	0.018	0.019	12:27:16	10/13/2011 12:27	0.019
16980	0.016	0.017	0.017	0.018	12:28:16	10/13/2011 12:28	0.018
17040	0.017	0.017	0.017	0.018	12:29:16	10/13/2011 12:29	0.018
17100	0.016	0.016	0.016	0.017	12:30:16	10/13/2011 12:30	0.017
17160	0.015	0.016	0.016	0.017	12:31:16	10/13/2011 12:31	0.017
17220	0.016	0.016	0.017	0.018	12:32:16	10/13/2011 12:32	0.018
17280	0.016	0.017	0.017	0.018	12:33:16	10/13/2011 12:33	0.018
17340	0.016	0.016	0.016	0.016	12:34:16	10/13/2011 12:34	0.016
17400	0.016	0.016	0.016	0.017	12:35:16	10/13/2011 12:35	0.017
17460	0.016	0.016	0.017	0.017	12:36:16	10/13/2011 12:36	0.017
17520	0.016	0.017	0.017	0.018	12:37:16	10/13/2011 12:37	0.018
17580	0.016	0.017	0.017	0.017	12:38:16	10/13/2011 12:38	0.017
17640	0.017	0.017	0.018	0.018	12:39:16	10/13/2011 12:39	0.019
17700	0.017	0.017	0.018	0.018	12:40:16	10/13/2011 12:40	0.018
17760	0.017	0.017	0.017	0.018	12:41:16	10/13/2011 12:41	0.018
17820	0.017	0.018	0.018	0.019	12:42:16	10/13/2011 12:42	0.019
17880	0.018	0.018	0.019	0.02	12:43:16	10/13/2011 12:43	0.02
17940	0.018	0.018	0.019	0.019	12:44:16	10/13/2011 12:44	0.019
18000	0.018	0.019	0.019	0.02	12:45:16	10/13/2011 12:45	0.02
18060	0.018	0.018	0.018	0.019	12:46:16	10/13/2011 12:46	0.019
18120	0.018	0.019	0.019	0.02	12:47:16	10/13/2011 12:47	0.02
18180	0.018	0.018	0.019	0.019	12:48:16	10/13/2011 12:48	0.019
18240	0.018	0.018	0.019	0.019	12:49:16	10/13/2011 12:49	0.019
18300	0.019	0.019	0.019	0.02	12:50:16	10/13/2011 12:50	0.02
18360	0.019	0.019	0.019	0.02	12:51:16	10/13/2011 12:51	0.02
18420	0.018	0.018	0.018	0.019	12:52:16	10/13/2011 12:52	0.019
18480	0.018	0.018	0.019	0.02	12:53:16	10/13/2011 12:53	0.02

18540	0.017	0.017	0.017	0.018	12:54:16	10/13/2011 12:54	0.018
18600	0.016	0.016	0.017	0.018	12:55:16	10/13/2011 12:55	0.018
18660	0.017	0.017	0.018	0.02	12:56:16	10/13/2011 12:56	0.02
18720	0.016	0.017	0.017	0.018	12:57:16	10/13/2011 12:57	0.018
18780	0.017	0.017	0.018	0.019	12:58:16	10/13/2011 12:58	0.019
18840	0.017	0.017	0.017	0.018	12:59:16	10/13/2011 12:59	0.018
18900	0.016	0.016	0.017	0.017	13:00:16	10/13/2011 13:00	0.018
18960	0.021	0.022	0.022	0.024	13:01:16	10/13/2011 13:01	0.024
19020	0.017	0.018	0.018	0.019	13:02:16	10/13/2011 13:02	0.019
19080	0.018	0.019	0.019	0.021	13:03:16	10/13/2011 13:03	0.021
19140	0.018	0.018	0.019	0.02	13:04:16	10/13/2011 13:04	0.02
19200	0.018	0.018	0.018	0.02	13:05:16	10/13/2011 13:05	0.02
19260	0.018	0.018	0.019	0.02	13:06:16	10/13/2011 13:06	0.02
19320	0.017	0.018	0.018	0.019	13:07:16	10/13/2011 13:07	0.019
19380	0.018	0.018	0.019	0.02	13:08:16	10/13/2011 13:08	0.02
19440	0.022	0.023	0.024	0.025	13:09:16	10/13/2011 13:09	0.025
19500	0.026	0.027	0.029	0.032	13:10:16	10/13/2011 13:10	0.032
19560	0.029	0.031	0.033	0.035	13:11:16	10/13/2011 13:11	0.037
19620	0.024	0.025	0.026	0.028	13:12:16	10/13/2011 13:12	0.028
19680	0.025	0.026	0.027	0.029	13:13:16	10/13/2011 13:13	0.029
19740	0.027	0.028	0.03	0.031	13:14:16	10/13/2011 13:14	0.031
19800	0.026	0.027	0.028	0.03	13:15:16	10/13/2011 13:15	0.03
19860	0.027	0.028	0.03	0.032	13:16:16	10/13/2011 13:16	0.033
19920	0.03	0.032	0.034	0.036	13:17:16	10/13/2011 13:17	0.036
19980	0.027	0.028	0.029	0.031	13:18:16	10/13/2011 13:18	0.031
20040	0.022	0.022	0.023	0.025	13:19:16	10/13/2011 13:19	0.025
20100	0.02	0.02	0.021	0.023	13:20:16	10/13/2011 13:20	0.023
20160	0.021	0.022	0.022	0.023	13:21:16	10/13/2011 13:21	0.023
20220	0.023	0.024	0.024	0.026	13:22:16	10/13/2011 13:22	0.027
20280	0.02	0.021	0.022	0.024	13:23:16	10/13/2011 13:23	0.024
20340	0.02	0.02	0.021	0.024	13:24:16	10/13/2011 13:24	0.024
20400	0.019	0.02	0.021	0.022	13:25:16	10/13/2011 13:25	0.023
20460	0.021	0.021	0.022	0.023	13:26:16	10/13/2011 13:26	0.024
20520	0.02	0.02	0.02	0.021	13:27:16	10/13/2011 13:27	0.021
20580	0.02	0.021	0.021	0.023	13:28:16	10/13/2011 13:28	0.023
20640	0.019	0.02	0.02	0.021	13:29:16	10/13/2011 13:29	0.021
20700	0.019	0.019	0.02	0.021	13:30:16	10/13/2011 13:30	0.021
20760	0.02	0.021	0.021	0.022	13:31:16	10/13/2011 13:31	0.022
20820	0.02	0.021	0.022	0.023	13:32:16	10/13/2011 13:32	0.023
20880	0.02	0.021	0.021	0.022	13:33:16	10/13/2011 13:33	0.022
20940	0.02	0.021	0.021	0.022	13:34:16	10/13/2011 13:34	0.022
21000	0.021	0.022	0.022	0.024	13:35:16	10/13/2011 13:35	0.024
21060	0.021	0.022	0.022	0.023	13:36:16	10/13/2011 13:36	0.023
21120	0.022	0.023	0.023	0.025	13:37:16	10/13/2011 13:37	0.025
21180	0.023	0.023	0.024	0.025	13:38:16	10/13/2011 13:38	0.026
21240	0.025	0.026	0.027	0.029	13:39:16	10/13/2011 13:39	0.03
21300	0.028	0.029	0.03	0.031	13:40:16	10/13/2011 13:40	0.031
21360	0.082	0.083	0.084	0.1	13:41:16	10/13/2011 13:41	0.114
21420	0.024	0.025	0.026	0.027	13:42:16	10/13/2011 13:42	0.027
21480	0.025	0.025	0.026	0.027	13:43:16	10/13/2011 13:43	0.027
21540	0.024	0.025	0.026	0.027	13:44:16	10/13/2011 13:44	0.027
21600	0.024	0.025	0.026	0.027	13:45:16	10/13/2011 13:45	0.027
21660	0.024	0.025	0.025	0.027	13:46:16	10/13/2011 13:46	0.027
21720	0.023	0.024	0.024	0.025	13:47:16	10/13/2011 13:47	0.025
21780	0.022	0.023	0.023	0.024	13:48:16	10/13/2011 13:48	0.024
21840	0.023	0.023	0.024	0.025	13:49:16	10/13/2011 13:49	0.025
21900	0.023	0.023	0.024	0.025	13:50:16	10/13/2011 13:50	0.025
21960	0.022	0.023	0.023	0.024	13:51:16	10/13/2011 13:51	0.024
22020	0.022	0.023	0.023	0.024	13:52:16	10/13/2011 13:52	0.024
22080	0.022	0.023	0.023	0.025	13:53:16	10/13/2011 13:53	0.025
22140	0.023	0.023	0.024	0.025	13:54:16	10/13/2011 13:54	0.026
22200	0.035	0.036	0.037	0.042	13:55:16	10/13/2011 13:55	0.047
22260	0.055	0.056	0.057	0.064	13:56:16	10/13/2011 13:56	0.072
22320	0.025	0.025	0.026	0.026	13:57:16	10/13/2011 13:57	0.026
22380	0.026	0.026	0.027	0.028	13:58:16	10/13/2011 13:58	0.028
22440	0.025	0.025	0.026	0.026	13:59:16	10/13/2011 13:59	0.026
22500	0.026	0.026	0.027	0.028	14:00:16	10/13/2011 14:00	0.028
22560	0.028	0.029	0.029	0.031	14:01:16	10/13/2011 14:01	0.031
22620	0.027	0.027	0.028	0.029	14:02:16	10/13/2011 14:02	0.029

22680	0.027	0.027	0.028	0.029	14:03:16	10/13/2011 14:03	0.029
22740	0.027	0.027	0.028	0.029	14:04:16	10/13/2011 14:04	0.029
22800	0.026	0.027	0.027	0.028	14:05:16	10/13/2011 14:05	0.029
22860	0.026	0.026	0.027	0.028	14:06:16	10/13/2011 14:06	0.028
22920	0.026	0.027	0.028	0.029	14:07:16	10/13/2011 14:07	0.029
22980	0.026	0.027	0.028	0.029	14:08:16	10/13/2011 14:08	0.029
23040	0.024	0.024	0.025	0.026	14:09:16	10/13/2011 14:09	0.026
23100	0.024	0.024	0.024	0.025	14:10:16	10/13/2011 14:10	0.025
23160	0.023	0.024	0.024	0.025	14:11:16	10/13/2011 14:11	0.025
23220	0.023	0.024	0.024	0.025	14:12:16	10/13/2011 14:12	0.025
23280	0.024	0.025	0.025	0.026	14:13:16	10/13/2011 14:13	0.026
23340	0.026	0.026	0.027	0.028	14:14:16	10/13/2011 14:14	0.028
23400	0.028	0.029	0.029	0.03	14:15:16	10/13/2011 14:15	0.03
23460	0.026	0.026	0.027	0.027	14:16:16	10/13/2011 14:16	0.027
23520	0.026	0.026	0.027	0.028	14:17:16	10/13/2011 14:17	0.028
23580	0.026	0.026	0.027	0.028	14:18:16	10/13/2011 14:18	0.028
23640	0.025	0.025	0.026	0.026	14:19:16	10/13/2011 14:19	0.027
23700	0.025	0.026	0.026	0.027	14:20:16	10/13/2011 14:20	0.027
23760	0.025	0.026	0.026	0.027	14:21:16	10/13/2011 14:21	0.027
23820	0.024	0.025	0.025	0.026	14:22:16	10/13/2011 14:22	0.026
23880	0.025	0.025	0.025	0.026	14:23:16	10/13/2011 14:23	0.026
23940	0.025	0.026	0.026	0.028	14:24:16	10/13/2011 14:24	0.028
24000	0.026	0.026	0.027	0.027	14:25:16	10/13/2011 14:25	0.027
24060	0.027	0.027	0.028	0.029	14:26:16	10/13/2011 14:26	0.03
24120	0.026	0.026	0.027	0.028	14:27:16	10/13/2011 14:27	0.028
24180	0.024	0.025	0.025	0.026	14:28:16	10/13/2011 14:28	0.026
24240	0.024	0.024	0.025	0.026	14:29:16	10/13/2011 14:29	0.026
24300	0.024	0.025	0.025	0.026	14:30:16	10/13/2011 14:30	0.026
24360	0.025	0.025	0.026	0.027	14:31:16	10/13/2011 14:31	0.027
24420	0.026	0.026	0.027	0.028	14:32:16	10/13/2011 14:32	0.029
24480	0.025	0.025	0.026	0.026	14:33:16	10/13/2011 14:33	0.026
24540	0.026	0.026	0.027	0.029	14:34:16	10/13/2011 14:34	0.029
24600	0.027	0.028	0.029	0.032	14:35:16	10/13/2011 14:35	0.033
24660	0.027	0.028	0.028	0.029	14:36:16	10/13/2011 14:36	0.03
24720	0.026	0.027	0.027	0.029	14:37:16	10/13/2011 14:37	0.029
24780	0.027	0.027	0.028	0.029	14:38:16	10/13/2011 14:38	0.029
24840	0.026	0.027	0.028	0.028	14:39:16	10/13/2011 14:39	0.029
24900	0.025	0.026	0.027	0.028	14:40:16	10/13/2011 14:40	0.029
24960	0.027	0.028	0.029	0.03	14:41:16	10/13/2011 14:41	0.031
25020	0.026	0.026	0.027	0.027	14:42:16	10/13/2011 14:42	0.028
25080	0.025	0.026	0.026	0.027	14:43:16	10/13/2011 14:43	0.028
25140	0.025	0.026	0.026	0.027	14:44:16	10/13/2011 14:44	0.027
25200	0.027	0.027	0.028	0.029	14:45:16	10/13/2011 14:45	0.03
25260	0.027	0.027	0.028	0.029	14:46:16	10/13/2011 14:46	0.029
25320	0.026	0.027	0.028	0.029	14:47:16	10/13/2011 14:47	0.029
25380	0.026	0.026	0.027	0.028	14:48:16	10/13/2011 14:48	0.028
25440	0.026	0.026	0.027	0.028	14:49:16	10/13/2011 14:49	0.028
25500	0.027	0.028	0.029	0.032	14:50:16	10/13/2011 14:50	0.032
25560	0.027	0.027	0.028	0.03	14:51:16	10/13/2011 14:51	0.03
25620	0.027	0.027	0.028	0.029	14:52:16	10/13/2011 14:52	0.029
25680	0.028	0.029	0.03	0.032	14:53:16	10/13/2011 14:53	0.032
25740	0.027	0.027	0.028	0.029	14:54:16	10/13/2011 14:54	0.029
25800	0.029	0.03	0.031	0.035	14:55:16	10/13/2011 14:55	0.036
25860	0.028	0.028	0.029	0.031	14:56:16	10/13/2011 14:56	0.032
25920	0.029	0.029	0.03	0.033	14:57:16	10/13/2011 14:57	0.033
25980	0.029	0.03	0.031	0.034	14:58:16	10/13/2011 14:58	0.035
26040	0.029	0.03	0.032	0.033	14:59:16	10/13/2011 14:59	0.034
26100	0.029	0.03	0.03	0.032	15:00:16	10/13/2011 15:00	0.033
26160	0.029	0.03	0.031	0.033	15:01:16	10/13/2011 15:01	0.033
26220	0.029	0.029	0.03	0.031	15:02:16	10/13/2011 15:02	0.031
26280	0.029	0.029	0.03	0.031	15:03:16	10/13/2011 15:03	0.031
26340	0.03	0.03	0.031	0.032	15:04:16	10/13/2011 15:04	0.033
26400	0.029	0.03	0.03	0.031	15:05:16	10/13/2011 15:05	0.031
26460	0.03	0.03	0.031	0.032	15:06:16	10/13/2011 15:06	0.032
26520	0.03	0.03	0.031	0.033	15:07:16	10/13/2011 15:07	0.033
26580	0.031	0.031	0.032	0.033	15:08:16	10/13/2011 15:08	0.033
26640	0.03	0.031	0.031	0.032	15:09:16	10/13/2011 15:09	0.033
26700	0.031	0.032	0.032	0.034	15:10:16	10/13/2011 15:10	0.034
26760	0.031	0.032	0.033	0.034	15:11:16	10/13/2011 15:11	0.034

26820	0.031	0.032	0.033	0.034	15:12:16	10/13/2011 15:12	0.034
26880	0.031	0.032	0.033	0.034	15:13:16	10/13/2011 15:13	0.035
26940	0.031	0.032	0.032	0.034	15:14:16	10/13/2011 15:14	0.034
27000	0.032	0.033	0.034	0.034	15:15:16	10/13/2011 15:15	0.034
27060	0.032	0.033	0.034	0.034	15:16:16	10/13/2011 15:16	0.034
27120	0.032	0.033	0.034	0.035	15:17:16	10/13/2011 15:17	0.035
27180	0.032	0.033	0.034	0.034	15:18:16	10/13/2011 15:18	0.034
27240	0.033	0.034	0.034	0.036	15:19:16	10/13/2011 15:19	0.036
27300	0.041	0.042	0.043	0.052	15:20:16	10/13/2011 15:20	0.063
27360	0.033	0.034	0.035	0.036	15:21:16	10/13/2011 15:21	0.036
27420	0.033	0.034	0.034	0.035	15:22:16	10/13/2011 15:22	0.035
27480	0.034	0.034	0.035	0.036	15:23:16	10/13/2011 15:23	0.036
27540	0.033	0.034	0.034	0.035	15:24:16	10/13/2011 15:24	0.035
27600	0.033	0.033	0.034	0.035	15:25:16	10/13/2011 15:25	0.035
27660	0.033	0.033	0.034	0.035	15:26:16	10/13/2011 15:26	0.035
27720	0.034	0.035	0.036	0.037	15:27:16	10/13/2011 15:27	0.037
27780	0.033	0.034	0.034	0.035	15:28:16	10/13/2011 15:28	0.035
27840	0.034	0.035	0.035	0.036	15:29:16	10/13/2011 15:29	0.036
27900	0.034	0.035	0.036	0.037	15:30:16	10/13/2011 15:30	0.039
27960	0.033	0.034	0.034	0.035	15:31:16	10/13/2011 15:31	0.035
28020	0.032	0.033	0.033	0.034	15:32:16	10/13/2011 15:32	0.034
28080	0.033	0.033	0.034	0.034	15:33:16	10/13/2011 15:33	0.035
28140	0.033	0.033	0.034	0.035	15:34:16	10/13/2011 15:34	0.035
28200	0.032	0.033	0.033	0.034	15:35:16	10/13/2011 15:35	0.034
28260	0.033	0.034	0.035	0.035	15:36:16	10/13/2011 15:36	0.036
28320	0.034	0.035	0.035	0.036	15:37:16	10/13/2011 15:37	0.036
28380	0.034	0.035	0.036	0.037	15:38:16	10/13/2011 15:38	0.037
28440	0.035	0.036	0.036	0.037	15:39:16	10/13/2011 15:39	0.038
28500	0.034	0.035	0.036	0.037	15:40:16	10/13/2011 15:40	0.037
28560	0.033	0.033	0.034	0.035	15:41:16	10/13/2011 15:41	0.035
28620	0.035	0.035	0.036	0.037	15:42:16	10/13/2011 15:42	0.037
28680	0.034	0.034	0.035	0.036	15:43:16	10/13/2011 15:43	0.036
28740	0.033	0.034	0.034	0.035	15:44:16	10/13/2011 15:44	0.035
28800	0.034	0.034	0.035	0.035	15:45:16	10/13/2011 15:45	0.035
28860	0.034	0.035	0.035	0.036	15:46:16	10/13/2011 15:46	0.037
28920	0.034	0.035	0.035	0.036	15:47:16	10/13/2011 15:47	0.036
28980	0.033	0.034	0.034	0.034	15:48:16	10/13/2011 15:48	0.034
29040	0.034	0.034	0.035	0.035	15:49:16	10/13/2011 15:49	0.035
29100	0.034	0.035	0.035	0.036	15:50:16	10/13/2011 15:50	0.036
29160	0.035	0.035	0.035	0.036	15:51:16	10/13/2011 15:51	0.036
29220	0.036	0.037	0.037	0.038	15:52:16	10/13/2011 15:52	0.039
29280	0.038	0.039	0.04	0.044	15:53:16	10/13/2011 15:53	0.052
29340	0.034	0.034	0.035	0.035	15:54:16	10/13/2011 15:54	0.035
29400	0.034	0.034	0.035	0.036	15:55:16	10/13/2011 15:55	0.036
29460	0.034	0.035	0.035	0.036	15:56:16	10/13/2011 15:56	0.036
29520	0.034	0.034	0.035	0.035	15:57:16	10/13/2011 15:57	0.035
29580	0.034	0.034	0.034	0.035	15:58:16	10/13/2011 15:58	0.035
29640	0.032	0.033	0.033	0.033	15:59:16	10/13/2011 15:59	0.033
29700	0.031	0.032	0.032	0.032	16:00:16	10/13/2011 16:00	0.032
29760	0.032	0.032	0.033	0.033	16:01:16	10/13/2011 16:01	0.033
29820	0.032	0.032	0.033	0.033	16:02:16	10/13/2011 16:02	0.033
29880	0.033	0.034	0.034	0.035	16:03:16	10/13/2011 16:03	0.035
29940	0.033	0.033	0.033	0.034	16:04:16	10/13/2011 16:04	0.034
30000	0.033	0.034	0.034	0.034	16:05:16	10/13/2011 16:05	0.034
30060	0.034	0.034	0.034	0.035	16:06:16	10/13/2011 16:06	0.035
30120	0.033	0.033	0.034	0.034	16:07:16	10/13/2011 16:07	0.034
30180	0.032	0.032	0.033	0.033	16:08:16	10/13/2011 16:08	0.033
30240	0.031	0.032	0.032	0.032	16:09:16	10/13/2011 16:09	0.032
30300	0.031	0.031	0.031	0.032	16:10:16	10/13/2011 16:10	0.032
30360	0.031	0.031	0.032	0.032	16:11:16	10/13/2011 16:11	0.032
30420	0.031	0.031	0.032	0.032	16:12:16	10/13/2011 16:12	0.033
30480	0.031	0.031	0.031	0.032	16:13:16	10/13/2011 16:13	0.032
30540	0.031	0.031	0.032	0.032	16:14:16	10/13/2011 16:14	0.032
30600	0.031	0.031	0.031	0.032	16:15:16	10/13/2011 16:15	0.032
30660	0.03	0.031	0.031	0.032	16:16:16	10/13/2011 16:16	0.032
30720	0.03	0.03	0.031	0.031	16:17:16	10/13/2011 16:17	0.031
30780	0.029	0.03	0.03	0.03	16:18:16	10/13/2011 16:18	0.03
30840	0.03	0.03	0.031	0.031	16:19:16	10/13/2011 16:19	0.031
30900	0.031	0.032	0.032	0.033	16:20:16	10/13/2011 16:20	0.033

30960	0.03	0.031	0.031	0.032	16:21:16	10/13/2011 16:21	0.032
31020	0.031	0.031	0.032	0.032	16:22:16	10/13/2011 16:22	0.032
31080	0.047	0.047	0.048	0.05	16:23:16	10/13/2011 16:23	0.051
31140	0.037	0.037	0.038	0.039	16:24:16	10/13/2011 16:24	0.039
31200	0.031	0.031	0.032	0.032	16:25:16	10/13/2011 16:25	0.032

AECOM

Client: National Grid
Location: Metropolitan - Lowe's
Date: 10/17/11 - 10/18/11
Field Personnel: J. Ehlen

Project: Metropolitan
Project Number: 60137361
Weather: ~55°F, clear, breezy
Ambient Noise: ~75 dB

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
2340	0.8	0.024	0.0	0.0	0.029	91.1	Setting up on SB-21
2353	0.6	0.022	0.0	0.1	0.026	91.4	Drilling SB-21
0010	0.5	0.023	0.0	0.1	0.028	94.6	"
0024	0.4	0.029	0.0	0.2	0.029	96.0	"
0037	0.4	0.021	0.0	0.2	0.027	93.5	"
0055	0.4	0.023	0.0	0.2	0.026	95.4	"
0108	0.4	0.028	0.0	0.2	0.027	93.9	"
0130	0.5	0.023	0.0	0.2	0.025	95.4	"
0146	0.7	0.055	0.0	0.2	0.029	92.3	"
0202	0.6	0.025	0.0	0.3	0.033	94.8	"
0216	0.8	0.028	0.2	0.2	0.028	95.8	"
0230	0.8	0.026	0.1	0.3	0.026	94.5	"
0243	0.7	0.024	0.1	0.3	0.024	96.2	"
0259	0.8	0.022	0.1	0.3	0.023	96.2	"
0315	0.8	0.033	0.1	0.3	0.040	94.5	"
0328	0.7	0.029	0.1	0.3	0.026	96.5	"
0343	0.6	0.027	0.1	0.3	0.028	92.0	"
0404	0.7	0.029	0.1	0.3	0.028	88.0	Finish drilling SB-21 @ 90 ft bgs.

=========Event #45 information (begin)=========
==========
[Event #45 name:]--[Event #45]2011-10-17 23:43<-->2011-10-18 04:41
[Event start time:]--2011-10-17 23:43:37[Event end time:]--2011-10-18 04:41:37
==========Event #45 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624
Data Points: 298 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)
Measurement Gas : Isobutene
Calibration Time : 2011-10-17 21:53:002011-10-17 21:53:002011-10-17 21:53:00
Drift Value : --- --- ---
Low Alarm Levels : 21.738 21.738 21.738
High Alarm Levels : 43.476 43.476 43.476
Span Value : 100.000 100.000 100.000
Correction Factor : 1.00 1.00 1.00
Over Alarm Levels : 15000.000 15000.000 15000.000
==========Event #45 data informations==========

LINE#	Date/Time	PID-Max(ppm)	PID-Min(ppm)	PID-Avg(ppm)
1	10/17/2011 23:44	0.947	0.22	0.89
2	10/17/2011 23:45	0.938	0.874	0.905
3	10/17/2011 23:46	0.883	0.813	0.849
4	10/17/2011 23:47	0.909	0.808	0.855
5	10/17/2011 23:48	0.861	0.813	0.835
6	10/17/2011 23:49	0.852	0.803	0.825
7	10/17/2011 23:50	0.859	0.776	0.813
8	10/17/2011 23:51	0.821	0.767	0.793
9	10/17/2011 23:52	0.797	0.741	0.773
10	10/17/2011 23:53	0.741	0.686	0.711
11	10/17/2011 23:54	0.733	0.632	0.689
12	10/17/2011 23:55	0.651	0.602	0.634
13	10/17/2011 23:56	0.634	0.605	0.619
14	10/17/2011 23:57	0.624	0.571	0.595
15	10/17/2011 23:58	0.627	0.553	0.595
16	10/17/2011 23:59	0.608	0.522	0.562
17	10/18/2011 0:00	0.602	0.511	0.534
18	10/18/2011 0:01	0.622	0.507	0.546
19	10/18/2011 0:02	0.678	0.531	0.588
20	10/18/2011 0:03	0.648	0.493	0.551
21	10/18/2011 0:04	0.59	0.487	0.523
22	10/18/2011 0:05	0.611	0.517	0.564
23	10/18/2011 0:06	0.639	0.53	0.593
24	10/18/2011 0:07	0.633	0.54	0.596
25	10/18/2011 0:08	0.618	0.535	0.587
26	10/18/2011 0:09	0.596	0.549	0.564
27	10/18/2011 0:10	0.588	0.54	0.563
28	10/18/2011 0:11	0.597	0.524	0.572
29	10/18/2011 0:12	0.581	0.536	0.559
30	10/18/2011 0:13	0.575	0.504	0.542
31	10/18/2011 0:14	0.58	0.498	0.528
32	10/18/2011 0:15	0.534	0.484	0.509
33	10/18/2011 0:16	0.52	0.464	0.5
34	10/18/2011 0:17	0.546	0.469	0.503
35	10/18/2011 0:18	0.513	0.479	0.495
36	10/18/2011 0:19	0.545	0.46	0.499
37	10/18/2011 0:20	0.507	0.453	0.48
38	10/18/2011 0:21	0.495	0.452	0.475
39	10/18/2011 0:22	0.476	0.454	0.464
40	10/18/2011 0:23	0.471	0.43	0.453
41	10/18/2011 0:24	0.468	0.43	0.445
42	10/18/2011 0:25	0.453	0.409	0.431
43	10/18/2011 0:26	0.442	0.404	0.425
44	10/18/2011 0:27	0.435	0.405	0.42
45	10/18/2011 0:28	0.442	0.378	0.415
46	10/18/2011 0:29	0.443	0.387	0.422
47	10/18/2011 0:30	0.438	0.406	0.423
48	10/18/2011 0:31	0.436	0.393	0.411

49	10/18/2011 0:32	0.434	0.387	0.41
50	10/18/2011 0:33	0.426	0.388	0.402
51	10/18/2011 0:34	0.413	0.381	0.401
52	10/18/2011 0:35	0.421	0.396	0.407
53	10/18/2011 0:36	0.448	0.367	0.415
54	10/18/2011 0:37	0.457	0.425	0.438
55	10/18/2011 0:38	0.451	0.413	0.431
56	10/18/2011 0:39	0.436	0.412	0.422
57	10/18/2011 0:40	0.437	0.335	0.388
58	10/18/2011 0:41	0.424	0.355	0.406
59	10/18/2011 0:42	0.418	0.329	0.379
60	10/18/2011 0:43	0.438	0.325	0.386
61	10/18/2011 0:44	0.438	0.305	0.356
62	10/18/2011 0:45	0.427	0.323	0.365
63	10/18/2011 0:46	0.415	0.303	0.373
64	10/18/2011 0:47	0.411	0.302	0.366
65	10/18/2011 0:48	0.403	0.304	0.364
66	10/18/2011 0:49	0.39	0.301	0.354
67	10/18/2011 0:50	0.407	0.329	0.374
68	10/18/2011 0:51	0.407	0.348	0.384
69	10/18/2011 0:52	0.391	0.302	0.36
70	10/18/2011 0:53	0.383	0.294	0.337
71	10/18/2011 0:54	0.397	0.294	0.362
72	10/18/2011 0:55	0.392	0.283	0.337
73	10/18/2011 0:56	0.397	0.287	0.34
74	10/18/2011 0:57	0.385	0.285	0.337
75	10/18/2011 0:58	0.382	0.294	0.337
76	10/18/2011 0:59	0.373	0.279	0.319
77	10/18/2011 1:00	0.39	0.284	0.332
78	10/18/2011 1:01	0.384	0.297	0.335
79	10/18/2011 1:02	0.382	0.296	0.34
80	10/18/2011 1:03	0.385	0.3	0.346
81	10/18/2011 1:04	0.385	0.298	0.343
82	10/18/2011 1:05	0.385	0.287	0.344
83	10/18/2011 1:06	0.377	0.314	0.362
84	10/18/2011 1:07	0.42	0.302	0.352
85	10/18/2011 1:08	0.406	0.299	0.348
86	10/18/2011 1:09	0.434	0.33	0.372
87	10/18/2011 1:10	0.444	0.339	0.39
88	10/18/2011 1:11	0.45	0.34	0.401
89	10/18/2011 1:12	0.451	0.331	0.388
90	10/18/2011 1:13	0.448	0.338	0.389
91	10/18/2011 1:14	0.433	0.351	0.389
92	10/18/2011 1:15	0.436	0.343	0.386
93	10/18/2011 1:16	0.445	0.327	0.367
94	10/18/2011 1:17	0.455	0.349	0.39
95	10/18/2011 1:18	0.428	0.337	0.384
96	10/18/2011 1:19	0.414	0.328	0.366
97	10/18/2011 1:20	0.442	0.32	0.377
98	10/18/2011 1:21	0.424	0.341	0.385
99	10/18/2011 1:22	0.409	0.319	0.367
100	10/18/2011 1:23	0.389	0.314	0.356
101	10/18/2011 1:24	0.383	0.298	0.342
102	10/18/2011 1:25	0.401	0.302	0.355
103	10/18/2011 1:26	0.406	0.321	0.365
104	10/18/2011 1:27	0.414	0.312	0.363
105	10/18/2011 1:28	0.426	0.321	0.375
106	10/18/2011 1:29	0.475	0.36	0.412
107	10/18/2011 1:30	0.472	0.368	0.411
108	10/18/2011 1:31	0.464	0.365	0.406
109	10/18/2011 1:32	0.455	0.36	0.411
110	10/18/2011 1:33	0.464	0.369	0.413
111	10/18/2011 1:34	0.51	0.376	0.443
112	10/18/2011 1:35	0.488	0.397	0.438
113	10/18/2011 1:36	0.487	0.382	0.44
114	10/18/2011 1:37	0.532	0.43	0.493
115	10/18/2011 1:38	0.587	0.422	0.51
116	10/18/2011 1:39	0.571	0.464	0.527
117	10/18/2011 1:40	0.601	0.465	0.534

118	10/18/2011 1:41	0.622	0.543	0.58
119	10/18/2011 1:42	0.615	0.51	0.56
120	10/18/2011 1:43	0.61	0.514	0.556
121	10/18/2011 1:44	0.618	0.51	0.563
122	10/18/2011 1:45	0.622	0.506	0.571
123	10/18/2011 1:46	0.675	0.528	0.603
124	10/18/2011 1:47	0.665	0.558	0.601
125	10/18/2011 1:48	0.673	0.563	0.63
126	10/18/2011 1:49	0.658	0.533	0.595
127	10/18/2011 1:50	0.682	0.54	0.61
128	10/18/2011 1:51	0.693	0.554	0.609
129	10/18/2011 1:52	0.702	0.579	0.626
130	10/18/2011 1:53	0.724	0.617	0.675
131	10/18/2011 1:54	0.722	0.602	0.653
132	10/18/2011 1:55	0.753	0.631	0.685
133	10/18/2011 1:56	0.745	0.638	0.685
134	10/18/2011 1:57	0.736	0.585	0.66
135	10/18/2011 1:58	0.707	0.581	0.649
136	10/18/2011 1:59	0.721	0.633	0.674
137	10/18/2011 2:00	0.721	0.591	0.652
138	10/18/2011 2:01	0.715	0.58	0.644
139	10/18/2011 2:02	0.725	0.597	0.64
140	10/18/2011 2:03	0.706	0.58	0.639
141	10/18/2011 2:04	0.717	0.584	0.656
142	10/18/2011 2:05	0.709	0.606	0.639
143	10/18/2011 2:06	0.707	0.591	0.654
144	10/18/2011 2:07	0.755	0.636	0.712
145	10/18/2011 2:08	0.756	0.653	0.726
146	10/18/2011 2:09	0.769	0.637	0.694
147	10/18/2011 2:10	0.783	0.652	0.746
148	10/18/2011 2:11	0.789	0.651	0.691
149	10/18/2011 2:12	0.763	0.66	0.704
150	10/18/2011 2:13	0.777	0.668	0.742
151	10/18/2011 2:14	0.78	0.662	0.73
152	10/18/2011 2:15	0.788	0.63	0.716
153	10/18/2011 2:16	0.788	0.659	0.708
154	10/18/2011 2:17	0.767	0.656	0.713
155	10/18/2011 2:18	0.769	0.648	0.712
156	10/18/2011 2:19	0.766	0.623	0.677
157	10/18/2011 2:20	0.752	0.624	0.683
158	10/18/2011 2:21	0.754	0.647	0.716
159	10/18/2011 2:22	0.772	0.648	0.694
160	10/18/2011 2:23	0.778	0.653	0.707
161	10/18/2011 2:24	0.794	0.675	0.741
162	10/18/2011 2:25	0.773	0.654	0.7
163	10/18/2011 2:26	0.809	0.683	0.745
164	10/18/2011 2:27	0.794	0.698	0.754
165	10/18/2011 2:28	0.832	0.709	0.771
166	10/18/2011 2:29	0.816	0.71	0.754
167	10/18/2011 2:30	0.86	0.713	0.785
168	10/18/2011 2:31	0.874	0.749	0.808
169	10/18/2011 2:32	0.86	0.744	0.802
170	10/18/2011 2:33	0.865	0.728	0.784
171	10/18/2011 2:34	0.883	0.748	0.794
172	10/18/2011 2:35	0.855	0.708	0.797
173	10/18/2011 2:36	0.853	0.718	0.763
174	10/18/2011 2:37	0.857	0.704	0.798
175	10/18/2011 2:38	0.848	0.699	0.772
176	10/18/2011 2:39	0.834	0.692	0.737
177	10/18/2011 2:40	0.837	0.703	0.783
178	10/18/2011 2:41	0.869	0.743	0.814
179	10/18/2011 2:42	0.852	0.725	0.786
180	10/18/2011 2:43	0.922	0.803	0.866
181	10/18/2011 2:44	0.947	0.799	0.851
182	10/18/2011 2:45	0.951	0.786	0.857
183	10/18/2011 2:46	0.884	0.664	0.762
184	10/18/2011 2:47	0.803	0.675	0.753
185	10/18/2011 2:48	0.824	0.672	0.754
186	10/18/2011 2:49	0.77	0.655	0.697

187	10/18/2011 2:50	0.838	0.636	0.675
188	10/18/2011 2:51	0.915	0.682	0.769
189	10/18/2011 2:52	0.758	0.619	0.706
190	10/18/2011 2:53	0.762	0.636	0.686
191	10/18/2011 2:54	0.779	0.634	0.698
192	10/18/2011 2:55	0.76	0.643	0.689
193	10/18/2011 2:56	0.792	0.64	0.712
194	10/18/2011 2:57	0.755	0.607	0.677
195	10/18/2011 2:58	0.779	0.655	0.72
196	10/18/2011 2:59	0.782	0.662	0.695
197	10/18/2011 3:00	0.762	0.655	0.711
198	10/18/2011 3:01	0.759	0.621	0.676
199	10/18/2011 3:02	0.755	0.64	0.685
200	10/18/2011 3:03	0.781	0.638	0.729
201	10/18/2011 3:04	0.767	0.66	0.706
202	10/18/2011 3:05	0.768	0.645	0.714
203	10/18/2011 3:06	0.783	0.662	0.705
204	10/18/2011 3:07	0.808	0.675	0.749
205	10/18/2011 3:08	0.803	0.643	0.707
206	10/18/2011 3:09	0.867	0.701	0.798
207	10/18/2011 3:10	0.79	0.665	0.712
208	10/18/2011 3:11	0.755	0.68	0.713
209	10/18/2011 3:12	0.816	0.663	0.734
210	10/18/2011 3:13	0.79	0.631	0.704
211	10/18/2011 3:14	0.675	0.565	0.608
212	10/18/2011 3:15	0.671	0.573	0.621
213	10/18/2011 3:16	0.69	0.58	0.628
214	10/18/2011 3:17	0.71	0.6	0.672
215	10/18/2011 3:18	0.748	0.623	0.696
216	10/18/2011 3:19	0.715	0.593	0.649
217	10/18/2011 3:20	0.721	0.615	0.669
218	10/18/2011 3:21	0.744	0.615	0.657
219	10/18/2011 3:22	0.77	0.642	0.714
220	10/18/2011 3:23	0.77	0.624	0.705
221	10/18/2011 3:24	0.753	0.601	0.661
222	10/18/2011 3:25	0.717	0.613	0.666
223	10/18/2011 3:26	0.836	0.62	0.699
224	10/18/2011 3:27	0.855	0.707	0.766
225	10/18/2011 3:28	0.782	0.643	0.712
226	10/18/2011 3:29	0.795	0.644	0.715
227	10/18/2011 3:30	0.799	0.642	0.706
228	10/18/2011 3:31	0.805	0.661	0.714
229	10/18/2011 3:32	0.896	0.73	0.821
230	10/18/2011 3:33	0.923	0.671	0.753
231	10/18/2011 3:34	0.821	0.673	0.732
232	10/18/2011 3:35	0.823	0.711	0.774
233	10/18/2011 3:36	0.81	0.684	0.735
234	10/18/2011 3:37	0.773	0.644	0.718
235	10/18/2011 3:38	0.759	0.639	0.687
236	10/18/2011 3:39	0.787	0.668	0.746
237	10/18/2011 3:40	0.721	0.625	0.67
238	10/18/2011 3:41	0.726	0.604	0.673
239	10/18/2011 3:42	0.73	0.61	0.673
240	10/18/2011 3:43	0.714	0.606	0.652
241	10/18/2011 3:44	0.692	0.585	0.629
242	10/18/2011 3:45	0.76	0.649	0.686
243	10/18/2011 3:46	0.87	0.659	0.74
244	10/18/2011 3:47	0.952	0.781	0.849
245	10/18/2011 3:48	0.799	0.689	0.762
246	10/18/2011 3:49	0.779	0.607	0.701
247	10/18/2011 3:50	0.661	0.6	0.642
248	10/18/2011 3:51	0.722	0.632	0.68
249	10/18/2011 3:52	0.728	0.592	0.674
250	10/18/2011 3:53	0.703	0.592	0.634
251	10/18/2011 3:54	0.66	0.556	0.632
252	10/18/2011 3:55	0.652	0.556	0.616
253	10/18/2011 3:56	0.71	0.59	0.648
254	10/18/2011 3:57	0.732	0.613	0.661
255	10/18/2011 3:58	0.757	0.652	0.705

256	10/18/2011 3:59	0.742	0.642	0.671
257	10/18/2011 4:00	0.757	0.643	0.681
258	10/18/2011 4:01	0.755	0.636	0.681
259	10/18/2011 4:02	0.736	0.595	0.656
260	10/18/2011 4:03	0.766	0.633	0.718
261	10/18/2011 4:04	0.805	0.661	0.718
262	10/18/2011 4:05	0.797	0.686	0.76
263	10/18/2011 4:06	0.838	0.61	0.734
264	10/18/2011 4:07	0.733	0.603	0.657
265	10/18/2011 4:08	0.729	0.639	0.698
266	10/18/2011 4:09	0.771	0.674	0.707
267	10/18/2011 4:10	0.841	0.63	0.718
268	10/18/2011 4:11	0.835	0.669	0.719
269	10/18/2011 4:12	0.814	0.66	0.736
270	10/18/2011 4:13	0.713	0.588	0.632
271	10/18/2011 4:14	0.735	0.621	0.672
272	10/18/2011 4:15	0.728	0.617	0.658
273	10/18/2011 4:16	0.747	0.64	0.705
274	10/18/2011 4:17	0.718	0.595	0.665
275	10/18/2011 4:18	0.689	0.598	0.652
276	10/18/2011 4:19	0.726	0.602	0.658
277	10/18/2011 4:20	0.684	0.575	0.627
278	10/18/2011 4:21	0.716	0.679	0.69
279	10/18/2011 4:22	0.752	0.644	0.692
280	10/18/2011 4:23	0.697	0.576	0.614
281	10/18/2011 4:24	0.689	0.575	0.644
282	10/18/2011 4:25	0.691	0.598	0.651
283	10/18/2011 4:26	0.635	0.58	0.61
284	10/18/2011 4:27	0.625	0.471	0.545
285	10/18/2011 4:28	0.669	0.544	0.586
286	10/18/2011 4:29	0.613	0.507	0.565
287	10/18/2011 4:30	0.657	0.503	0.575
288	10/18/2011 4:31	0.656	0.489	0.574
289	10/18/2011 4:32	0.662	0.51	0.562
290	10/18/2011 4:33	0.594	0.503	0.54
291	10/18/2011 4:34	0.573	0.461	0.525
292	10/18/2011 4:35	0.557	0.446	0.493
293	10/18/2011 4:36	0.551	0.43	0.5
294	10/18/2011 4:37	0.504	0.399	0.428
295	10/18/2011 4:38	0.507	0.391	0.433
296	10/18/2011 4:39	0.506	0.393	0.44
297	10/18/2011 4:40	0.472	0.353	0.409
298	10/18/2011 4:41	0.418	0.304	0.371

==========Event #45 information (end)==========

=========Event #37 information (begin)=========
==========
[Event #37 name:]--[Event #37]2011-10-17 23:58<-->2011-10-18 04:50
[Event start time:]--2011-10-17 23:58:02[Event end time:]--2011-10-18 04:50:02
==========Event #37 head information==========
Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367
Data Points: 292 Sample Period: 60 s Datalog Mode: Automatic
SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode
==========
Sensor Information : PID(ppb)
Measurement Gas : Isobutene
Calibration Time : 2011-10-17 22:02:00
Drift Value : ---
Low Alarm Levels : 25847
High Alarm Levels : 51694
Span Value : 100000
Correction Factor : 1.00
Over Alarm Levels : 15000000
==========Event #37 data informations==========

LINE#	Date/Time	PID(ppm)	PID(ppb)
1	10/17/2011 23:59	0.02	20
2	10/18/2011 0:00	0.016	16
3	10/18/2011 0:01	0.021	21
4	10/18/2011 0:02	0.026	26
5	10/18/2011 0:03	0.028	28
6	10/18/2011 0:04	0.034	34
7	10/18/2011 0:05	0.037	37
8	10/18/2011 0:06	0.048	48
9	10/18/2011 0:07	0.044	44
10	10/18/2011 0:08	0.045	45
11	10/18/2011 0:09	0.052	52
12	10/18/2011 0:10	0.068	68
13	10/18/2011 0:11	0.091	91
14	10/18/2011 0:12	0.089	89
15	10/18/2011 0:13	0.084	84
16	10/18/2011 0:14	0.085	85
17	10/18/2011 0:15	0.089	89
18	10/18/2011 0:16	0.088	88
19	10/18/2011 0:17	0.098	98
20	10/18/2011 0:18	0.097	97
21	10/18/2011 0:19	0.097	97
22	10/18/2011 0:20	0.1	100
23	10/18/2011 0:21	0.111	111
24	10/18/2011 0:22	0.115	115
25	10/18/2011 0:23	0.114	114
26	10/18/2011 0:24	0.123	123
27	10/18/2011 0:25	0.125	125
28	10/18/2011 0:26	0.138	138
29	10/18/2011 0:27	0.137	137
30	10/18/2011 0:28	0.146	146
31	10/18/2011 0:29	0.13	130
32	10/18/2011 0:30	0.127	127
33	10/18/2011 0:31	0.128	128
34	10/18/2011 0:32	0.133	133
35	10/18/2011 0:33	0.146	146
36	10/18/2011 0:34	0.141	141
37	10/18/2011 0:35	0.237	237
38	10/18/2011 0:36	0.22	220
39	10/18/2011 0:37	0.16	160
40	10/18/2011 0:38	0.161	161
41	10/18/2011 0:39	0.159	159
42	10/18/2011 0:40	0.159	159
43	10/18/2011 0:41	0.163	163
44	10/18/2011 0:42	0.167	167
45	10/18/2011 0:43	0.162	162
46	10/18/2011 0:44	0.173	173
47	10/18/2011 0:45	0.17	170
48	10/18/2011 0:46	0.167	167

49	10/18/2011 0:47	0.17	170
50	10/18/2011 0:48	0.167	167
51	10/18/2011 0:49	0.168	168
52	10/18/2011 0:50	0.178	178
53	10/18/2011 0:51	0.185	185
54	10/18/2011 0:52	0.18	180
55	10/18/2011 0:53	0.185	185
56	10/18/2011 0:54	0.187	187
57	10/18/2011 0:55	0.182	182
58	10/18/2011 0:56	0.198	198
59	10/18/2011 0:57	0.189	189
60	10/18/2011 0:58	0.189	189
61	10/18/2011 0:59	0.186	186
62	10/18/2011 1:00	0.195	195
63	10/18/2011 1:01	0.205	205
64	10/18/2011 1:02	0.244	244
65	10/18/2011 1:03	0.209	209
66	10/18/2011 1:04	0.207	207
67	10/18/2011 1:05	0.203	203
68	10/18/2011 1:06	0.205	205
69	10/18/2011 1:07	0.203	203
70	10/18/2011 1:08	0.195	195
71	10/18/2011 1:09	0.194	194
72	10/18/2011 1:10	0.195	195
73	10/18/2011 1:11	0.203	203
74	10/18/2011 1:12	0.201	201
75	10/18/2011 1:13	0.198	198
76	10/18/2011 1:14	0.198	198
77	10/18/2011 1:15	0.21	210
78	10/18/2011 1:16	0.214	214
79	10/18/2011 1:17	0.204	204
80	10/18/2011 1:18	0.208	208
81	10/18/2011 1:19	0.213	213
82	10/18/2011 1:20	0.211	211
83	10/18/2011 1:21	0.233	233
84	10/18/2011 1:22	0.227	227
85	10/18/2011 1:23	0.215	215
86	10/18/2011 1:24	0.208	208
87	10/18/2011 1:25	0.213	213
88	10/18/2011 1:26	0.226	226
89	10/18/2011 1:27	0.234	234
90	10/18/2011 1:28	0.233	233
91	10/18/2011 1:29	0.224	224
92	10/18/2011 1:30	0.225	225
93	10/18/2011 1:31	0.231	231
94	10/18/2011 1:32	0.23	230
95	10/18/2011 1:33	0.231	231
96	10/18/2011 1:34	0.23	230
97	10/18/2011 1:35	0.231	231
98	10/18/2011 1:36	0.234	234
99	10/18/2011 1:37	0.233	233
100	10/18/2011 1:38	0.228	228
101	10/18/2011 1:39	0.23	230
102	10/18/2011 1:40	0.239	239
103	10/18/2011 1:41	0.236	236
104	10/18/2011 1:42	0.231	231
105	10/18/2011 1:43	0.237	237
106	10/18/2011 1:44	0.23	230
107	10/18/2011 1:45	0.229	229
108	10/18/2011 1:46	0.222	222
109	10/18/2011 1:47	0.226	226
110	10/18/2011 1:48	0.227	227
111	10/18/2011 1:49	0.225	225
112	10/18/2011 1:50	0.233	233
113	10/18/2011 1:51	0.233	233
114	10/18/2011 1:52	0.233	233
115	10/18/2011 1:53	0.231	231
116	10/18/2011 1:54	0.23	230
117	10/18/2011 1:55	0.226	226

118	10/18/2011 1:56	0.227	227
119	10/18/2011 1:57	0.228	228
120	10/18/2011 1:58	0.231	231
121	10/18/2011 1:59	0.232	232
122	10/18/2011 2:00	0.229	229
123	10/18/2011 2:01	0.232	232
124	10/18/2011 2:02	0.238	238
125	10/18/2011 2:03	0.241	241
126	10/18/2011 2:04	0.246	246
127	10/18/2011 2:05	0.246	246
128	10/18/2011 2:06	0.242	242
129	10/18/2011 2:07	0.234	234
130	10/18/2011 2:08	0.238	238
131	10/18/2011 2:09	0.243	243
132	10/18/2011 2:10	0.244	244
133	10/18/2011 2:11	0.23	230
134	10/18/2011 2:12	0.233	233
135	10/18/2011 2:13	0.236	236
136	10/18/2011 2:14	0.239	239
137	10/18/2011 2:15	0.242	242
138	10/18/2011 2:16	0.238	238
139	10/18/2011 2:17	0.239	239
140	10/18/2011 2:18	0.237	237
141	10/18/2011 2:19	0.237	237
142	10/18/2011 2:20	0.241	241
143	10/18/2011 2:21	0.24	240
144	10/18/2011 2:22	0.239	239
145	10/18/2011 2:23	0.238	238
146	10/18/2011 2:24	0.236	236
147	10/18/2011 2:25	0.24	240
148	10/18/2011 2:26	0.244	244
149	10/18/2011 2:27	0.251	251
150	10/18/2011 2:28	0.259	259
151	10/18/2011 2:29	0.253	253
152	10/18/2011 2:30	0.253	253
153	10/18/2011 2:31	0.251	251
154	10/18/2011 2:32	0.251	251
155	10/18/2011 2:33	0.258	258
156	10/18/2011 2:34	0.263	263
157	10/18/2011 2:35	0.256	256
158	10/18/2011 2:36	0.252	252
159	10/18/2011 2:37	0.246	246
160	10/18/2011 2:38	0.247	247
161	10/18/2011 2:39	0.247	247
162	10/18/2011 2:40	0.245	245
163	10/18/2011 2:41	0.247	247
164	10/18/2011 2:42	0.251	251
165	10/18/2011 2:43	0.25	250
166	10/18/2011 2:44	0.25	250
167	10/18/2011 2:45	0.253	253
168	10/18/2011 2:46	0.256	256
169	10/18/2011 2:47	0.259	259
170	10/18/2011 2:48	0.261	261
171	10/18/2011 2:49	0.261	261
172	10/18/2011 2:50	0.261	261
173	10/18/2011 2:51	0.264	264
174	10/18/2011 2:52	0.264	264
175	10/18/2011 2:53	0.265	265
176	10/18/2011 2:54	0.272	272
177	10/18/2011 2:55	0.275	275
178	10/18/2011 2:56	0.282	282
179	10/18/2011 2:57	0.284	284
180	10/18/2011 2:58	0.28	280
181	10/18/2011 2:59	0.273	273
182	10/18/2011 3:00	0.275	275
183	10/18/2011 3:01	0.273	273
184	10/18/2011 3:02	0.273	273
185	10/18/2011 3:03	0.272	272
186	10/18/2011 3:04	0.269	269

187	10/18/2011 3:05	0.269	269
188	10/18/2011 3:06	0.271	271
189	10/18/2011 3:07	0.28	280
190	10/18/2011 3:08	0.269	269
191	10/18/2011 3:09	0.269	269
192	10/18/2011 3:10	0.271	271
193	10/18/2011 3:11	0.274	274
194	10/18/2011 3:12	0.279	279
195	10/18/2011 3:13	0.281	281
196	10/18/2011 3:14	0.283	283
197	10/18/2011 3:15	0.278	278
198	10/18/2011 3:16	0.271	271
199	10/18/2011 3:17	0.27	270
200	10/18/2011 3:18	0.271	271
201	10/18/2011 3:19	0.272	272
202	10/18/2011 3:20	0.269	269
203	10/18/2011 3:21	0.27	270
204	10/18/2011 3:22	0.273	273
205	10/18/2011 3:23	0.277	277
206	10/18/2011 3:24	0.276	276
207	10/18/2011 3:25	0.277	277
208	10/18/2011 3:26	0.283	283
209	10/18/2011 3:27	0.283	283
210	10/18/2011 3:28	0.282	282
211	10/18/2011 3:29	0.276	276
212	10/18/2011 3:30	0.278	278
213	10/18/2011 3:31	0.277	277
214	10/18/2011 3:32	0.278	278
215	10/18/2011 3:33	0.281	281
216	10/18/2011 3:34	0.285	285
217	10/18/2011 3:35	0.286	286
218	10/18/2011 3:36	0.288	288
219	10/18/2011 3:37	0.291	291
220	10/18/2011 3:38	0.293	293
221	10/18/2011 3:39	0.291	291
222	10/18/2011 3:40	0.29	290
223	10/18/2011 3:41	0.291	291
224	10/18/2011 3:42	0.284	284
225	10/18/2011 3:43	0.287	287
226	10/18/2011 3:44	0.291	291
227	10/18/2011 3:45	0.29	290
228	10/18/2011 3:46	0.292	292
229	10/18/2011 3:47	0.295	295
230	10/18/2011 3:48	0.298	298
231	10/18/2011 3:49	0.301	301
232	10/18/2011 3:50	0.303	303
233	10/18/2011 3:51	0.301	301
234	10/18/2011 3:52	0.295	295
235	10/18/2011 3:53	0.298	298
236	10/18/2011 3:54	0.297	297
237	10/18/2011 3:55	0.298	298
238	10/18/2011 3:56	0.301	301
239	10/18/2011 3:57	0.301	301
240	10/18/2011 3:58	0.298	298
241	10/18/2011 3:59	0.301	301
242	10/18/2011 4:00	0.303	303
243	10/18/2011 4:01	0.304	304
244	10/18/2011 4:02	0.306	306
245	10/18/2011 4:03	0.305	305
246	10/18/2011 4:04	0.305	305
247	10/18/2011 4:05	0.305	305
248	10/18/2011 4:06	0.302	302
249	10/18/2011 4:07	0.317	317
250	10/18/2011 4:08	0.307	307
251	10/18/2011 4:09	0.299	299
252	10/18/2011 4:10	0.299	299
253	10/18/2011 4:11	0.303	303
254	10/18/2011 4:12	0.304	304
255	10/18/2011 4:13	0.307	307

256	10/18/2011 4:14	0.308	308
257	10/18/2011 4:15	0.299	299
258	10/18/2011 4:16	0.296	296
259	10/18/2011 4:17	0.297	297
260	10/18/2011 4:18	0.297	297
261	10/18/2011 4:19	0.304	304
262	10/18/2011 4:20	0.308	308
263	10/18/2011 4:21	0.308	308
264	10/18/2011 4:22	0.328	328
265	10/18/2011 4:23	0.321	321
266	10/18/2011 4:24	0.315	315
267	10/18/2011 4:25	0.317	317
268	10/18/2011 4:26	0.319	319
269	10/18/2011 4:27	0.316	316
270	10/18/2011 4:28	0.316	316
271	10/18/2011 4:29	0.315	315
272	10/18/2011 4:30	0.315	315
273	10/18/2011 4:31	0.315	315
274	10/18/2011 4:32	0.316	316
275	10/18/2011 4:33	0.319	319
276	10/18/2011 4:34	0.318	318
277	10/18/2011 4:35	0.314	314
278	10/18/2011 4:36	0.316	316
279	10/18/2011 4:37	0.315	315
280	10/18/2011 4:38	0.312	312
281	10/18/2011 4:39	0.313	313
282	10/18/2011 4:40	0.315	315
283	10/18/2011 4:41	0.332	332
284	10/18/2011 4:42	0.337	337
285	10/18/2011 4:43	0.333	333
286	10/18/2011 4:44	0.332	332
287	10/18/2011 4:45	0.333	333
288	10/18/2011 4:46	0.335	335
289	10/18/2011 4:47	0.335	335
290	10/18/2011 4:48	0.332	332
291	10/18/2011 4:49	0.329	329
292	10/18/2011 4:50	0.325	325

==========Event #37 information (end)==========

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533101806
Firmware Version	2.8
Calibration Date	5/19/2011
Test Name	MANUAL_010
Test Start Time	11:31:00 PM
Test Start Date	10/17/2011
Test Length [D:H:M	0:04:58
Test Interval [M:S]	1:00
PM1 Average [mg/	0.024
PM1 Minimum [mg	0.015
PM1 Maximum [mg	0.037
PM1 TWA [mg/m3]	0.015
PM2.5 Average [mg	0.024
PM2.5 Minimum [m	0.015
PM2.5 Maximum [r	0.037
PM2.5 TWA [mg/m	0.015
PM4 Average [mg/	0.025
PM4 Minimum [mg	0.016
PM4 Maximum [mg	0.041
PM4 TWA [mg/m3]	0.015
PM10 Average [mg,	0.026
PM10 Minimum [m	0.016
PM10 Maximum [m	0.053
PM10 TWA [mg/m3	0.016
TOTAL Average [mg	0.026
TOTAL Minimum [m	0.017
TOTAL Maximum [r	0.068
TOTAL TWA [mg/m	0.016
Photometric User C	1
Size Correction Use	1
Flow User Cal	1
Errors	
Number of Samples	298

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	11:31:00 PM	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.031	0.032	0.034	0.053	11:32:00 PM	10/17/2011 23:32	0.068		
120	0.019	0.02	0.02	0.024	11:33:00 PM	10/17/2011 23:33	0.028		
180	0.018	0.019	0.019	0.02	11:34:00 PM	10/17/2011 23:34	0.021		
240	0.017	0.017	0.017	0.018	11:35:00 PM	10/17/2011 23:35	0.019		
300	0.021	0.021	0.021	0.022	11:36:00 PM	10/17/2011 23:36	0.022		
360	0.019	0.019	0.02	0.02	11:37:00 PM	10/17/2011 23:37	0.02		
420	0.022	0.023	0.023	0.024	11:38:00 PM	10/17/2011 23:38	0.025		
480	0.023	0.024	0.025	0.034	11:39:00 PM	10/17/2011 23:39	0.04		
540	0.017	0.018	0.018	0.02	11:40:00 PM	10/17/2011 23:40	0.02		
600	0.015	0.015	0.016	0.016	11:41:00 PM	10/17/2011 23:41	0.017		
660	0.018	0.018	0.019	0.019	11:42:00 PM	10/17/2011 23:42	0.019		
720	0.018	0.018	0.019	0.02	11:43:00 PM	10/17/2011 23:43	0.02		
780	0.025	0.026	0.026	0.027	11:44:00 PM	10/17/2011 23:44	0.027		
840	0.025	0.025	0.025	0.026	11:45:00 PM	10/17/2011 23:45	0.026		
900	0.02	0.02	0.021	0.022	11:46:00 PM	10/17/2011 23:46	0.022		
960	0.016	0.016	0.017	0.018	11:47:00 PM	10/17/2011 23:47	0.018		
1020	0.02	0.02	0.02	0.021	11:48:00 PM	10/17/2011 23:48	0.023		
1080	0.023	0.023	0.023	0.025	11:49:00 PM	10/17/2011 23:49	0.025		
1140	0.024	0.024	0.024	0.025	11:50:00 PM	10/17/2011 23:50	0.026		
1200	0.02	0.02	0.021	0.022	11:51:00 PM	10/17/2011 23:51	0.022		
1260	0.023	0.023	0.024	0.024	11:52:00 PM	10/17/2011 23:52	0.026		
1320	0.02	0.02	0.02	0.022	11:53:00 PM	10/17/2011 23:53	0.022		
1380	0.019	0.019	0.02	0.02	11:54:00 PM	10/17/2011 23:54	0.02		
1440	0.023	0.023	0.023	0.024	11:55:00 PM	10/17/2011 23:55	0.025		
1500	0.022	0.023	0.023	0.024	11:56:00 PM	10/17/2011 23:56	0.024		
1560	0.018	0.019	0.019	0.02	11:57:00 PM	10/17/2011 23:57	0.021		
1620	0.017	0.018	0.018	0.019	11:58:00 PM	10/17/2011 23:58	0.019		
1680	0.018	0.018	0.018	0.019	11:59:00 PM	10/17/2011 23:59	0.019		
1740	0.021	0.021	0.022	0.023	12:00:00 AM	10/18/2011 0:00	0.023		
1800	0.02	0.02	0.02	0.021	12:01:00 AM	10/18/2011 0:01	0.021		
1860	0.021	0.021	0.021	0.022	12:02:00 AM	10/18/2011 0:02	0.022		
1920	0.018	0.018	0.019	0.02	12:03:00 AM	10/18/2011 0:03	0.021		

1980	0.018	0.018	0.019	0.02	12:04:00 AM	10/18/2011 0:04	0.02
2040	0.021	0.021	0.021	0.022	12:05:00 AM	10/18/2011 0:05	0.022
2100	0.022	0.022	0.023	0.024	12:06:00 AM	10/18/2011 0:06	0.024
2160	0.02	0.021	0.021	0.022	12:07:00 AM	10/18/2011 0:07	0.022
2220	0.021	0.021	0.021	0.022	12:08:00 AM	10/18/2011 0:08	0.022
2280	0.019	0.019	0.02	0.021	12:09:00 AM	10/18/2011 0:09	0.022
2340	0.018	0.018	0.019	0.02	12:10:00 AM	10/18/2011 0:10	0.02
2400	0.019	0.02	0.02	0.021	12:11:00 AM	10/18/2011 0:11	0.021
2460	0.016	0.017	0.017	0.019	12:12:00 AM	10/18/2011 0:12	0.019
2520	0.015	0.016	0.016	0.017	12:13:00 AM	10/18/2011 0:13	0.017
2580	0.017	0.018	0.018	0.019	12:14:00 AM	10/18/2011 0:14	0.019
2640	0.02	0.021	0.021	0.022	12:15:00 AM	10/18/2011 0:15	0.023
2700	0.021	0.021	0.021	0.022	12:16:00 AM	10/18/2011 0:16	0.024
2760	0.016	0.017	0.017	0.019	12:17:00 AM	10/18/2011 0:17	0.019
2820	0.016	0.016	0.017	0.017	12:18:00 AM	10/18/2011 0:18	0.018
2880	0.017	0.017	0.018	0.019	12:19:00 AM	10/18/2011 0:19	0.02
2940	0.027	0.027	0.027	0.029	12:20:00 AM	10/18/2011 0:20	0.029
3000	0.026	0.026	0.026	0.028	12:21:00 AM	10/18/2011 0:21	0.028
3060	0.022	0.022	0.023	0.024	12:22:00 AM	10/18/2011 0:22	0.024
3120	0.022	0.022	0.023	0.025	12:23:00 AM	10/18/2011 0:23	0.025
3180	0.021	0.021	0.021	0.023	12:24:00 AM	10/18/2011 0:24	0.023
3240	0.018	0.018	0.019	0.019	12:25:00 AM	10/18/2011 0:25	0.019
3300	0.023	0.023	0.023	0.025	12:26:00 AM	10/18/2011 0:26	0.025
3360	0.019	0.019	0.02	0.02	12:27:00 AM	10/18/2011 0:27	0.02
3420	0.017	0.018	0.018	0.018	12:28:00 AM	10/18/2011 0:28	0.018
3480	0.019	0.019	0.02	0.021	12:29:00 AM	10/18/2011 0:29	0.021
3540	0.018	0.018	0.019	0.02	12:30:00 AM	10/18/2011 0:30	0.02
3600	0.023	0.024	0.024	0.025	12:31:00 AM	10/18/2011 0:31	0.025
3660	0.019	0.019	0.02	0.02	12:32:00 AM	10/18/2011 0:32	0.02
3720	0.023	0.023	0.024	0.024	12:33:00 AM	10/18/2011 0:33	0.024
3780	0.022	0.022	0.023	0.024	12:34:00 AM	10/18/2011 0:34	0.024
3840	0.024	0.024	0.025	0.026	12:35:00 AM	10/18/2011 0:35	0.026
3900	0.018	0.019	0.019	0.02	12:36:00 AM	10/18/2011 0:36	0.02
3960	0.02	0.02	0.02	0.023	12:37:00 AM	10/18/2011 0:37	0.024
4020	0.02	0.02	0.021	0.022	12:38:00 AM	10/18/2011 0:38	0.022
4080	0.021	0.022	0.022	0.024	12:39:00 AM	10/18/2011 0:39	0.024
4140	0.021	0.022	0.022	0.023	12:40:00 AM	10/18/2011 0:40	0.024
4200	0.023	0.023	0.024	0.026	12:41:00 AM	10/18/2011 0:41	0.026
4260	0.022	0.022	0.023	0.024	12:42:00 AM	10/18/2011 0:42	0.024
4320	0.023	0.023	0.024	0.025	12:43:00 AM	10/18/2011 0:43	0.026
4380	0.02	0.02	0.021	0.022	12:44:00 AM	10/18/2011 0:44	0.022
4440	0.02	0.02	0.021	0.022	12:45:00 AM	10/18/2011 0:45	0.022
4500	0.024	0.024	0.025	0.026	12:46:00 AM	10/18/2011 0:46	0.026
4560	0.02	0.02	0.02	0.021	12:47:00 AM	10/18/2011 0:47	0.022
4620	0.022	0.022	0.023	0.024	12:48:00 AM	10/18/2011 0:48	0.025
4680	0.021	0.021	0.022	0.023	12:49:00 AM	10/18/2011 0:49	0.024
4740	0.023	0.023	0.024	0.026	12:50:00 AM	10/18/2011 0:50	0.026
4800	0.022	0.023	0.023	0.025	12:51:00 AM	10/18/2011 0:51	0.025
4860	0.02	0.02	0.021	0.022	12:52:00 AM	10/18/2011 0:52	0.023
4920	0.022	0.022	0.022	0.024	12:53:00 AM	10/18/2011 0:53	0.024
4980	0.021	0.021	0.022	0.024	12:54:00 AM	10/18/2011 0:54	0.024
5040	0.023	0.024	0.024	0.025	12:55:00 AM	10/18/2011 0:55	0.025
5100	0.024	0.024	0.024	0.025	12:56:00 AM	10/18/2011 0:56	0.025
5160	0.022	0.022	0.022	0.023	12:57:00 AM	10/18/2011 0:57	0.024
5220	0.023	0.023	0.024	0.025	12:58:00 AM	10/18/2011 0:58	0.025
5280	0.02	0.02	0.021	0.022	12:59:00 AM	10/18/2011 0:59	0.023
5340	0.031	0.031	0.032	0.033	1:00:00 AM	10/18/2011 1:00	0.034
5400	0.021	0.022	0.022	0.024	1:01:00 AM	10/18/2011 1:01	0.024
5460	0.022	0.023	0.023	0.025	1:02:00 AM	10/18/2011 1:02	0.025
5520	0.027	0.028	0.028	0.03	1:03:00 AM	10/18/2011 1:03	0.03
5580	0.034	0.035	0.035	0.037	1:04:00 AM	10/18/2011 1:04	0.037
5640	0.032	0.033	0.033	0.035	1:05:00 AM	10/18/2011 1:05	0.035
5700	0.033	0.033	0.034	0.036	1:06:00 AM	10/18/2011 1:06	0.036
5760	0.029	0.029	0.03	0.032	1:07:00 AM	10/18/2011 1:07	0.032
5820	0.029	0.029	0.03	0.031	1:08:00 AM	10/18/2011 1:08	0.032
5880	0.024	0.024	0.025	0.027	1:09:00 AM	10/18/2011 1:09	0.027
5940	0.023	0.023	0.024	0.026	1:10:00 AM	10/18/2011 1:10	0.027
6000	0.02	0.021	0.021	0.023	1:11:00 AM	10/18/2011 1:11	0.023
6060	0.021	0.021	0.022	0.023	1:12:00 AM	10/18/2011 1:12	0.024

6120	0.022	0.022	0.023	0.024	1:13:00 AM	10/18/2011 1:13	0.024
6180	0.024	0.024	0.025	0.026	1:14:00 AM	10/18/2011 1:14	0.027
6240	0.02	0.021	0.021	0.023	1:15:00 AM	10/18/2011 1:15	0.023
6300	0.021	0.021	0.022	0.023	1:16:00 AM	10/18/2011 1:16	0.023
6360	0.023	0.024	0.024	0.026	1:17:00 AM	10/18/2011 1:17	0.026
6420	0.026	0.026	0.027	0.028	1:18:00 AM	10/18/2011 1:18	0.028
6480	0.022	0.023	0.023	0.024	1:19:00 AM	10/18/2011 1:19	0.024
6540	0.026	0.026	0.027	0.028	1:20:00 AM	10/18/2011 1:20	0.029
6600	0.025	0.025	0.026	0.027	1:21:00 AM	10/18/2011 1:21	0.027
6660	0.028	0.029	0.029	0.03	1:22:00 AM	10/18/2011 1:22	0.03
6720	0.024	0.025	0.025	0.026	1:23:00 AM	10/18/2011 1:23	0.027
6780	0.02	0.021	0.021	0.022	1:24:00 AM	10/18/2011 1:24	0.022
6840	0.02	0.02	0.021	0.022	1:25:00 AM	10/18/2011 1:25	0.023
6900	0.02	0.02	0.02	0.021	1:26:00 AM	10/18/2011 1:26	0.021
6960	0.022	0.022	0.022	0.023	1:27:00 AM	10/18/2011 1:27	0.024
7020	0.022	0.022	0.023	0.024	1:28:00 AM	10/18/2011 1:28	0.024
7080	0.026	0.027	0.027	0.028	1:29:00 AM	10/18/2011 1:29	0.028
7140	0.028	0.029	0.029	0.03	1:30:00 AM	10/18/2011 1:30	0.031
7200	0.023	0.024	0.024	0.025	1:31:00 AM	10/18/2011 1:31	0.025
7260	0.021	0.021	0.022	0.023	1:32:00 AM	10/18/2011 1:32	0.023
7320	0.021	0.021	0.022	0.023	1:33:00 AM	10/18/2011 1:33	0.023
7380	0.029	0.029	0.029	0.031	1:34:00 AM	10/18/2011 1:34	0.031
7440	0.023	0.024	0.024	0.025	1:35:00 AM	10/18/2011 1:35	0.025
7500	0.026	0.026	0.027	0.028	1:36:00 AM	10/18/2011 1:36	0.028
7560	0.022	0.022	0.023	0.024	1:37:00 AM	10/18/2011 1:37	0.024
7620	0.024	0.024	0.024	0.026	1:38:00 AM	10/18/2011 1:38	0.026
7680	0.023	0.023	0.023	0.024	1:39:00 AM	10/18/2011 1:39	0.025
7740	0.022	0.022	0.023	0.024	1:40:00 AM	10/18/2011 1:40	0.024
7800	0.026	0.026	0.027	0.028	1:41:00 AM	10/18/2011 1:41	0.028
7860	0.023	0.024	0.024	0.026	1:42:00 AM	10/18/2011 1:42	0.026
7920	0.029	0.029	0.03	0.033	1:43:00 AM	10/18/2011 1:43	0.033
7980	0.028	0.029	0.032	0.036	1:44:00 AM	10/18/2011 1:44	0.036
8040	0.029	0.03	0.034	0.041	1:45:00 AM	10/18/2011 1:45	0.042
8100	0.028	0.029	0.032	0.037	1:46:00 AM	10/18/2011 1:46	0.038
8160	0.034	0.036	0.041	0.053	1:47:00 AM	10/18/2011 1:47	0.055
8220	0.025	0.026	0.028	0.032	1:48:00 AM	10/18/2011 1:48	0.033
8280	0.025	0.026	0.028	0.032	1:49:00 AM	10/18/2011 1:49	0.032
8340	0.03	0.031	0.034	0.041	1:50:00 AM	10/18/2011 1:50	0.042
8400	0.025	0.026	0.027	0.03	1:51:00 AM	10/18/2011 1:51	0.031
8460	0.024	0.024	0.025	0.027	1:52:00 AM	10/18/2011 1:52	0.027
8520	0.029	0.029	0.03	0.032	1:53:00 AM	10/18/2011 1:53	0.032
8580	0.024	0.024	0.025	0.026	1:54:00 AM	10/18/2011 1:54	0.027
8640	0.023	0.024	0.024	0.026	1:55:00 AM	10/18/2011 1:55	0.026
8700	0.023	0.023	0.023	0.024	1:56:00 AM	10/18/2011 1:56	0.025
8760	0.023	0.023	0.024	0.025	1:57:00 AM	10/18/2011 1:57	0.025
8820	0.027	0.028	0.028	0.029	1:58:00 AM	10/18/2011 1:58	0.03
8880	0.023	0.023	0.023	0.024	1:59:00 AM	10/18/2011 1:59	0.025
8940	0.024	0.025	0.025	0.026	2:00:00 AM	10/18/2011 2:00	0.026
9000	0.027	0.027	0.027	0.029	2:01:00 AM	10/18/2011 2:01	0.03
9060	0.024	0.024	0.025	0.025	2:02:00 AM	10/18/2011 2:02	0.025
9120	0.023	0.023	0.024	0.025	2:03:00 AM	10/18/2011 2:03	0.025
9180	0.025	0.025	0.025	0.027	2:04:00 AM	10/18/2011 2:04	0.027
9240	0.023	0.024	0.024	0.026	2:05:00 AM	10/18/2011 2:05	0.026
9300	0.029	0.029	0.03	0.031	2:06:00 AM	10/18/2011 2:06	0.032
9360	0.027	0.027	0.029	0.033	2:07:00 AM	10/18/2011 2:07	0.033
9420	0.028	0.029	0.031	0.036	2:08:00 AM	10/18/2011 2:08	0.036
9480	0.028	0.029	0.03	0.034	2:09:00 AM	10/18/2011 2:09	0.034
9540	0.026	0.026	0.028	0.03	2:10:00 AM	10/18/2011 2:10	0.03
9600	0.027	0.028	0.029	0.031	2:11:00 AM	10/18/2011 2:11	0.032
9660	0.027	0.028	0.029	0.031	2:12:00 AM	10/18/2011 2:12	0.031
9720	0.023	0.024	0.024	0.026	2:13:00 AM	10/18/2011 2:13	0.026
9780	0.024	0.024	0.025	0.026	2:14:00 AM	10/18/2011 2:14	0.026
9840	0.025	0.025	0.026	0.027	2:15:00 AM	10/18/2011 2:15	0.029
9900	0.024	0.024	0.025	0.026	2:16:00 AM	10/18/2011 2:16	0.027
9960	0.022	0.022	0.023	0.024	2:17:00 AM	10/18/2011 2:17	0.024
10020	0.027	0.027	0.027	0.029	2:18:00 AM	10/18/2011 2:18	0.029
10080	0.03	0.03	0.031	0.032	2:19:00 AM	10/18/2011 2:19	0.032
10140	0.024	0.024	0.024	0.025	2:20:00 AM	10/18/2011 2:20	0.025
10200	0.024	0.024	0.025	0.026	2:21:00 AM	10/18/2011 2:21	0.027

10260	0.022	0.023	0.023	0.024	2:22:00 AM	10/18/2011 2:22	0.024
10320	0.023	0.023	0.023	0.025	2:23:00 AM	10/18/2011 2:23	0.025
10380	0.023	0.023	0.024	0.025	2:24:00 AM	10/18/2011 2:24	0.025
10440	0.023	0.024	0.024	0.025	2:25:00 AM	10/18/2011 2:25	0.025
10500	0.026	0.027	0.027	0.028	2:26:00 AM	10/18/2011 2:26	0.028
10560	0.027	0.027	0.027	0.028	2:27:00 AM	10/18/2011 2:27	0.029
10620	0.027	0.027	0.027	0.029	2:28:00 AM	10/18/2011 2:28	0.029
10680	0.023	0.024	0.024	0.025	2:29:00 AM	10/18/2011 2:29	0.025
10740	0.023	0.024	0.024	0.025	2:30:00 AM	10/18/2011 2:30	0.025
10800	0.035	0.035	0.036	0.036	2:31:00 AM	10/18/2011 2:31	0.037
10860	0.029	0.03	0.03	0.031	2:32:00 AM	10/18/2011 2:32	0.032
10920	0.026	0.027	0.027	0.028	2:33:00 AM	10/18/2011 2:33	0.028
10980	0.022	0.022	0.023	0.024	2:34:00 AM	10/18/2011 2:34	0.024
11040	0.022	0.022	0.022	0.024	2:35:00 AM	10/18/2011 2:35	0.024
11100	0.025	0.025	0.026	0.027	2:36:00 AM	10/18/2011 2:36	0.027
11160	0.022	0.022	0.022	0.023	2:37:00 AM	10/18/2011 2:37	0.023
11220	0.028	0.029	0.029	0.03	2:38:00 AM	10/18/2011 2:38	0.03
11280	0.025	0.025	0.025	0.027	2:39:00 AM	10/18/2011 2:39	0.027
11340	0.02	0.02	0.02	0.021	2:40:00 AM	10/18/2011 2:40	0.021
11400	0.025	0.025	0.026	0.027	2:41:00 AM	10/18/2011 2:41	0.028
11460	0.023	0.023	0.023	0.025	2:42:00 AM	10/18/2011 2:42	0.025
11520	0.022	0.022	0.023	0.024	2:43:00 AM	10/18/2011 2:43	0.024
11580	0.03	0.03	0.031	0.033	2:44:00 AM	10/18/2011 2:44	0.033
11640	0.023	0.023	0.024	0.025	2:45:00 AM	10/18/2011 2:45	0.025
11700	0.023	0.024	0.024	0.025	2:46:00 AM	10/18/2011 2:46	0.026
11760	0.022	0.022	0.023	0.023	2:47:00 AM	10/18/2011 2:47	0.024
11820	0.021	0.021	0.022	0.022	2:48:00 AM	10/18/2011 2:48	0.023
11880	0.022	0.022	0.023	0.024	2:49:00 AM	10/18/2011 2:49	0.024
11940	0.023	0.023	0.024	0.025	2:50:00 AM	10/18/2011 2:50	0.025
12000	0.022	0.022	0.022	0.023	2:51:00 AM	10/18/2011 2:51	0.023
12060	0.021	0.021	0.022	0.023	2:52:00 AM	10/18/2011 2:52	0.023
12120	0.021	0.021	0.021	0.022	2:53:00 AM	10/18/2011 2:53	0.022
12180	0.022	0.022	0.023	0.024	2:54:00 AM	10/18/2011 2:54	0.024
12240	0.025	0.025	0.026	0.027	2:55:00 AM	10/18/2011 2:55	0.027
12300	0.024	0.024	0.025	0.026	2:56:00 AM	10/18/2011 2:56	0.026
12360	0.03	0.03	0.031	0.032	2:57:00 AM	10/18/2011 2:57	0.032
12420	0.021	0.022	0.022	0.023	2:58:00 AM	10/18/2011 2:58	0.023
12480	0.023	0.023	0.023	0.024	2:59:00 AM	10/18/2011 2:59	0.025
12540	0.026	0.026	0.027	0.027	3:00:00 AM	10/18/2011 3:00	0.027
12600	0.021	0.021	0.022	0.023	3:01:00 AM	10/18/2011 3:01	0.023
12660	0.022	0.022	0.022	0.024	3:02:00 AM	10/18/2011 3:02	0.024
12720	0.023	0.024	0.024	0.025	3:03:00 AM	10/18/2011 3:03	0.025
12780	0.024	0.024	0.024	0.025	3:04:00 AM	10/18/2011 3:04	0.026
12840	0.021	0.022	0.022	0.023	3:05:00 AM	10/18/2011 3:05	0.023
12900	0.023	0.023	0.023	0.024	3:06:00 AM	10/18/2011 3:06	0.024
12960	0.021	0.021	0.022	0.023	3:07:00 AM	10/18/2011 3:07	0.023
13020	0.022	0.023	0.023	0.024	3:08:00 AM	10/18/2011 3:08	0.024
13080	0.029	0.029	0.03	0.031	3:09:00 AM	10/18/2011 3:09	0.031
13140	0.024	0.024	0.024	0.026	3:10:00 AM	10/18/2011 3:10	0.026
13200	0.025	0.025	0.025	0.027	3:11:00 AM	10/18/2011 3:11	0.027
13260	0.024	0.024	0.025	0.025	3:12:00 AM	10/18/2011 3:12	0.025
13320	0.024	0.024	0.025	0.026	3:13:00 AM	10/18/2011 3:13	0.027
13380	0.031	0.031	0.032	0.033	3:14:00 AM	10/18/2011 3:14	0.034
13440	0.035	0.035	0.035	0.036	3:15:00 AM	10/18/2011 3:15	0.036
13500	0.024	0.024	0.024	0.026	3:16:00 AM	10/18/2011 3:16	0.027
13560	0.026	0.026	0.026	0.027	3:17:00 AM	10/18/2011 3:17	0.027
13620	0.024	0.025	0.025	0.026	3:18:00 AM	10/18/2011 3:18	0.026
13680	0.023	0.023	0.024	0.025	3:19:00 AM	10/18/2011 3:19	0.025
13740	0.024	0.024	0.025	0.026	3:20:00 AM	10/18/2011 3:20	0.026
13800	0.024	0.024	0.025	0.026	3:21:00 AM	10/18/2011 3:21	0.027
13860	0.023	0.023	0.023	0.024	3:22:00 AM	10/18/2011 3:22	0.024
13920	0.024	0.024	0.025	0.026	3:23:00 AM	10/18/2011 3:23	0.026
13980	0.024	0.024	0.025	0.026	3:24:00 AM	10/18/2011 3:24	0.026
14040	0.024	0.025	0.025	0.026	3:25:00 AM	10/18/2011 3:25	0.026
14100	0.028	0.028	0.029	0.03	3:26:00 AM	10/18/2011 3:26	0.03
14160	0.024	0.025	0.025	0.026	3:27:00 AM	10/18/2011 3:27	0.027
14220	0.023	0.023	0.023	0.025	3:28:00 AM	10/18/2011 3:28	0.025
14280	0.025	0.025	0.025	0.027	3:29:00 AM	10/18/2011 3:29	0.027
14340	0.024	0.024	0.025	0.026	3:30:00 AM	10/18/2011 3:30	0.026

14400	0.024	0.024	0.024	0.026	3:31:00 AM	10/18/2011 3:31	0.026
14460	0.023	0.024	0.024	0.026	3:32:00 AM	10/18/2011 3:32	0.026
14520	0.029	0.03	0.03	0.032	3:33:00 AM	10/18/2011 3:33	0.032
14580	0.027	0.028	0.028	0.03	3:34:00 AM	10/18/2011 3:34	0.03
14640	0.03	0.03	0.031	0.032	3:35:00 AM	10/18/2011 3:35	0.032
14700	0.025	0.026	0.026	0.028	3:36:00 AM	10/18/2011 3:36	0.029
14760	0.024	0.025	0.025	0.027	3:37:00 AM	10/18/2011 3:37	0.027
14820	0.024	0.025	0.025	0.027	3:38:00 AM	10/18/2011 3:38	0.027
14880	0.024	0.025	0.025	0.026	3:39:00 AM	10/18/2011 3:39	0.026
14940	0.027	0.028	0.028	0.029	3:40:00 AM	10/18/2011 3:40	0.029
15000	0.025	0.025	0.026	0.027	3:41:00 AM	10/18/2011 3:41	0.027
15060	0.026	0.026	0.027	0.028	3:42:00 AM	10/18/2011 3:42	0.029
15120	0.025	0.026	0.026	0.027	3:43:00 AM	10/18/2011 3:43	0.028
15180	0.027	0.027	0.028	0.029	3:44:00 AM	10/18/2011 3:44	0.029
15240	0.03	0.031	0.031	0.032	3:45:00 AM	10/18/2011 3:45	0.033
15300	0.026	0.026	0.026	0.027	3:46:00 AM	10/18/2011 3:46	0.027
15360	0.027	0.027	0.028	0.029	3:47:00 AM	10/18/2011 3:47	0.029
15420	0.025	0.026	0.026	0.028	3:48:00 AM	10/18/2011 3:48	0.028
15480	0.025	0.026	0.026	0.027	3:49:00 AM	10/18/2011 3:49	0.027
15540	0.026	0.027	0.027	0.028	3:50:00 AM	10/18/2011 3:50	0.028
15600	0.025	0.025	0.026	0.028	3:51:00 AM	10/18/2011 3:51	0.028
15660	0.027	0.027	0.028	0.028	3:52:00 AM	10/18/2011 3:52	0.028
15720	0.027	0.028	0.028	0.029	3:53:00 AM	10/18/2011 3:53	0.029
15780	0.026	0.027	0.027	0.029	3:54:00 AM	10/18/2011 3:54	0.029
15840	0.025	0.025	0.026	0.027	3:55:00 AM	10/18/2011 3:55	0.027
15900	0.026	0.026	0.027	0.028	3:56:00 AM	10/18/2011 3:56	0.028
15960	0.026	0.026	0.026	0.028	3:57:00 AM	10/18/2011 3:57	0.028
16020	0.036	0.037	0.038	0.041	3:58:00 AM	10/18/2011 3:58	0.042
16080	0.032	0.032	0.033	0.035	3:59:00 AM	10/18/2011 3:59	0.035
16140	0.031	0.032	0.033	0.034	4:00:00 AM	10/18/2011 4:00	0.034
16200	0.027	0.027	0.028	0.029	4:01:00 AM	10/18/2011 4:01	0.029
16260	0.031	0.031	0.032	0.034	4:02:00 AM	10/18/2011 4:02	0.036
16320	0.028	0.029	0.029	0.03	4:03:00 AM	10/18/2011 4:03	0.031
16380	0.037	0.037	0.038	0.039	4:04:00 AM	10/18/2011 4:04	0.039
16440	0.027	0.027	0.028	0.029	4:05:00 AM	10/18/2011 4:05	0.029
16500	0.028	0.028	0.029	0.03	4:06:00 AM	10/18/2011 4:06	0.03
16560	0.027	0.028	0.028	0.029	4:07:00 AM	10/18/2011 4:07	0.029
16620	0.027	0.027	0.028	0.029	4:08:00 AM	10/18/2011 4:08	0.03
16680	0.026	0.026	0.027	0.028	4:09:00 AM	10/18/2011 4:09	0.028
16740	0.027	0.028	0.028	0.03	4:10:00 AM	10/18/2011 4:10	0.03
16800	0.026	0.027	0.027	0.029	4:11:00 AM	10/18/2011 4:11	0.029
16860	0.024	0.024	0.025	0.026	4:12:00 AM	10/18/2011 4:12	0.026
16920	0.025	0.025	0.026	0.027	4:13:00 AM	10/18/2011 4:13	0.027
16980	0.022	0.022	0.023	0.025	4:14:00 AM	10/18/2011 4:14	0.025
17040	0.022	0.022	0.023	0.024	4:15:00 AM	10/18/2011 4:15	0.025
17100	0.029	0.03	0.03	0.032	4:16:00 AM	10/18/2011 4:16	0.032
17160	0.024	0.025	0.026	0.027	4:17:00 AM	10/18/2011 4:17	0.027
17220	0.023	0.023	0.024	0.024	4:18:00 AM	10/18/2011 4:18	0.024
17280	0.03	0.03	0.031	0.033	4:19:00 AM	10/18/2011 4:19	0.033
17340	0.023	0.023	0.023	0.025	4:20:00 AM	10/18/2011 4:20	0.025
17400	0.021	0.021	0.022	0.024	4:21:00 AM	10/18/2011 4:21	0.024
17460	0.025	0.025	0.026	0.027	4:22:00 AM	10/18/2011 4:22	0.027
17520	0.025	0.026	0.026	0.029	4:23:00 AM	10/18/2011 4:23	0.029
17580	0.021	0.022	0.022	0.025	4:24:00 AM	10/18/2011 4:24	0.025
17640	0.019	0.02	0.02	0.021	4:25:00 AM	10/18/2011 4:25	0.022
17700	0.019	0.019	0.02	0.021	4:26:00 AM	10/18/2011 4:26	0.021
17760	0.021	0.021	0.022	0.023	4:27:00 AM	10/18/2011 4:27	0.023
17820	0.022	0.022	0.023	0.025	4:28:00 AM	10/18/2011 4:28	0.025
17880	0.016	0.016	0.017	0.017	4:29:00 AM	10/18/2011 4:29	0.017

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533112903
Firmware Version	2.8
Calibration Date	7/18/2011
Test Name	MANUAL_010
Test Start Time	23:34:55
Test Start Date	10/17/2011
Test Length [D:H:M]	0:04:51
Test Interval [M:S]	1:00
PM1 Average [mg/m3]	0.027
PM1 Minimum [mg/m3]	0.015
PM1 Maximum [mg/m3]	0.215
PM1 TWA [mg/m3]	0.016
PM2.5 Average [mg/m3]	0.027
PM2.5 Minimum [mg/m3]	0.015
PM2.5 Maximum [mg/m3]	0.217
PM2.5 TWA [mg/m3]	0.016
PM4 Average [mg/m3]	0.028
PM4 Minimum [mg/m3]	0.016
PM4 Maximum [mg/m3]	0.223
PM4 TWA [mg/m3]	0.017
PM10 Average [mg/m3]	0.03
PM10 Minimum [mg/m3]	0.017
PM10 Maximum [mg/m3]	0.294
PM10 TWA [mg/m3]	0.018
TOTAL Average [mg/m3]	0.031
TOTAL Minimum [mg/m3]	0.017
TOTAL Maximum [mg/m3]	0.378
TOTAL TWA [mg/m3]	0.019
Photometric User Cal	1
Size Correction User Cal	1
Flow User Cal	1
Errors	
Number of Samples	291

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	23:34:55	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.215	0.217	0.223	0.294	23:35:55	10/17/2011 23:35	0.378		
120	0.018	0.019	0.019	0.021	23:36:55	10/17/2011 23:36	0.022		
180	0.02	0.021	0.021	0.022	23:37:55	10/17/2011 23:37	0.023		
240	0.017	0.018	0.018	0.019	23:38:55	10/17/2011 23:38	0.02		
300	0.019	0.02	0.021	0.024	23:39:55	10/17/2011 23:39	0.027		
360	0.096	0.097	0.101	0.138	23:40:55	10/17/2011 23:40	0.177		
420	0.019	0.02	0.02	0.022	23:41:55	10/17/2011 23:41	0.023		
480	0.015	0.015	0.016	0.017	23:42:55	10/17/2011 23:42	0.017		
540	0.015	0.015	0.016	0.017	23:43:55	10/17/2011 23:43	0.018		
600	0.016	0.016	0.016	0.018	23:44:55	10/17/2011 23:44	0.021		
660	0.018	0.018	0.018	0.02	23:45:55	10/17/2011 23:45	0.02		
720	0.02	0.021	0.021	0.023	23:46:55	10/17/2011 23:46	0.024		
780	0.026	0.026	0.027	0.028	23:47:55	10/17/2011 23:47	0.028		
840	0.026	0.026	0.027	0.027	23:48:55	10/17/2011 23:48	0.028		
900	0.023	0.023	0.023	0.025	23:49:55	10/17/2011 23:49	0.025		
960	0.021	0.021	0.022	0.023	23:50:55	10/17/2011 23:50	0.023		
1020	0.018	0.018	0.018	0.019	23:51:55	10/17/2011 23:51	0.019		
1080	0.021	0.022	0.022	0.023	23:52:55	10/17/2011 23:52	0.023		
1140	0.069	0.069	0.071	0.087	23:53:55	10/17/2011 23:53	0.099		
1200	0.174	0.174	0.177	0.209	23:54:55	10/17/2011 23:54	0.243		
1260	0.019	0.019	0.019	0.02	23:55:55	10/17/2011 23:55	0.022		
1320	0.019	0.019	0.019	0.02	23:56:55	10/17/2011 23:56	0.02		
1380	0.019	0.02	0.02	0.021	23:57:55	10/17/2011 23:57	0.022		
1440	0.019	0.02	0.02	0.021	23:58:55	10/17/2011 23:58	0.021		
1500	0.02	0.02	0.02	0.021	23:59:55	10/17/2011 23:59	0.021		
1560	0.021	0.021	0.021	0.023	0:00:55	10/18/2011 0:00	0.024		
1620	0.021	0.021	0.021	0.022	0:01:55	10/18/2011 0:01	0.023		
1680	0.024	0.025	0.025	0.026	0:02:55	10/18/2011 0:02	0.026		
1740	0.029	0.03	0.03	0.031	0:03:55	10/18/2011 0:03	0.032		
1800	0.017	0.018	0.018	0.019	0:04:55	10/18/2011 0:04	0.019		
1860	0.016	0.016	0.017	0.018	0:05:55	10/18/2011 0:05	0.018		
1920	0.016	0.016	0.016	0.018	0:06:55	10/18/2011 0:06	0.018		

1980	0.017	0.017	0.017	0.018	0:07:55	10/18/2011 0:07	0.019
2040	0.023	0.023	0.024	0.025	0:08:55	10/18/2011 0:08	0.025
2100	0.02	0.02	0.02	0.022	0:09:55	10/18/2011 0:09	0.024
2160	0.052	0.052	0.053	0.063	0:10:55	10/18/2011 0:10	0.071
2220	0.019	0.02	0.02	0.021	0:11:55	10/18/2011 0:11	0.021
2280	0.021	0.022	0.022	0.023	0:12:55	10/18/2011 0:12	0.024
2340	0.023	0.024	0.024	0.025	0:13:55	10/18/2011 0:13	0.025
2400	0.021	0.022	0.022	0.023	0:14:55	10/18/2011 0:14	0.024
2460	0.023	0.024	0.024	0.025	0:15:55	10/18/2011 0:15	0.025
2520	0.021	0.022	0.022	0.024	0:16:55	10/18/2011 0:16	0.024
2580	0.024	0.024	0.025	0.027	0:17:55	10/18/2011 0:17	0.027
2640	0.025	0.025	0.025	0.026	0:18:55	10/18/2011 0:18	0.027
2700	0.025	0.025	0.025	0.026	0:19:55	10/18/2011 0:19	0.026
2760	0.03	0.03	0.031	0.032	0:20:55	10/18/2011 0:20	0.033
2820	0.024	0.024	0.024	0.025	0:21:55	10/18/2011 0:21	0.025
2880	0.036	0.036	0.037	0.043	0:22:55	10/18/2011 0:22	0.048
2940	0.019	0.02	0.02	0.021	0:23:55	10/18/2011 0:23	0.021
3000	0.019	0.019	0.019	0.02	0:24:55	10/18/2011 0:24	0.021
3060	0.023	0.023	0.024	0.025	0:25:55	10/18/2011 0:25	0.025
3120	0.022	0.022	0.023	0.024	0:26:55	10/18/2011 0:26	0.024
3180	0.024	0.024	0.024	0.025	0:27:55	10/18/2011 0:27	0.026
3240	0.024	0.024	0.025	0.026	0:28:55	10/18/2011 0:28	0.027
3300	0.022	0.022	0.023	0.024	0:29:55	10/18/2011 0:29	0.024
3360	0.021	0.022	0.022	0.023	0:30:55	10/18/2011 0:30	0.024
3420	0.023	0.024	0.024	0.025	0:31:55	10/18/2011 0:31	0.025
3480	0.023	0.023	0.024	0.024	0:32:55	10/18/2011 0:32	0.025
3540	0.025	0.025	0.026	0.027	0:33:55	10/18/2011 0:33	0.027
3600	0.024	0.025	0.025	0.027	0:34:55	10/18/2011 0:34	0.027
3660	0.025	0.026	0.026	0.027	0:35:55	10/18/2011 0:35	0.028
3720	0.023	0.024	0.024	0.026	0:36:55	10/18/2011 0:36	0.026
3780	0.05	0.05	0.051	0.059	0:37:55	10/18/2011 0:37	0.062
3840	0.024	0.024	0.024	0.025	0:38:55	10/18/2011 0:38	0.026
3900	0.029	0.03	0.03	0.031	0:39:55	10/18/2011 0:39	0.031
3960	0.027	0.027	0.028	0.029	0:40:55	10/18/2011 0:40	0.03
4020	0.026	0.026	0.026	0.028	0:41:55	10/18/2011 0:41	0.028
4080	0.025	0.026	0.026	0.027	0:42:55	10/18/2011 0:42	0.028
4140	0.022	0.022	0.022	0.024	0:43:55	10/18/2011 0:43	0.024
4200	0.023	0.023	0.024	0.024	0:44:55	10/18/2011 0:44	0.025
4260	0.023	0.024	0.024	0.025	0:45:55	10/18/2011 0:45	0.026
4320	0.025	0.026	0.026	0.027	0:46:55	10/18/2011 0:46	0.027
4380	0.023	0.023	0.023	0.025	0:47:55	10/18/2011 0:47	0.025
4440	0.02	0.021	0.021	0.022	0:48:55	10/18/2011 0:48	0.022
4500	0.022	0.022	0.023	0.024	0:49:55	10/18/2011 0:49	0.024
4560	0.023	0.024	0.025	0.026	0:50:55	10/18/2011 0:50	0.027
4620	0.025	0.025	0.025	0.026	0:51:55	10/18/2011 0:51	0.027
4680	0.025	0.025	0.026	0.027	0:52:55	10/18/2011 0:52	0.028
4740	0.024	0.024	0.024	0.026	0:53:55	10/18/2011 0:53	0.026
4800	0.024	0.024	0.025	0.026	0:54:55	10/18/2011 0:54	0.027
4860	0.024	0.024	0.025	0.027	0:55:55	10/18/2011 0:55	0.028
4920	0.027	0.027	0.027	0.028	0:56:55	10/18/2011 0:56	0.028
4980	0.027	0.028	0.028	0.029	0:57:55	10/18/2011 0:57	0.029
5040	0.026	0.026	0.027	0.028	0:58:55	10/18/2011 0:58	0.028
5100	0.026	0.026	0.027	0.029	0:59:55	10/18/2011 0:59	0.029
5160	0.027	0.027	0.027	0.029	1:00:55	10/18/2011 1:00	0.029
5220	0.036	0.037	0.037	0.038	1:01:55	10/18/2011 1:01	0.039
5280	0.036	0.036	0.037	0.038	1:02:55	10/18/2011 1:02	0.038
5340	0.032	0.032	0.033	0.034	1:03:55	10/18/2011 1:03	0.034
5400	0.031	0.032	0.032	0.033	1:04:55	10/18/2011 1:04	0.033
5460	0.028	0.028	0.029	0.03	1:05:55	10/18/2011 1:05	0.03
5520	0.029	0.03	0.03	0.032	1:06:55	10/18/2011 1:06	0.033
5580	0.026	0.027	0.027	0.029	1:07:55	10/18/2011 1:07	0.029
5640	0.034	0.034	0.035	0.04	1:08:55	10/18/2011 1:08	0.043
5700	0.023	0.023	0.024	0.025	1:09:55	10/18/2011 1:09	0.026
5760	0.023	0.023	0.024	0.026	1:10:55	10/18/2011 1:10	0.026
5820	0.023	0.024	0.024	0.026	1:11:55	10/18/2011 1:11	0.026
5880	0.023	0.023	0.024	0.025	1:12:55	10/18/2011 1:12	0.025
5940	0.024	0.024	0.024	0.026	1:13:55	10/18/2011 1:13	0.026
6000	0.023	0.023	0.024	0.025	1:14:55	10/18/2011 1:14	0.025
6060	0.023	0.023	0.024	0.025	1:15:55	10/18/2011 1:15	0.025

6120	0.022	0.023	0.023	0.025	1:16:55	10/18/2011 1:16	0.025
6180	0.022	0.023	0.023	0.025	1:17:55	10/18/2011 1:17	0.025
6240	0.025	0.025	0.025	0.026	1:18:55	10/18/2011 1:18	0.026
6300	0.023	0.024	0.024	0.025	1:19:55	10/18/2011 1:19	0.025
6360	0.024	0.024	0.025	0.026	1:20:55	10/18/2011 1:20	0.026
6420	0.021	0.021	0.021	0.022	1:21:55	10/18/2011 1:21	0.023
6480	0.02	0.021	0.021	0.022	1:22:55	10/18/2011 1:22	0.022
6540	0.022	0.022	0.023	0.024	1:23:55	10/18/2011 1:23	0.024
6600	0.019	0.02	0.02	0.02	1:24:55	10/18/2011 1:24	0.02
6660	0.021	0.021	0.021	0.022	1:25:55	10/18/2011 1:25	0.023
6720	0.022	0.022	0.022	0.024	1:26:55	10/18/2011 1:26	0.024
6780	0.022	0.023	0.023	0.024	1:27:55	10/18/2011 1:27	0.024
6840	0.023	0.024	0.024	0.025	1:28:55	10/18/2011 1:28	0.025
6900	0.022	0.022	0.023	0.023	1:29:55	10/18/2011 1:29	0.023
6960	0.021	0.022	0.022	0.023	1:30:55	10/18/2011 1:30	0.023
7020	0.023	0.024	0.024	0.027	1:31:55	10/18/2011 1:31	0.029
7080	0.023	0.023	0.023	0.024	1:32:55	10/18/2011 1:32	0.024
7140	0.023	0.023	0.023	0.024	1:33:55	10/18/2011 1:33	0.024
7200	0.023	0.023	0.023	0.024	1:34:55	10/18/2011 1:34	0.024
7260	0.023	0.023	0.023	0.024	1:35:55	10/18/2011 1:35	0.024
7320	0.021	0.021	0.022	0.022	1:36:55	10/18/2011 1:36	0.022
7380	0.024	0.025	0.025	0.026	1:37:55	10/18/2011 1:37	0.027
7440	0.025	0.025	0.026	0.027	1:38:55	10/18/2011 1:38	0.027
7500	0.025	0.025	0.025	0.026	1:39:55	10/18/2011 1:39	0.026
7560	0.026	0.026	0.027	0.028	1:40:55	10/18/2011 1:40	0.028
7620	0.026	0.027	0.027	0.028	1:41:55	10/18/2011 1:41	0.028
7680	0.024	0.024	0.025	0.027	1:42:55	10/18/2011 1:42	0.027
7740	0.026	0.026	0.028	0.03	1:43:55	10/18/2011 1:43	0.031
7800	0.028	0.029	0.032	0.036	1:44:55	10/18/2011 1:44	0.036
7860	0.03	0.031	0.033	0.038	1:45:55	10/18/2011 1:45	0.039
7920	0.025	0.026	0.028	0.031	1:46:55	10/18/2011 1:46	0.032
7980	0.027	0.028	0.029	0.036	1:47:55	10/18/2011 1:47	0.038
8040	0.032	0.033	0.035	0.04	1:48:55	10/18/2011 1:48	0.041
8100	0.029	0.03	0.032	0.037	1:49:55	10/18/2011 1:49	0.038
8160	0.03	0.031	0.033	0.035	1:50:55	10/18/2011 1:50	0.035
8220	0.024	0.025	0.025	0.027	1:51:55	10/18/2011 1:51	0.027
8280	0.026	0.027	0.028	0.029	1:52:55	10/18/2011 1:52	0.03
8340	0.024	0.024	0.025	0.026	1:53:55	10/18/2011 1:53	0.026
8400	0.023	0.023	0.024	0.025	1:54:55	10/18/2011 1:54	0.026
8460	0.024	0.024	0.025	0.026	1:55:55	10/18/2011 1:55	0.027
8520	0.023	0.023	0.024	0.024	1:56:55	10/18/2011 1:56	0.024
8580	0.023	0.023	0.023	0.024	1:57:55	10/18/2011 1:57	0.024
8640	0.023	0.023	0.023	0.024	1:58:55	10/18/2011 1:58	0.024
8700	0.024	0.024	0.025	0.026	1:59:55	10/18/2011 1:59	0.026
8760	0.024	0.024	0.024	0.025	2:00:55	10/18/2011 2:00	0.026
8820	0.024	0.024	0.024	0.025	2:01:55	10/18/2011 2:01	0.025
8880	0.026	0.026	0.027	0.028	2:02:55	10/18/2011 2:02	0.028
8940	0.028	0.029	0.029	0.035	2:03:55	10/18/2011 2:03	0.04
9000	0.024	0.025	0.025	0.027	2:04:55	10/18/2011 2:04	0.027
9060	0.026	0.026	0.027	0.029	2:05:55	10/18/2011 2:05	0.029
9120	0.027	0.027	0.028	0.03	2:06:55	10/18/2011 2:06	0.03
9180	0.026	0.027	0.028	0.03	2:07:55	10/18/2011 2:07	0.031
9240	0.028	0.028	0.03	0.032	2:08:55	10/18/2011 2:08	0.032
9300	0.03	0.03	0.032	0.034	2:09:55	10/18/2011 2:09	0.034
9360	0.026	0.027	0.027	0.029	2:10:55	10/18/2011 2:10	0.029
9420	0.025	0.026	0.026	0.028	2:11:55	10/18/2011 2:11	0.028
9480	0.025	0.025	0.026	0.027	2:12:55	10/18/2011 2:12	0.027
9540	0.024	0.024	0.024	0.026	2:13:55	10/18/2011 2:13	0.026
9600	0.025	0.025	0.026	0.027	2:14:55	10/18/2011 2:14	0.028
9660	0.023	0.024	0.024	0.026	2:15:55	10/18/2011 2:15	0.026
9720	0.024	0.024	0.024	0.026	2:16:55	10/18/2011 2:16	0.028
9780	0.023	0.023	0.024	0.025	2:17:55	10/18/2011 2:17	0.025
9840	0.023	0.023	0.024	0.025	2:18:55	10/18/2011 2:18	0.025
9900	0.022	0.023	0.023	0.024	2:19:55	10/18/2011 2:19	0.024
9960	0.023	0.023	0.023	0.024	2:20:55	10/18/2011 2:20	0.024
10020	0.023	0.023	0.024	0.024	2:21:55	10/18/2011 2:21	0.024
10080	0.023	0.024	0.024	0.025	2:22:55	10/18/2011 2:22	0.025
10140	0.023	0.024	0.024	0.025	2:23:55	10/18/2011 2:23	0.025
10200	0.023	0.024	0.024	0.025	2:24:55	10/18/2011 2:24	0.026

10260	0.023	0.024	0.024	0.025	2:25:55	10/18/2011 2:25	0.025
10320	0.024	0.024	0.025	0.026	2:26:55	10/18/2011 2:26	0.026
10380	0.024	0.024	0.024	0.025	2:27:55	10/18/2011 2:27	0.025
10440	0.024	0.024	0.024	0.025	2:28:55	10/18/2011 2:28	0.025
10500	0.024	0.025	0.025	0.026	2:29:55	10/18/2011 2:29	0.026
10560	0.026	0.027	0.027	0.03	2:30:55	10/18/2011 2:30	0.034
10620	0.027	0.027	0.028	0.028	2:31:55	10/18/2011 2:31	0.028
10680	0.029	0.029	0.03	0.031	2:32:55	10/18/2011 2:32	0.031
10740	0.026	0.026	0.027	0.028	2:33:55	10/18/2011 2:33	0.028
10800	0.026	0.026	0.026	0.027	2:34:55	10/18/2011 2:34	0.027
10860	0.027	0.028	0.028	0.029	2:35:55	10/18/2011 2:35	0.029
10920	0.022	0.022	0.023	0.023	2:36:55	10/18/2011 2:36	0.023
10980	0.022	0.022	0.022	0.023	2:37:55	10/18/2011 2:37	0.023
11040	0.021	0.022	0.022	0.022	2:38:55	10/18/2011 2:38	0.022
11100	0.021	0.022	0.022	0.023	2:39:55	10/18/2011 2:39	0.023
11160	0.021	0.022	0.022	0.023	2:40:55	10/18/2011 2:40	0.023
11220	0.021	0.022	0.022	0.023	2:41:55	10/18/2011 2:41	0.023
11280	0.023	0.023	0.023	0.024	2:42:55	10/18/2011 2:42	0.025
11340	0.022	0.022	0.023	0.026	2:43:55	10/18/2011 2:43	0.028
11400	0.021	0.021	0.021	0.022	2:44:55	10/18/2011 2:44	0.022
11460	0.022	0.022	0.023	0.023	2:45:55	10/18/2011 2:45	0.023
11520	0.021	0.021	0.021	0.022	2:46:55	10/18/2011 2:46	0.022
11580	0.023	0.024	0.024	0.025	2:47:55	10/18/2011 2:47	0.025
11640	0.024	0.024	0.024	0.025	2:48:55	10/18/2011 2:48	0.025
11700	0.025	0.025	0.026	0.027	2:49:55	10/18/2011 2:49	0.027
11760	0.024	0.024	0.025	0.026	2:50:55	10/18/2011 2:50	0.026
11820	0.021	0.021	0.022	0.022	2:51:55	10/18/2011 2:51	0.023
11880	0.021	0.022	0.022	0.022	2:52:55	10/18/2011 2:52	0.022
11940	0.021	0.022	0.022	0.022	2:53:55	10/18/2011 2:53	0.023
12000	0.022	0.022	0.022	0.023	2:54:55	10/18/2011 2:54	0.023
12060	0.022	0.022	0.022	0.023	2:55:55	10/18/2011 2:55	0.023
12120	0.021	0.022	0.022	0.022	2:56:55	10/18/2011 2:56	0.023
12180	0.021	0.022	0.022	0.022	2:57:55	10/18/2011 2:57	0.022
12240	0.022	0.022	0.022	0.024	2:58:55	10/18/2011 2:58	0.024
12300	0.024	0.024	0.025	0.028	2:59:55	10/18/2011 2:59	0.029
12360	0.021	0.022	0.022	0.023	3:00:55	10/18/2011 3:00	0.023
12420	0.022	0.022	0.023	0.023	3:01:55	10/18/2011 3:01	0.024
12480	0.022	0.022	0.023	0.023	3:02:55	10/18/2011 3:02	0.023
12540	0.022	0.022	0.022	0.023	3:03:55	10/18/2011 3:03	0.023
12600	0.02	0.021	0.021	0.021	3:04:55	10/18/2011 3:04	0.021
12660	0.021	0.021	0.021	0.022	3:05:55	10/18/2011 3:05	0.022
12720	0.021	0.021	0.021	0.022	3:06:55	10/18/2011 3:06	0.022
12780	0.02	0.021	0.021	0.022	3:07:55	10/18/2011 3:07	0.022
12840	0.021	0.022	0.022	0.023	3:08:55	10/18/2011 3:08	0.023
12900	0.023	0.023	0.024	0.024	3:09:55	10/18/2011 3:09	0.024
12960	0.023	0.024	0.024	0.025	3:10:55	10/18/2011 3:10	0.025
13020	0.024	0.024	0.025	0.026	3:11:55	10/18/2011 3:11	0.026
13080	0.026	0.026	0.026	0.027	3:12:55	10/18/2011 3:12	0.027
13140	0.054	0.055	0.056	0.057	3:13:55	10/18/2011 3:13	0.058
13200	0.029	0.03	0.03	0.031	3:14:55	10/18/2011 3:14	0.032
13260	0.033	0.034	0.034	0.038	3:15:55	10/18/2011 3:15	0.043
13320	0.025	0.025	0.026	0.026	3:16:55	10/18/2011 3:16	0.026
13380	0.024	0.024	0.025	0.025	3:17:55	10/18/2011 3:17	0.025
13440	0.024	0.025	0.025	0.026	3:18:55	10/18/2011 3:18	0.026
13500	0.026	0.026	0.026	0.027	3:19:55	10/18/2011 3:19	0.027
13560	0.025	0.026	0.026	0.027	3:20:55	10/18/2011 3:20	0.027
13620	0.024	0.024	0.025	0.025	3:21:55	10/18/2011 3:21	0.026
13680	0.024	0.024	0.025	0.025	3:22:55	10/18/2011 3:22	0.026
13740	0.024	0.024	0.025	0.025	3:23:55	10/18/2011 3:23	0.025
13800	0.024	0.025	0.025	0.025	3:24:55	10/18/2011 3:24	0.025
13860	0.024	0.024	0.025	0.025	3:25:55	10/18/2011 3:25	0.025
13920	0.024	0.025	0.025	0.026	3:26:55	10/18/2011 3:26	0.026
13980	0.035	0.035	0.036	0.043	3:27:55	10/18/2011 3:27	0.05
14040	0.025	0.025	0.025	0.027	3:28:55	10/18/2011 3:28	0.027
14100	0.025	0.025	0.025	0.026	3:29:55	10/18/2011 3:29	0.026
14160	0.024	0.024	0.025	0.026	3:30:55	10/18/2011 3:30	0.026
14220	0.023	0.024	0.024	0.025	3:31:55	10/18/2011 3:31	0.025
14280	0.024	0.024	0.024	0.025	3:32:55	10/18/2011 3:32	0.025
14340	0.024	0.025	0.025	0.026	3:33:55	10/18/2011 3:33	0.026

14400	0.028	0.028	0.029	0.031	3:34:55	10/18/2011 3:34	0.031
14460	0.026	0.026	0.027	0.028	3:35:55	10/18/2011 3:35	0.028
14520	0.026	0.026	0.027	0.028	3:36:55	10/18/2011 3:36	0.028
14580	0.026	0.026	0.027	0.028	3:37:55	10/18/2011 3:37	0.028
14640	0.027	0.027	0.028	0.029	3:38:55	10/18/2011 3:38	0.029
14700	0.026	0.026	0.027	0.028	3:39:55	10/18/2011 3:39	0.028
14760	0.026	0.027	0.027	0.028	3:40:55	10/18/2011 3:40	0.028
14820	0.025	0.025	0.026	0.027	3:41:55	10/18/2011 3:41	0.027
14880	0.027	0.027	0.028	0.029	3:42:55	10/18/2011 3:42	0.029
14940	0.04	0.041	0.042	0.05	3:43:55	10/18/2011 3:43	0.057
15000	0.025	0.026	0.026	0.027	3:44:55	10/18/2011 3:44	0.027
15060	0.025	0.025	0.025	0.026	3:45:55	10/18/2011 3:45	0.026
15120	0.025	0.025	0.026	0.026	3:46:55	10/18/2011 3:46	0.026
15180	0.026	0.026	0.026	0.027	3:47:55	10/18/2011 3:47	0.027
15240	0.025	0.026	0.026	0.027	3:48:55	10/18/2011 3:48	0.027
15300	0.025	0.026	0.026	0.027	3:49:55	10/18/2011 3:49	0.027
15360	0.025	0.025	0.025	0.026	3:50:55	10/18/2011 3:50	0.026
15420	0.024	0.025	0.025	0.026	3:51:55	10/18/2011 3:51	0.026
15480	0.024	0.024	0.025	0.025	3:52:55	10/18/2011 3:52	0.026
15540	0.025	0.025	0.025	0.026	3:53:55	10/18/2011 3:53	0.026
15600	0.025	0.025	0.025	0.026	3:54:55	10/18/2011 3:54	0.027
15660	0.025	0.026	0.026	0.027	3:55:55	10/18/2011 3:55	0.027
15720	0.025	0.025	0.026	0.027	3:56:55	10/18/2011 3:56	0.027
15780	0.095	0.096	0.097	0.098	3:57:55	10/18/2011 3:57	0.099
15840	0.039	0.04	0.04	0.042	3:58:55	10/18/2011 3:58	0.042
15900	0.029	0.029	0.03	0.031	3:59:55	10/18/2011 3:59	0.031
15960	0.028	0.028	0.028	0.029	4:00:55	10/18/2011 4:00	0.029
16020	0.027	0.028	0.028	0.029	4:01:55	10/18/2011 4:01	0.029
16080	0.026	0.027	0.027	0.029	4:02:55	10/18/2011 4:02	0.029
16140	0.027	0.027	0.027	0.029	4:03:55	10/18/2011 4:03	0.03
16200	0.027	0.027	0.028	0.029	4:04:55	10/18/2011 4:04	0.029
16260	0.15	0.15	0.153	0.176	4:05:55	10/18/2011 4:05	0.195
16320	0.031	0.032	0.032	0.033	4:06:55	10/18/2011 4:06	0.033
16380	0.031	0.031	0.031	0.033	4:07:55	10/18/2011 4:07	0.033
16440	0.031	0.031	0.032	0.033	4:08:55	10/18/2011 4:08	0.034
16500	0.03	0.031	0.031	0.032	4:09:55	10/18/2011 4:09	0.032
16560	0.03	0.03	0.03	0.032	4:10:55	10/18/2011 4:10	0.032
16620	0.029	0.029	0.029	0.031	4:11:55	10/18/2011 4:11	0.031
16680	0.029	0.029	0.029	0.031	4:12:55	10/18/2011 4:12	0.031
16740	0.026	0.026	0.026	0.028	4:13:55	10/18/2011 4:13	0.028
16800	0.024	0.024	0.025	0.025	4:14:55	10/18/2011 4:14	0.025
16860	0.024	0.025	0.025	0.026	4:15:55	10/18/2011 4:15	0.026
16920	0.032	0.032	0.033	0.034	4:16:55	10/18/2011 4:16	0.034
16980	0.025	0.025	0.026	0.026	4:17:55	10/18/2011 4:17	0.026
17040	0.024	0.024	0.025	0.025	4:18:55	10/18/2011 4:18	0.025
17100	0.024	0.024	0.024	0.025	4:19:55	10/18/2011 4:19	0.025
17160	0.025	0.025	0.026	0.027	4:20:55	10/18/2011 4:20	0.027
17220	0.026	0.026	0.027	0.029	4:21:55	10/18/2011 4:21	0.03
17280	0.025	0.025	0.026	0.027	4:22:55	10/18/2011 4:22	0.028
17340	0.025	0.025	0.026	0.027	4:23:55	10/18/2011 4:23	0.027
17400	0.024	0.025	0.025	0.026	4:24:55	10/18/2011 4:24	0.027
17460	0.023	0.023	0.023	0.024	4:25:55	10/18/2011 4:25	0.024

AECOM

Client: National Grid
Location: Lowe's Parking lot
Date: 10/18/11 - 10/19/11
Field Personnel: J. Ehlen

Project: Metropolitan
Project Number: 60137361
Weather: ~60°F, cloudy, little wind
Ambient Noise: ~75 dB

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
1050pm	0.3	0.020	0.0	0.0	0.020	90.4	Well install SB-21
1102pm	0.2	0.019	0.0	0.0	0.018	94.2	"
1117pm	0.2	0.017	0.0	0.0	0.018	91.0	"
1130pm	0.3	0.018	0.1	0.1	0.016	83.6	"
1143pm	0.2	0.023	0.0	0.1	0.025	92.4	"
1159pm	0.3	0.019	0.1	0.1	0.019	93.0	"
0013	0.3	0.022	0.0	0.2	0.024	91.1	"
0030	0.2	0.024	0.1	0.2	0.024	93.2	Grouting SB-21
0043	0.2	0.024	0.1	0.2	0.025	92.6	"
0059	0.2	0.022	0.1	0.2	0.025	91.4	"
0113	0.1	0.022	0.1	0.2	0.029	84.9	finished grouting, cleaning up around site

==========Event #4 information (begin)==========

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[Event #4 name:]--[Event #4]2011-10-18 22:52<-->2011-10-19 01:33

[Event start time:]--2011-10-18 22:52:42[Event end time:]--2011-10-19 01:33:42

==========Event #4 head information==========

Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-904624

Data Points: 161 Sample Period: 60 s Datalog Mode: Automatic

SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode

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Sensor Information : PID-Min(ppm)PID-Avg(ppm)PID-Max(ppm)

Measurement Gas : Isobutene

Calibration Time : 2011-10-18 22:02:002011-10-18 22:02:002011-10-18 22:02:00

Drift Value : --- --- ---

Low Alarm Levels : 21.738 21.738 21.738

High Alarm Levels : 43.476 43.476 43.476

Span Value : 100.000 100.000 100.000

Correction Factor : 1.00 1.00 1.00

Over Alarm Levels : 15000.000 15000.000 15000.000

==========Event #4 data informations==========

LINE#	Date/Time	PID-Max(ppm)	PID-Min(ppm)	PID-Avg(ppm)
1	10/18/2011 22:53	0.479	0.122	0.376
2	10/18/2011 22:54	0.356	0.306	0.333
3	10/18/2011 22:55	0.46	0.308	0.358
4	10/18/2011 22:56	0.316	0.282	0.294
5	10/18/2011 22:57	0.46	0.286	0.382
6	10/18/2011 22:58	0.447	0.293	0.364
7	10/18/2011 22:59	0.342	0.264	0.307
8	10/18/2011 23:00	0.381	0.271	0.322
9	10/18/2011 23:01	0.357	0.299	0.318
10	10/18/2011 23:02	0.319	0.235	0.269
11	10/18/2011 23:03	0.326	0.222	0.276
12	10/18/2011 23:04	0.313	0.213	0.253
13	10/18/2011 23:05	0.233	0.155	0.179
14	10/18/2011 23:06	0.266	0.142	0.172
15	10/18/2011 23:07	0.263	0.139	0.193
16	10/18/2011 23:08	0.228	0.168	0.197
17	10/18/2011 23:09	0.194	0.161	0.18
18	10/18/2011 23:10	0.196	0.152	0.171
19	10/18/2011 23:11	0.185	0.111	0.165
20	10/18/2011 23:12	0.187	0.114	0.169
21	10/18/2011 23:13	0.179	0.156	0.166
22	10/18/2011 23:14	0.181	0.158	0.169
23	10/18/2011 23:15	0.189	0.105	0.153
24	10/18/2011 23:16	0.203	0.165	0.185
25	10/18/2011 23:17	0.19	0.116	0.151
26	10/18/2011 23:18	0.193	0.099	0.138
27	10/18/2011 23:19	0.196	0.107	0.165
28	10/18/2011 23:20	0.211	0.128	0.177
29	10/18/2011 23:21	0.207	0.137	0.175
30	10/18/2011 23:22	0.208	0.12	0.166
31	10/18/2011 23:23	0.231	0.138	0.179
32	10/18/2011 23:24	0.224	0.133	0.184
33	10/18/2011 23:25	0.227	0.128	0.174
34	10/18/2011 23:26	0.236	0.146	0.185
35	10/18/2011 23:27	0.238	0.156	0.21
36	10/18/2011 23:28	0.25	0.172	0.212
37	10/18/2011 23:29	0.293	0.181	0.224
38	10/18/2011 23:30	0.298	0.191	0.233
39	10/18/2011 23:31	0.276	0.191	0.237
40	10/18/2011 23:32	0.282	0.2	0.26
41	10/18/2011 23:33	0.264	0.18	0.229
42	10/18/2011 23:34	0.281	0.184	0.231
43	10/18/2011 23:35	0.28	0.185	0.232
44	10/18/2011 23:36	0.278	0.189	0.231
45	10/18/2011 23:37	0.272	0.184	0.233
46	10/18/2011 23:38	0.284	0.192	0.247
47	10/18/2011 23:39	0.275	0.189	0.225
48	10/18/2011 23:40	0.281	0.193	0.235

49	10/18/2011 23:41	0.297	0.195	0.245
50	10/18/2011 23:42	0.29	0.2	0.249
51	10/18/2011 23:43	0.303	0.199	0.244
52	10/18/2011 23:44	0.285	0.199	0.233
53	10/18/2011 23:45	0.28	0.199	0.237
54	10/18/2011 23:46	0.295	0.199	0.238
55	10/18/2011 23:47	0.294	0.201	0.252
56	10/18/2011 23:48	0.3	0.206	0.248
57	10/18/2011 23:49	0.315	0.233	0.271
58	10/18/2011 23:50	0.313	0.229	0.268
59	10/18/2011 23:51	0.308	0.219	0.259
60	10/18/2011 23:52	0.319	0.21	0.261
61	10/18/2011 23:53	0.292	0.204	0.237
62	10/18/2011 23:54	0.279	0.188	0.229
63	10/18/2011 23:55	0.298	0.194	0.24
64	10/18/2011 23:56	0.31	0.203	0.253
65	10/18/2011 23:57	0.335	0.213	0.266
66	10/18/2011 23:58	0.334	0.226	0.279
67	10/18/2011 23:59	0.318	0.231	0.275
68	10/19/2011 0:00	0.31	0.229	0.269
69	10/19/2011 0:01	0.332	0.213	0.264
70	10/19/2011 0:02	0.331	0.23	0.267
71	10/19/2011 0:03	0.346	0.247	0.286
72	10/19/2011 0:04	0.344	0.234	0.293
73	10/19/2011 0:05	0.342	0.245	0.278
74	10/19/2011 0:06	0.337	0.222	0.269
75	10/19/2011 0:07	0.324	0.232	0.273
76	10/19/2011 0:08	0.337	0.212	0.265
77	10/19/2011 0:09	0.3	0.208	0.25
78	10/19/2011 0:10	0.307	0.214	0.25
79	10/19/2011 0:11	0.298	0.207	0.247
80	10/19/2011 0:12	0.29	0.212	0.25
81	10/19/2011 0:13	0.282	0.195	0.231
82	10/19/2011 0:14	0.29	0.185	0.242
83	10/19/2011 0:15	0.271	0.179	0.223
84	10/19/2011 0:16	0.296	0.188	0.247
85	10/19/2011 0:17	0.255	0.201	0.231
86	10/19/2011 0:18	0.299	0.206	0.248
87	10/19/2011 0:19	0.301	0.193	0.238
88	10/19/2011 0:20	0.299	0.196	0.236
89	10/19/2011 0:21	0.294	0.196	0.238
90	10/19/2011 0:22	0.275	0.177	0.218
91	10/19/2011 0:23	0.277	0.191	0.225
92	10/19/2011 0:24	0.278	0.197	0.234
93	10/19/2011 0:25	0.287	0.188	0.232
94	10/19/2011 0:26	0.271	0.186	0.226
95	10/19/2011 0:27	0.288	0.204	0.234
96	10/19/2011 0:28	0.298	0.21	0.245
97	10/19/2011 0:29	0.298	0.218	0.259
98	10/19/2011 0:30	0.288	0.203	0.242
99	10/19/2011 0:31	0.287	0.2	0.235
100	10/19/2011 0:32	0.262	0.176	0.213
101	10/19/2011 0:33	0.257	0.178	0.214
102	10/19/2011 0:34	0.257	0.173	0.207
103	10/19/2011 0:35	0.254	0.17	0.214
104	10/19/2011 0:36	0.248	0.169	0.206
105	10/19/2011 0:37	0.252	0.176	0.207
106	10/19/2011 0:38	0.245	0.166	0.205
107	10/19/2011 0:39	0.249	0.174	0.208
108	10/19/2011 0:40	0.275	0.174	0.207
109	10/19/2011 0:41	0.256	0.184	0.218
110	10/19/2011 0:42	0.232	0.167	0.206
111	10/19/2011 0:43	0.244	0.172	0.205
112	10/19/2011 0:44	0.265	0.173	0.216
113	10/19/2011 0:45	0.25	0.162	0.207
114	10/19/2011 0:46	0.248	0.148	0.201
115	10/19/2011 0:47	0.255	0.166	0.207
116	10/19/2011 0:48	0.244	0.166	0.197
117	10/19/2011 0:49	0.255	0.161	0.205

118	10/19/2011 0:50	0.246	0.181	0.202
119	10/19/2011 0:51	0.229	0.163	0.196
120	10/19/2011 0:52	0.245	0.171	0.198
121	10/19/2011 0:53	0.245	0.164	0.194
122	10/19/2011 0:54	0.234	0.166	0.193
123	10/19/2011 0:55	0.219	0.151	0.18
124	10/19/2011 0:56	0.21	0.138	0.171
125	10/19/2011 0:57	0.2	0.135	0.162
126	10/19/2011 0:58	0.193	0.127	0.161
127	10/19/2011 0:59	0.209	0.118	0.151
128	10/19/2011 1:00	0.198	0.132	0.16
129	10/19/2011 1:01	0.198	0.129	0.166
130	10/19/2011 1:02	0.209	0.144	0.168
131	10/19/2011 1:03	0.218	0.151	0.18
132	10/19/2011 1:04	0.197	0.125	0.159
133	10/19/2011 1:05	0.207	0.138	0.16
134	10/19/2011 1:06	0.207	0.138	0.167
135	10/19/2011 1:07	0.215	0.129	0.169
136	10/19/2011 1:08	0.198	0.135	0.167
137	10/19/2011 1:09	0.193	0.131	0.16
138	10/19/2011 1:10	0.182	0.117	0.159
139	10/19/2011 1:11	0.175	0.108	0.145
140	10/19/2011 1:12	0.187	0.132	0.157
141	10/19/2011 1:13	0.176	0.116	0.142
142	10/19/2011 1:14	0.182	0.095	0.138
143	10/19/2011 1:15	0.158	0.103	0.129
144	10/19/2011 1:16	0.158	0.082	0.127
145	10/19/2011 1:17	0.163	0.086	0.12
146	10/19/2011 1:18	0.132	0.089	0.109
147	10/19/2011 1:19	0.155	0.086	0.121
148	10/19/2011 1:20	0.149	0.097	0.118
149	10/19/2011 1:21	0.157	0.099	0.119
150	10/19/2011 1:22	0.152	0.104	0.127
151	10/19/2011 1:23	0.15	0.099	0.12
152	10/19/2011 1:24	0.157	0.106	0.13
153	10/19/2011 1:25	0.172	0.113	0.143
154	10/19/2011 1:26	0.167	0.106	0.138
155	10/19/2011 1:27	0.186	0.106	0.139
156	10/19/2011 1:28	0.164	0.107	0.133
157	10/19/2011 1:29	0.179	0.119	0.142
158	10/19/2011 1:30	0.194	0.117	0.152
159	10/19/2011 1:31	0.19	0.122	0.152
160	10/19/2011 1:32	0.187	0.13	0.16
161	10/19/2011 1:33	0.188	0.139	0.161

==========Event #4 information (end)==========

==========Event #4 information (begin)==========

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[Event #4 name:]--[Event #4]2011-10-18 23:05<-->2011-10-19 01:46

[Event start time:]--2011-10-18 23:05:29[Event end time:]--2011-10-19 01:46:29

==========Event #4 head information==========

Product Name: MiniRAE 3000 Model Number: PGM-7320 Serial Number: 592-905367

Data Points: 161 Sample Period: 60 s Datalog Mode: Automatic

SITE ID: RAE00000 USER ID: 00000001 Op Mode: Hygiene Mode

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Sensor Information : PID(ppb)

Measurement Gas : Isobutene

Calibration Time : 2011-10-18 22:09:00

Drift Value : ---

Low Alarm Levels : 25847

High Alarm Levels : 51694

Span Value : 100000

Correction Factor : 1.00

Over Alarm Levels : 15000000

==========Event #4 data informations==========

LINE#	Date/Time	PID(ppm)	PID(ppb)
1	10/18/2011 23:06	0.001	1
2	10/18/2011 23:07	0	0
3	10/18/2011 23:08	0	0
4	10/18/2011 23:09	0	0
5	10/18/2011 23:10	0	0
6	10/18/2011 23:11	0	0
7	10/18/2011 23:12	0	0
8	10/18/2011 23:13	0	0
9	10/18/2011 23:14	0	0
10	10/18/2011 23:15	0	0
11	10/18/2011 23:16	0.001	1
12	10/18/2011 23:17	0	0
13	10/18/2011 23:18	0	0
14	10/18/2011 23:19	0	0
15	10/18/2011 23:20	0	0
16	10/18/2011 23:21	0.011	11
17	10/18/2011 23:22	0.009	9
18	10/18/2011 23:23	0.01	10
19	10/18/2011 23:24	0.016	16
20	10/18/2011 23:25	0.019	19
21	10/18/2011 23:26	0.013	13
22	10/18/2011 23:27	0.013	13
23	10/18/2011 23:28	0.013	13
24	10/18/2011 23:29	0.017	17
25	10/18/2011 23:30	0.021	21
26	10/18/2011 23:31	0.02	20
27	10/18/2011 23:32	0.028	28
28	10/18/2011 23:33	0.028	28
29	10/18/2011 23:34	0.028	28
30	10/18/2011 23:35	0.032	32
31	10/18/2011 23:36	0.032	32
32	10/18/2011 23:37	0.032	32
33	10/18/2011 23:38	0.041	41
34	10/18/2011 23:39	0.042	42
35	10/18/2011 23:40	0.037	37
36	10/18/2011 23:41	0.044	44
37	10/18/2011 23:42	0.045	45
38	10/18/2011 23:43	0.045	45
39	10/18/2011 23:44	0.044	44
40	10/18/2011 23:45	0.041	41
41	10/18/2011 23:46	0.044	44
42	10/18/2011 23:47	0.05	50
43	10/18/2011 23:48	0.057	57
44	10/18/2011 23:49	0.061	61
45	10/18/2011 23:50	0.056	56
46	10/18/2011 23:51	0.059	59
47	10/18/2011 23:52	0.059	59
48	10/18/2011 23:53	0.058	58

49	10/18/2011 23:54	0.059	59
50	10/18/2011 23:55	0.065	65
51	10/18/2011 23:56	0.072	72
52	10/18/2011 23:57	0.08	80
53	10/18/2011 23:58	0.082	82
54	10/18/2011 23:59	0.081	81
55	10/19/2011 0:00	0.088	88
56	10/19/2011 0:01	0.094	94
57	10/19/2011 0:02	0.104	104
58	10/19/2011 0:03	0.098	98
59	10/19/2011 0:04	0.1	100
60	10/19/2011 0:05	0.109	109
61	10/19/2011 0:06	0.121	121
62	10/19/2011 0:07	0.105	105
63	10/19/2011 0:08	0.104	104
64	10/19/2011 0:09	0.104	104
65	10/19/2011 0:10	0.101	101
66	10/19/2011 0:11	0.101	101
67	10/19/2011 0:12	0.103	103
68	10/19/2011 0:13	0.103	103
69	10/19/2011 0:14	0.106	106
70	10/19/2011 0:15	0.106	106
71	10/19/2011 0:16	0.103	103
72	10/19/2011 0:17	0.106	106
73	10/19/2011 0:18	0.103	103
74	10/19/2011 0:19	0.103	103
75	10/19/2011 0:20	0.105	105
76	10/19/2011 0:21	0.103	103
77	10/19/2011 0:22	0.099	99
78	10/19/2011 0:23	0.109	109
79	10/19/2011 0:24	0.102	102
80	10/19/2011 0:25	0.107	107
81	10/19/2011 0:26	0.114	114
82	10/19/2011 0:27	0.115	115
83	10/19/2011 0:28	0.122	122
84	10/19/2011 0:29	0.125	125
85	10/19/2011 0:30	0.132	132
86	10/19/2011 0:31	0.135	135
87	10/19/2011 0:32	0.131	131
88	10/19/2011 0:33	0.132	132
89	10/19/2011 0:34	0.146	146
90	10/19/2011 0:35	0.143	143
91	10/19/2011 0:36	0.147	147
92	10/19/2011 0:37	0.15	150
93	10/19/2011 0:38	0.155	155
94	10/19/2011 0:39	0.158	158
95	10/19/2011 0:40	0.175	175
96	10/19/2011 0:41	0.178	178
97	10/19/2011 0:42	0.178	178
98	10/19/2011 0:43	0.173	173
99	10/19/2011 0:44	0.175	175
100	10/19/2011 0:45	0.176	176
101	10/19/2011 0:46	0.178	178
102	10/19/2011 0:47	0.184	184
103	10/19/2011 0:48	0.183	183
104	10/19/2011 0:49	0.183	183
105	10/19/2011 0:50	0.186	186
106	10/19/2011 0:51	0.184	184
107	10/19/2011 0:52	0.186	186
108	10/19/2011 0:53	0.184	184
109	10/19/2011 0:54	0.19	190
110	10/19/2011 0:55	0.198	198
111	10/19/2011 0:56	0.203	203
112	10/19/2011 0:57	0.197	197
113	10/19/2011 0:58	0.186	186
114	10/19/2011 0:59	0.187	187
115	10/19/2011 1:00	0.185	185
116	10/19/2011 1:01	0.197	197
117	10/19/2011 1:02	0.197	197

118	10/19/2011 1:03	0.195	195
119	10/19/2011 1:04	0.193	193
120	10/19/2011 1:05	0.19	190
121	10/19/2011 1:06	0.189	189
122	10/19/2011 1:07	0.192	192
123	10/19/2011 1:08	0.193	193
124	10/19/2011 1:09	0.188	188
125	10/19/2011 1:10	0.192	192
126	10/19/2011 1:11	0.19	190
127	10/19/2011 1:12	0.195	195
128	10/19/2011 1:13	0.196	196
129	10/19/2011 1:14	0.195	195
130	10/19/2011 1:15	0.199	199
131	10/19/2011 1:16	0.225	225
132	10/19/2011 1:17	0.213	213
133	10/19/2011 1:18	0.209	209
134	10/19/2011 1:19	0.208	208
135	10/19/2011 1:20	0.202	202
136	10/19/2011 1:21	0.201	201
137	10/19/2011 1:22	0.205	205
138	10/19/2011 1:23	0.214	214
139	10/19/2011 1:24	0.224	224
140	10/19/2011 1:25	0.238	238
141	10/19/2011 1:26	0.211	211
142	10/19/2011 1:27	0.206	206
143	10/19/2011 1:28	0.209	209
144	10/19/2011 1:29	0.221	221
145	10/19/2011 1:30	0.227	227
146	10/19/2011 1:31	0.213	213
147	10/19/2011 1:32	0.203	203
148	10/19/2011 1:33	0.209	209
149	10/19/2011 1:34	0.214	214
150	10/19/2011 1:35	0.205	205
151	10/19/2011 1:36	0.216	216
152	10/19/2011 1:37	0.228	228
153	10/19/2011 1:38	0.205	205
154	10/19/2011 1:39	0.205	205
155	10/19/2011 1:40	0.209	209
156	10/19/2011 1:41	0.212	212
157	10/19/2011 1:42	0.209	209
158	10/19/2011 1:43	0.258	258
159	10/19/2011 1:44	0.28	280
160	10/19/2011 1:45	0.244	244
161	10/19/2011 1:46	0.223	223

==========Event #4 information (end)==========

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533101806
Firmware Version	2.8
Calibration Date	5/19/2011
Test Name	MANUAL_001
Test Start Time	10:40:22 PM
Test Start Date	10/18/2011
Test Length [D:H:M	0:02:41
Test Interval [M:S]	1:00
PM1 Average [mg/r	0.02
PM1 Minimum [mg	0.015
PM1 Maximum [mg	0.029
PM1 TWA [mg/m3]	0.007
PM2.5 Average [mg	0.02
PM2.5 Minimum [m	0.015
PM2.5 Maximum [r	0.029
PM2.5 TWA [mg/m	0.007
PM4 Average [mg/r	0.02
PM4 Minimum [mg	0.015
PM4 Maximum [mg	0.03
PM4 TWA [mg/m3]	0.007
PM10 Average [mg,	0.022
PM10 Minimum [m	0.016
PM10 Maximum [m	0.036
PM10 TWA [mg/m3	0.007
TOTAL Average [mg	0.022
TOTAL Minimum [m	0.016
TOTAL Maximum [r	0.044
TOTAL TWA [mg/m	0.007
Photometric User C	1
Size Correction Use	1
Flow User Cal	1
Errors	
Number of Samples	161

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	10:40:22 PM	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.017	0.017	0.018	0.023	10:41:22 PM	10/18/2011 22:41	0.034		
120	0.023	0.023	0.024	0.025	10:42:22 PM	10/18/2011 22:42	0.025		
180	0.021	0.022	0.022	0.023	10:43:22 PM	10/18/2011 22:43	0.024		
240	0.018	0.018	0.019	0.019	10:44:22 PM	10/18/2011 22:44	0.02		
300	0.018	0.018	0.019	0.02	10:45:22 PM	10/18/2011 22:45	0.02		
360	0.018	0.018	0.019	0.02	10:46:22 PM	10/18/2011 22:46	0.02		
420	0.018	0.019	0.019	0.02	10:47:22 PM	10/18/2011 22:47	0.021		
480	0.018	0.018	0.019	0.02	10:48:22 PM	10/18/2011 22:48	0.02		
540	0.018	0.018	0.019	0.02	10:49:22 PM	10/18/2011 22:49	0.02		
600	0.028	0.029	0.03	0.036	10:50:22 PM	10/18/2011 22:50	0.044		
660	0.017	0.018	0.018	0.019	10:51:22 PM	10/18/2011 22:51	0.019		
720	0.017	0.017	0.018	0.019	10:52:22 PM	10/18/2011 22:52	0.019		
780	0.017	0.017	0.018	0.019	10:53:22 PM	10/18/2011 22:53	0.019		
840	0.016	0.017	0.017	0.017	10:54:22 PM	10/18/2011 22:54	0.018		
900	0.016	0.016	0.016	0.018	10:55:22 PM	10/18/2011 22:55	0.018		
960	0.016	0.016	0.016	0.017	10:56:22 PM	10/18/2011 22:56	0.018		
1020	0.015	0.015	0.016	0.017	10:57:22 PM	10/18/2011 22:57	0.017		
1080	0.015	0.015	0.016	0.016	10:58:22 PM	10/18/2011 22:58	0.016		
1140	0.015	0.015	0.016	0.016	10:59:22 PM	10/18/2011 22:59	0.016		
1200	0.015	0.015	0.015	0.016	11:00:22 PM	10/18/2011 23:00	0.016		
1260	0.015	0.015	0.016	0.016	11:01:22 PM	10/18/2011 23:01	0.017		
1320	0.016	0.016	0.016	0.018	11:02:22 PM	10/18/2011 23:02	0.019		
1380	0.029	0.029	0.03	0.036	11:03:22 PM	10/18/2011 23:03	0.041		
1440	0.016	0.016	0.016	0.017	11:04:22 PM	10/18/2011 23:04	0.017		
1500	0.015	0.016	0.016	0.017	11:05:22 PM	10/18/2011 23:05	0.017		
1560	0.015	0.015	0.016	0.017	11:06:22 PM	10/18/2011 23:06	0.017		
1620	0.015	0.015	0.016	0.017	11:07:22 PM	10/18/2011 23:07	0.017		
1680	0.015	0.015	0.016	0.017	11:08:22 PM	10/18/2011 23:08	0.017		
1740	0.016	0.016	0.016	0.017	11:09:22 PM	10/18/2011 23:09	0.018		
1800	0.015	0.016	0.016	0.017	11:10:22 PM	10/18/2011 23:10	0.018		
1860	0.015	0.015	0.016	0.017	11:11:22 PM	10/18/2011 23:11	0.017		
1920	0.015	0.015	0.016	0.016	11:12:22 PM	10/18/2011 23:12	0.016		

1980	0.015	0.015	0.016	0.016	11:13:22 PM	10/18/2011 23:13	0.017
2040	0.015	0.015	0.015	0.017	11:14:22 PM	10/18/2011 23:14	0.017
2100	0.015	0.015	0.016	0.016	11:15:22 PM	10/18/2011 23:15	0.016
2160	0.015	0.015	0.016	0.016	11:16:22 PM	10/18/2011 23:16	0.017
2220	0.02	0.021	0.021	0.022	11:17:22 PM	10/18/2011 23:17	0.023
2280	0.016	0.016	0.016	0.017	11:18:22 PM	10/18/2011 23:18	0.018
2340	0.016	0.016	0.016	0.018	11:19:22 PM	10/18/2011 23:19	0.018
2400	0.016	0.016	0.016	0.017	11:20:22 PM	10/18/2011 23:20	0.017
2460	0.016	0.016	0.016	0.017	11:21:22 PM	10/18/2011 23:21	0.018
2520	0.016	0.016	0.016	0.017	11:22:22 PM	10/18/2011 23:22	0.017
2580	0.016	0.017	0.017	0.019	11:23:22 PM	10/18/2011 23:23	0.019
2640	0.017	0.017	0.017	0.019	11:24:22 PM	10/18/2011 23:24	0.02
2700	0.018	0.018	0.019	0.019	11:25:22 PM	10/18/2011 23:25	0.02
2760	0.016	0.016	0.017	0.017	11:26:22 PM	10/18/2011 23:26	0.017
2820	0.016	0.016	0.017	0.018	11:27:22 PM	10/18/2011 23:27	0.018
2880	0.016	0.017	0.017	0.017	11:28:22 PM	10/18/2011 23:28	0.018
2940	0.017	0.017	0.017	0.018	11:29:22 PM	10/18/2011 23:29	0.018
3000	0.017	0.017	0.018	0.019	11:30:22 PM	10/18/2011 23:30	0.02
3060	0.017	0.017	0.017	0.018	11:31:22 PM	10/18/2011 23:31	0.018
3120	0.017	0.017	0.018	0.019	11:32:22 PM	10/18/2011 23:32	0.019
3180	0.017	0.018	0.018	0.02	11:33:22 PM	10/18/2011 23:33	0.02
3240	0.017	0.017	0.018	0.018	11:34:22 PM	10/18/2011 23:34	0.019
3300	0.018	0.018	0.018	0.019	11:35:22 PM	10/18/2011 23:35	0.019
3360	0.019	0.019	0.019	0.02	11:36:22 PM	10/18/2011 23:36	0.02
3420	0.021	0.021	0.022	0.022	11:37:22 PM	10/18/2011 23:37	0.022
3480	0.021	0.021	0.022	0.023	11:38:22 PM	10/18/2011 23:38	0.023
3540	0.021	0.021	0.021	0.022	11:39:22 PM	10/18/2011 23:39	0.022
3600	0.021	0.022	0.022	0.023	11:40:22 PM	10/18/2011 23:40	0.023
3660	0.021	0.021	0.022	0.023	11:41:22 PM	10/18/2011 23:41	0.023
3720	0.021	0.021	0.022	0.023	11:42:22 PM	10/18/2011 23:42	0.024
3780	0.02	0.021	0.021	0.022	11:43:22 PM	10/18/2011 23:43	0.022
3840	0.021	0.021	0.021	0.022	11:44:22 PM	10/18/2011 23:44	0.022
3900	0.021	0.022	0.022	0.023	11:45:22 PM	10/18/2011 23:45	0.023
3960	0.022	0.022	0.023	0.024	11:46:22 PM	10/18/2011 23:46	0.024
4020	0.022	0.022	0.022	0.023	11:47:22 PM	10/18/2011 23:47	0.024
4080	0.022	0.022	0.023	0.023	11:48:22 PM	10/18/2011 23:48	0.024
4140	0.022	0.022	0.023	0.024	11:49:22 PM	10/18/2011 23:49	0.024
4200	0.022	0.022	0.022	0.023	11:50:22 PM	10/18/2011 23:50	0.024
4260	0.022	0.022	0.023	0.023	11:51:22 PM	10/18/2011 23:51	0.024
4320	0.022	0.022	0.022	0.024	11:52:22 PM	10/18/2011 23:52	0.024
4380	0.021	0.021	0.022	0.023	11:53:22 PM	10/18/2011 23:53	0.023
4440	0.021	0.021	0.022	0.023	11:54:22 PM	10/18/2011 23:54	0.023
4500	0.02	0.021	0.021	0.022	11:55:22 PM	10/18/2011 23:55	0.022
4560	0.02	0.02	0.02	0.021	11:56:22 PM	10/18/2011 23:56	0.021
4620	0.02	0.02	0.02	0.021	11:57:22 PM	10/18/2011 23:57	0.021
4680	0.018	0.019	0.019	0.019	11:58:22 PM	10/18/2011 23:58	0.019
4740	0.02	0.02	0.02	0.023	11:59:22 PM	10/18/2011 23:59	0.024
4800	0.018	0.019	0.019	0.02	12:00:22 AM	10/19/2011 0:00	0.02
4860	0.018	0.018	0.018	0.019	12:01:22 AM	10/19/2011 0:01	0.019
4920	0.018	0.018	0.019	0.02	12:02:22 AM	10/19/2011 0:02	0.02
4980	0.019	0.019	0.02	0.021	12:03:22 AM	10/19/2011 0:03	0.021
5040	0.019	0.019	0.02	0.02	12:04:22 AM	10/19/2011 0:04	0.02
5100	0.019	0.019	0.019	0.02	12:05:22 AM	10/19/2011 0:05	0.021
5160	0.019	0.019	0.019	0.02	12:06:22 AM	10/19/2011 0:06	0.021
5220	0.019	0.019	0.02	0.02	12:07:22 AM	10/19/2011 0:07	0.02
5280	0.019	0.019	0.019	0.02	12:08:22 AM	10/19/2011 0:08	0.02
5340	0.019	0.019	0.02	0.021	12:09:22 AM	10/19/2011 0:09	0.021
5400	0.02	0.02	0.02	0.021	12:10:22 AM	10/19/2011 0:10	0.021
5460	0.02	0.02	0.021	0.022	12:11:22 AM	10/19/2011 0:11	0.022
5520	0.027	0.028	0.028	0.031	12:12:22 AM	10/19/2011 0:12	0.032
5580	0.023	0.024	0.025	0.027	12:13:22 AM	10/19/2011 0:13	0.028
5640	0.023	0.023	0.024	0.026	12:14:22 AM	10/19/2011 0:14	0.027
5700	0.023	0.023	0.024	0.026	12:15:22 AM	10/19/2011 0:15	0.026
5760	0.023	0.023	0.024	0.025	12:16:22 AM	10/19/2011 0:16	0.026
5820	0.022	0.022	0.023	0.024	12:17:22 AM	10/19/2011 0:17	0.024
5880	0.022	0.022	0.022	0.024	12:18:22 AM	10/19/2011 0:18	0.024
5940	0.021	0.022	0.022	0.023	12:19:22 AM	10/19/2011 0:19	0.024
6000	0.022	0.022	0.022	0.024	12:20:22 AM	10/19/2011 0:20	0.025
6060	0.021	0.022	0.022	0.023	12:21:22 AM	10/19/2011 0:21	0.023

6120	0.021	0.022	0.022	0.023	12:22:22 AM	10/19/2011 0:22	0.023
6180	0.023	0.023	0.023	0.024	12:23:22 AM	10/19/2011 0:23	0.025
6240	0.022	0.023	0.023	0.024	12:24:22 AM	10/19/2011 0:24	0.024
6300	0.022	0.022	0.023	0.024	12:25:22 AM	10/19/2011 0:25	0.024
6360	0.023	0.023	0.023	0.024	12:26:22 AM	10/19/2011 0:26	0.025
6420	0.023	0.023	0.024	0.024	12:27:22 AM	10/19/2011 0:27	0.024
6480	0.022	0.022	0.023	0.023	12:28:22 AM	10/19/2011 0:28	0.023
6540	0.022	0.023	0.023	0.024	12:29:22 AM	10/19/2011 0:29	0.024
6600	0.022	0.022	0.023	0.024	12:30:22 AM	10/19/2011 0:30	0.025
6660	0.022	0.022	0.023	0.025	12:31:22 AM	10/19/2011 0:31	0.025
6720	0.022	0.023	0.023	0.024	12:32:22 AM	10/19/2011 0:32	0.024
6780	0.023	0.023	0.023	0.024	12:33:22 AM	10/19/2011 0:33	0.024
6840	0.022	0.022	0.023	0.023	12:34:22 AM	10/19/2011 0:34	0.023
6900	0.023	0.024	0.024	0.025	12:35:22 AM	10/19/2011 0:35	0.026
6960	0.023	0.023	0.024	0.025	12:36:22 AM	10/19/2011 0:36	0.025
7020	0.023	0.023	0.024	0.025	12:37:22 AM	10/19/2011 0:37	0.025
7080	0.023	0.023	0.024	0.025	12:38:22 AM	10/19/2011 0:38	0.025
7140	0.022	0.023	0.023	0.024	12:39:22 AM	10/19/2011 0:39	0.024
7200	0.022	0.023	0.023	0.024	12:40:22 AM	10/19/2011 0:40	0.024
7260	0.022	0.023	0.023	0.024	12:41:22 AM	10/19/2011 0:41	0.025
7320	0.022	0.022	0.023	0.024	12:42:22 AM	10/19/2011 0:42	0.024
7380	0.023	0.023	0.023	0.025	12:43:22 AM	10/19/2011 0:43	0.027
7440	0.022	0.022	0.023	0.023	12:44:22 AM	10/19/2011 0:44	0.024
7500	0.023	0.023	0.023	0.024	12:45:22 AM	10/19/2011 0:45	0.025
7560	0.023	0.023	0.024	0.025	12:46:22 AM	10/19/2011 0:46	0.025
7620	0.023	0.023	0.024	0.024	12:47:22 AM	10/19/2011 0:47	0.024
7680	0.023	0.023	0.023	0.024	12:48:22 AM	10/19/2011 0:48	0.024
7740	0.022	0.023	0.023	0.024	12:49:22 AM	10/19/2011 0:49	0.024
7800	0.022	0.023	0.023	0.024	12:50:22 AM	10/19/2011 0:50	0.024
7860	0.023	0.023	0.024	0.025	12:51:22 AM	10/19/2011 0:51	0.025
7920	0.022	0.023	0.023	0.023	12:52:22 AM	10/19/2011 0:52	0.023
7980	0.023	0.023	0.024	0.024	12:53:22 AM	10/19/2011 0:53	0.025
8040	0.021	0.021	0.022	0.023	12:54:22 AM	10/19/2011 0:54	0.023
8100	0.023	0.023	0.023	0.024	12:55:22 AM	10/19/2011 0:55	0.024
8160	0.022	0.022	0.023	0.023	12:56:22 AM	10/19/2011 0:56	0.023
8220	0.021	0.021	0.021	0.022	12:57:22 AM	10/19/2011 0:57	0.022
8280	0.021	0.021	0.022	0.024	12:58:22 AM	10/19/2011 0:58	0.025
8340	0.02	0.021	0.021	0.022	12:59:22 AM	10/19/2011 0:59	0.022
8400	0.021	0.021	0.022	0.022	1:00:22 AM	10/19/2011 1:00	0.023
8460	0.022	0.022	0.023	0.024	1:01:22 AM	10/19/2011 1:01	0.025
8520	0.021	0.022	0.022	0.023	1:02:22 AM	10/19/2011 1:02	0.023
8580	0.021	0.021	0.022	0.022	1:03:22 AM	10/19/2011 1:03	0.022
8640	0.021	0.021	0.022	0.024	1:04:22 AM	10/19/2011 1:04	0.024
8700	0.021	0.021	0.022	0.024	1:05:22 AM	10/19/2011 1:05	0.024
8760	0.02	0.02	0.021	0.022	1:06:22 AM	10/19/2011 1:06	0.023
8820	0.02	0.021	0.021	0.022	1:07:22 AM	10/19/2011 1:07	0.022
8880	0.02	0.021	0.021	0.022	1:08:22 AM	10/19/2011 1:08	0.022
8940	0.02	0.02	0.021	0.021	1:09:22 AM	10/19/2011 1:09	0.021
9000	0.021	0.021	0.022	0.023	1:10:22 AM	10/19/2011 1:10	0.024
9060	0.02	0.021	0.021	0.022	1:11:22 AM	10/19/2011 1:11	0.023
9120	0.021	0.021	0.022	0.024	1:12:22 AM	10/19/2011 1:12	0.026
9180	0.02	0.02	0.021	0.022	1:13:22 AM	10/19/2011 1:13	0.022
9240	0.02	0.02	0.021	0.022	1:14:22 AM	10/19/2011 1:14	0.022
9300	0.02	0.02	0.021	0.021	1:15:22 AM	10/19/2011 1:15	0.021
9360	0.019	0.02	0.02	0.021	1:16:22 AM	10/19/2011 1:16	0.021
9420	0.019	0.02	0.02	0.021	1:17:22 AM	10/19/2011 1:17	0.021
9480	0.019	0.02	0.02	0.021	1:18:22 AM	10/19/2011 1:18	0.021
9540	0.019	0.02	0.02	0.021	1:19:22 AM	10/19/2011 1:19	0.021
9600	0.02	0.02	0.02	0.022	1:20:22 AM	10/19/2011 1:20	0.023
9660	0.02	0.02	0.02	0.021	1:21:22 AM	10/19/2011 1:21	0.021

Instrument Name	DustTrak DRX
Model Number	8533
Serial Number	8533112903
Firmware Version	2.8
Calibration Date	7/18/2011
Test Name	MANUAL_001
Test Start Time	22:41:41
Test Start Date	10/18/2011
Test Length [D:H:M	0:02:40
Test Interval [M:S]	1:00
PM1 Average [mg/r	0.022
PM1 Minimum [mg	0.014
PM1 Maximum [mg	0.063
PM1 TWA [mg/m3]	0.007
PM2.5 Average [mg	0.022
PM2.5 Minimum [m	0.014
PM2.5 Maximum [r	0.068
PM2.5 TWA [mg/m	0.007
PM4 Average [mg/r	0.022
PM4 Minimum [mg	0.014
PM4 Maximum [mg	0.076
PM4 TWA [mg/m3]	0.007
PM10 Average [mg,	0.024
PM10 Minimum [m	0.014
PM10 Maximum [m	0.097
PM10 TWA [mg/m3	0.008
TOTAL Average [mg	0.025
TOTAL Minimum [m	0.015
TOTAL Maximum [r	0.105
TOTAL TWA [mg/m	0.008
Photometric User C	1
Size Correction Use	1
Flow User Cal	1
Errors	
Number of Samples	160

Elapsed Time [s]	PM1 [mg/m3]	PM2.5 [mg/m3]	PM4 [mg/m3]	PM10 [mg/m3]	22:41:41	Time/Date	TOTAL [mg/m3]	Alarms	Errors
60	0.025	0.025	0.027	0.043	22:42:41	10/18/2011 22:42	0.062		
120	0.019	0.019	0.019	0.02	22:43:41	10/18/2011 22:43	0.021		
180	0.018	0.019	0.019	0.02	22:44:41	10/18/2011 22:44	0.02		
240	0.017	0.017	0.018	0.019	22:45:41	10/18/2011 22:45	0.019		
300	0.017	0.018	0.018	0.019	22:46:41	10/18/2011 22:46	0.02		
360	0.018	0.018	0.019	0.02	22:47:41	10/18/2011 22:47	0.021		
420	0.018	0.018	0.019	0.02	22:48:41	10/18/2011 22:48	0.02		
480	0.018	0.018	0.018	0.02	22:49:41	10/18/2011 22:49	0.021		
540	0.032	0.033	0.034	0.039	22:50:41	10/18/2011 22:50	0.043		
600	0.018	0.018	0.019	0.019	22:51:41	10/18/2011 22:51	0.02		
660	0.019	0.019	0.02	0.02	22:52:41	10/18/2011 22:52	0.021		
720	0.017	0.017	0.018	0.019	22:53:41	10/18/2011 22:53	0.019		
780	0.016	0.016	0.017	0.017	22:54:41	10/18/2011 22:54	0.017		
840	0.016	0.016	0.016	0.017	22:55:41	10/18/2011 22:55	0.017		
900	0.015	0.015	0.015	0.016	22:56:41	10/18/2011 22:56	0.016		
960	0.018	0.018	0.018	0.019	22:57:41	10/18/2011 22:57	0.019		
1020	0.017	0.017	0.017	0.018	22:58:41	10/18/2011 22:58	0.019		
1080	0.015	0.015	0.015	0.016	22:59:41	10/18/2011 22:59	0.016		
1140	0.016	0.017	0.017	0.018	23:00:41	10/18/2011 23:00	0.018		
1200	0.016	0.016	0.016	0.017	23:01:41	10/18/2011 23:01	0.018		
1260	0.016	0.016	0.016	0.017	23:02:41	10/18/2011 23:02	0.018		
1320	0.015	0.016	0.016	0.017	23:03:41	10/18/2011 23:03	0.018		
1380	0.016	0.017	0.017	0.024	23:04:41	10/18/2011 23:04	0.029		
1440	0.015	0.015	0.016	0.016	23:05:41	10/18/2011 23:05	0.017		
1500	0.015	0.015	0.016	0.017	23:06:41	10/18/2011 23:06	0.017		
1560	0.015	0.015	0.016	0.016	23:07:41	10/18/2011 23:07	0.017		
1620	0.015	0.016	0.016	0.017	23:08:41	10/18/2011 23:08	0.017		
1680	0.015	0.015	0.016	0.016	23:09:41	10/18/2011 23:09	0.016		
1740	0.014	0.015	0.015	0.016	23:10:41	10/18/2011 23:10	0.016		
1800	0.015	0.015	0.015	0.016	23:11:41	10/18/2011 23:11	0.016		
1860	0.014	0.014	0.015	0.015	23:12:41	10/18/2011 23:12	0.015		
1920	0.014	0.014	0.014	0.014	23:13:41	10/18/2011 23:13	0.015		

1980	0.015	0.015	0.016	0.017	23:14:41	10/18/2011 23:14	0.017
2040	0.015	0.015	0.016	0.016	23:15:41	10/18/2011 23:15	0.016
2100	0.014	0.015	0.015	0.016	23:16:41	10/18/2011 23:16	0.017
2160	0.016	0.016	0.016	0.017	23:17:41	10/18/2011 23:17	0.018
2220	0.017	0.018	0.018	0.022	23:18:41	10/18/2011 23:18	0.025
2280	0.016	0.016	0.017	0.018	23:19:41	10/18/2011 23:19	0.018
2340	0.016	0.016	0.016	0.017	23:20:41	10/18/2011 23:20	0.018
2400	0.016	0.016	0.016	0.017	23:21:41	10/18/2011 23:21	0.017
2460	0.015	0.016	0.016	0.017	23:22:41	10/18/2011 23:22	0.017
2520	0.017	0.017	0.017	0.018	23:23:41	10/18/2011 23:23	0.019
2580	0.017	0.017	0.017	0.018	23:24:41	10/18/2011 23:24	0.018
2640	0.017	0.017	0.017	0.018	23:25:41	10/18/2011 23:25	0.019
2700	0.015	0.016	0.016	0.017	23:26:41	10/18/2011 23:26	0.017
2760	0.016	0.016	0.017	0.018	23:27:41	10/18/2011 23:27	0.018
2820	0.016	0.016	0.016	0.017	23:28:41	10/18/2011 23:28	0.017
2880	0.016	0.016	0.016	0.017	23:29:41	10/18/2011 23:29	0.017
2940	0.016	0.016	0.016	0.016	23:30:41	10/18/2011 23:30	0.017
3000	0.024	0.024	0.025	0.032	23:31:41	10/18/2011 23:31	0.037
3060	0.017	0.017	0.018	0.018	23:32:41	10/18/2011 23:32	0.019
3120	0.017	0.017	0.018	0.018	23:33:41	10/18/2011 23:33	0.019
3180	0.017	0.018	0.018	0.019	23:34:41	10/18/2011 23:34	0.019
3240	0.017	0.017	0.018	0.018	23:35:41	10/18/2011 23:35	0.018
3300	0.02	0.02	0.02	0.021	23:36:41	10/18/2011 23:36	0.022
3360	0.021	0.021	0.022	0.022	23:37:41	10/18/2011 23:37	0.023
3420	0.022	0.022	0.023	0.023	23:38:41	10/18/2011 23:38	0.023
3480	0.021	0.021	0.022	0.022	23:39:41	10/18/2011 23:39	0.022
3540	0.02	0.021	0.021	0.022	23:40:41	10/18/2011 23:40	0.022
3600	0.023	0.023	0.024	0.025	23:41:41	10/18/2011 23:41	0.025
3660	0.024	0.024	0.025	0.026	23:42:41	10/18/2011 23:42	0.026
3720	0.023	0.024	0.024	0.028	23:43:41	10/18/2011 23:43	0.031
3780	0.021	0.021	0.022	0.023	23:44:41	10/18/2011 23:44	0.023
3840	0.02	0.02	0.02	0.021	23:45:41	10/18/2011 23:45	0.021
3900	0.019	0.02	0.02	0.021	23:46:41	10/18/2011 23:46	0.021
3960	0.019	0.02	0.02	0.02	23:47:41	10/18/2011 23:47	0.02
4020	0.019	0.019	0.02	0.021	23:48:41	10/18/2011 23:48	0.021
4080	0.02	0.02	0.02	0.021	23:49:41	10/18/2011 23:49	0.021
4140	0.02	0.021	0.021	0.022	23:50:41	10/18/2011 23:50	0.023
4200	0.019	0.02	0.02	0.02	23:51:41	10/18/2011 23:51	0.02
4260	0.019	0.02	0.02	0.021	23:52:41	10/18/2011 23:52	0.021
4320	0.019	0.02	0.02	0.022	23:53:41	10/18/2011 23:53	0.022
4380	0.019	0.019	0.02	0.02	23:54:41	10/18/2011 23:54	0.021
4440	0.018	0.019	0.019	0.019	23:55:41	10/18/2011 23:55	0.019
4500	0.019	0.019	0.02	0.021	23:56:41	10/18/2011 23:56	0.021
4560	0.019	0.019	0.019	0.02	23:57:41	10/18/2011 23:57	0.021
4620	0.018	0.018	0.019	0.019	23:58:41	10/18/2011 23:58	0.019
4680	0.02	0.02	0.02	0.021	23:59:41	10/18/2011 23:59	0.021
4740	0.02	0.02	0.02	0.025	0:00:41	10/19/2011 0:00	0.026
4800	0.019	0.019	0.02	0.021	0:01:41	10/19/2011 0:01	0.021
4860	0.02	0.02	0.021	0.021	0:02:41	10/19/2011 0:02	0.022
4920	0.02	0.021	0.021	0.022	0:03:41	10/19/2011 0:03	0.023
4980	0.021	0.021	0.021	0.022	0:04:41	10/19/2011 0:04	0.022
5040	0.02	0.02	0.02	0.021	0:05:41	10/19/2011 0:05	0.021
5100	0.02	0.02	0.021	0.021	0:06:41	10/19/2011 0:06	0.022
5160	0.022	0.022	0.023	0.025	0:07:41	10/19/2011 0:07	0.025
5220	0.019	0.02	0.02	0.021	0:08:41	10/19/2011 0:08	0.021
5280	0.02	0.02	0.021	0.022	0:09:41	10/19/2011 0:09	0.022
5340	0.022	0.022	0.022	0.023	0:10:41	10/19/2011 0:10	0.023
5400	0.021	0.021	0.022	0.023	0:11:41	10/19/2011 0:11	0.023
5460	0.022	0.022	0.022	0.023	0:12:41	10/19/2011 0:12	0.023
5520	0.024	0.025	0.025	0.028	0:13:41	10/19/2011 0:13	0.029
5580	0.026	0.026	0.027	0.03	0:14:41	10/19/2011 0:14	0.031
5640	0.026	0.026	0.027	0.03	0:15:41	10/19/2011 0:15	0.031
5700	0.028	0.028	0.029	0.031	0:16:41	10/19/2011 0:16	0.032
5760	0.033	0.035	0.037	0.042	0:17:41	10/19/2011 0:17	0.043
5820	0.025	0.026	0.027	0.029	0:18:41	10/19/2011 0:18	0.03
5880	0.024	0.024	0.025	0.027	0:19:41	10/19/2011 0:19	0.027
5940	0.023	0.023	0.023	0.025	0:20:41	10/19/2011 0:20	0.025
6000	0.022	0.022	0.023	0.023	0:21:41	10/19/2011 0:21	0.024
6060	0.022	0.023	0.023	0.024	0:22:41	10/19/2011 0:22	0.024

6120	0.023	0.024	0.024	0.025	0:23:41	10/19/2011 0:23	0.025
6180	0.023	0.023	0.024	0.025	0:24:41	10/19/2011 0:24	0.025
6240	0.023	0.024	0.024	0.025	0:25:41	10/19/2011 0:25	0.025
6300	0.023	0.023	0.024	0.025	0:26:41	10/19/2011 0:26	0.026
6360	0.023	0.024	0.024	0.025	0:27:41	10/19/2011 0:27	0.025
6420	0.022	0.023	0.023	0.024	0:28:41	10/19/2011 0:28	0.024
6480	0.022	0.023	0.023	0.024	0:29:41	10/19/2011 0:29	0.024
6540	0.023	0.024	0.024	0.025	0:30:41	10/19/2011 0:30	0.027
6600	0.025	0.025	0.025	0.026	0:31:41	10/19/2011 0:31	0.026
6660	0.024	0.024	0.025	0.026	0:32:41	10/19/2011 0:32	0.026
6720	0.024	0.024	0.025	0.025	0:33:41	10/19/2011 0:33	0.026
6780	0.022	0.023	0.023	0.024	0:34:41	10/19/2011 0:34	0.024
6840	0.023	0.023	0.024	0.024	0:35:41	10/19/2011 0:35	0.024
6900	0.022	0.023	0.023	0.024	0:36:41	10/19/2011 0:36	0.024
6960	0.027	0.027	0.027	0.029	0:37:41	10/19/2011 0:37	0.029
7020	0.026	0.026	0.027	0.028	0:38:41	10/19/2011 0:38	0.028
7080	0.025	0.025	0.025	0.027	0:39:41	10/19/2011 0:39	0.027
7140	0.023	0.024	0.024	0.025	0:40:41	10/19/2011 0:40	0.025
7200	0.023	0.024	0.024	0.024	0:41:41	10/19/2011 0:41	0.024
7260	0.024	0.024	0.024	0.026	0:42:41	10/19/2011 0:42	0.026
7320	0.026	0.026	0.027	0.03	0:43:41	10/19/2011 0:43	0.035
7380	0.025	0.025	0.026	0.027	0:44:41	10/19/2011 0:44	0.027
7440	0.024	0.024	0.025	0.026	0:45:41	10/19/2011 0:45	0.026
7500	0.026	0.027	0.028	0.03	0:46:41	10/19/2011 0:46	0.031
7560	0.025	0.025	0.026	0.027	0:47:41	10/19/2011 0:47	0.028
7620	0.024	0.024	0.025	0.026	0:48:41	10/19/2011 0:48	0.026
7680	0.026	0.026	0.027	0.028	0:49:41	10/19/2011 0:49	0.028
7740	0.026	0.026	0.026	0.027	0:50:41	10/19/2011 0:50	0.027
7800	0.028	0.028	0.028	0.029	0:51:41	10/19/2011 0:51	0.03
7860	0.031	0.031	0.031	0.032	0:52:41	10/19/2011 0:52	0.033
7920	0.024	0.025	0.025	0.026	0:53:41	10/19/2011 0:53	0.026
7980	0.023	0.024	0.024	0.025	0:54:41	10/19/2011 0:54	0.025
8040	0.023	0.023	0.024	0.024	0:55:41	10/19/2011 0:55	0.025
8100	0.023	0.023	0.023	0.024	0:56:41	10/19/2011 0:56	0.024
8160	0.022	0.022	0.023	0.023	0:57:41	10/19/2011 0:57	0.023
8220	0.024	0.024	0.024	0.026	0:58:41	10/19/2011 0:58	0.026
8280	0.063	0.068	0.076	0.097	0:59:41	10/19/2011 0:59	0.105
8340	0.044	0.048	0.054	0.063	1:00:41	10/19/2011 1:00	0.064
8400	0.029	0.029	0.03	0.031	1:01:41	10/19/2011 1:01	0.031
8460	0.024	0.024	0.025	0.026	1:02:41	10/19/2011 1:02	0.026
8520	0.023	0.023	0.024	0.025	1:03:41	10/19/2011 1:03	0.025
8580	0.024	0.024	0.025	0.027	1:04:41	10/19/2011 1:04	0.028
8640	0.026	0.026	0.027	0.029	1:05:41	10/19/2011 1:05	0.029
8700	0.026	0.026	0.027	0.028	1:06:41	10/19/2011 1:06	0.028
8760	0.023	0.023	0.024	0.025	1:07:41	10/19/2011 1:07	0.025
8820	0.022	0.022	0.023	0.025	1:08:41	10/19/2011 1:08	0.026
8880	0.031	0.033	0.036	0.043	1:09:41	10/19/2011 1:09	0.045
8940	0.028	0.029	0.032	0.036	1:10:41	10/19/2011 1:10	0.037
9000	0.021	0.022	0.022	0.023	1:11:41	10/19/2011 1:11	0.023
9060	0.022	0.023	0.023	0.026	1:12:41	10/19/2011 1:12	0.026
9120	0.026	0.026	0.027	0.031	1:13:41	10/19/2011 1:13	0.034
9180	0.021	0.022	0.022	0.024	1:14:41	10/19/2011 1:14	0.025
9240	0.02	0.02	0.021	0.022	1:15:41	10/19/2011 1:15	0.023
9300	0.02	0.02	0.021	0.021	1:16:41	10/19/2011 1:16	0.021
9360	0.02	0.02	0.02	0.021	1:17:41	10/19/2011 1:17	0.022
9420	0.02	0.02	0.021	0.022	1:18:41	10/19/2011 1:18	0.023
9480	0.047	0.047	0.048	0.051	1:19:41	10/19/2011 1:19	0.051
9540	0.044	0.045	0.046	0.048	1:20:41	10/19/2011 1:20	0.05
9600	0.043	0.044	0.044	0.045	1:21:41	10/19/2011 1:21	0.046

AECOM

Client:
Location: Lowe's - Metropolitan
Date: 11/30/11
Field Personnel: JS & SS / Board Longyear

Project:
Project Number:
Weather: 50 - sunny, 10 MPH wind
Ambient Noise: 63.0

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
1115	1.2	.027	0.1	1.0	.146	64.6	Preclear
1130	0.2	.020	0.0	0.3	.015	66.1	" - work stoppage
1210	0.1	.012	0.2	0.3	.030	71.9	continue preclear
1225	0.1	.011	0.1	0.2	0.014	65.4	"
1240	0.1	.013	0.2	0.2	.015	67.5	"
1255	0.1	.011	0.1	0.2	.011	66.3	"
1310	0.1	.054	0.2	0.2	.057	64.9	"
1325	0.0	.034	0.3	0.2	.021	67.2	
1345	0.0	.036	0.3	0.2	.072	66.5	
1420	0.0	.039	0.3	0.2	.032	66.1	
1435	0.0	.051	0.3	0.2	.021	67.0	Grouting
1450	0.0	.048	0.3	0.2	.041	66.4	"
1505	0.0	.019	0.3	0.2	.016	65.5	"
1520	0.0	.029	0.3	0.2	.032	69.4	Grouted up - shutting down

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 902685
User ID: 00000001 Site ID: 00000095
Data Points: 256 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 11/30/2011 10:19

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	11/30/2011 11:08	0.5		0.5		0.6	
2	11/30/2011 11:09	0.4		0.4		0.5	
3	11/30/2011 11:10	0.3		0.3		0.4	
4	11/30/2011 11:11	0.3		0.3		0.4	
5	11/30/2011 11:12	0.2		0.2		0.3	
6	11/30/2011 11:13	0.3		0.3		0.3	
7	11/30/2011 11:14	0.2		0.2		0.3	
8	11/30/2011 11:15	0.2		0.2		0.3	
9	11/30/2011 11:16	0.2		0.2		0.3	
10	11/30/2011 11:17	0.2		0.2		0.3	
11	11/30/2011 11:18	0.2		0.2		0.3	
12	11/30/2011 11:19	0.2		0.2		0.3	
13	11/30/2011 11:20	0.2		0.2		0.2	
14	11/30/2011 11:21	0.2		0.2		0.2	
15	11/30/2011 11:22	0.2		0.2		0.2	
16	11/30/2011 11:23	0.2		0.2		0.2	
17	11/30/2011 11:24	0.2		0.2		0.2	
18	11/30/2011 11:25	0.2		0.2		0.2	
19	11/30/2011 11:26	0.2		0.2		0.2	
20	11/30/2011 11:27	0.1		0.1		0.2	
21	11/30/2011 11:28	0.1		0.1		0.2	
22	11/30/2011 11:29	0.1		0.1		0.2	
23	11/30/2011 11:30	0.1		0.1		0.2	
24	11/30/2011 11:31	0.1		0.1		0.2	
25	11/30/2011 11:32	0.1		0.1		0.2	
26	11/30/2011 11:33	0.1		0.1		0.3	
27	11/30/2011 11:34	0.1		0.1		0.3	
28	11/30/2011 11:35	0.1		0.1		0.3	
29	11/30/2011 11:36	0.1		0.1		0.3	
30	11/30/2011 11:37	0.1		0.1		0.2	
31	11/30/2011 11:38	0.1		0.1		0.2	
32	11/30/2011 11:39	0.2		0.2		0.2	
33	11/30/2011 11:40	0.1		0.1		0.2	
34	11/30/2011 11:41	0.1		0.1		0.2	
35	11/30/2011 11:42	0.1		0.1		0.2	
36	11/30/2011 11:43	0.2		0.2		0.2	
37	11/30/2011 11:44	0.2		0.2		0.2	
38	11/30/2011 11:45	0.2		0.2		0.2	
39	11/30/2011 11:46	0.2		0.2		0.2	
40	11/30/2011 11:47	0.2		0.2		0.2	
41	11/30/2011 11:48	0.2		0.2		0.2	
42	11/30/2011 11:49	0.2		0.2		0.2	
43	11/30/2011 11:50	0.2		0.2		0.2	
44	11/30/2011 11:51	0.2		0.2		0.2	
45	11/30/2011 11:52	0.2		0.2		0.2	
46	11/30/2011 11:53	0.2		0.2		0.2	
47	11/30/2011 11:54	0.2		0.2		0.2	
48	11/30/2011 11:55	0.2		0.2		0.2	
49	11/30/2011 11:56	0.2		0.2		0.2	
50	11/30/2011 11:57	0.2		0.2		0.2	
51	11/30/2011 11:58	0.2		0.2		0.2	
52	11/30/2011 11:59	0.2		0.2		0.2	
53	11/30/2011 12:00	0.2		0.2		0.2	
54	11/30/2011 12:01	0.1		0.1		0.2	
55	11/30/2011 12:02	0.1		0.1		0.2	
56	11/30/2011 12:03	0.1		0.1		0.2	
57	11/30/2011 12:04	0.1		0.1		0.2	
58	11/30/2011 12:05	0.1		0.1		0.2	

59	11/30/2011 12:06	0.1	0.1	0.2
60	11/30/2011 12:07	0.1	0.1	0.2
61	11/30/2011 12:08	0.1	0.1	0.2
62	11/30/2011 12:09	0.1	0.1	0.2
63	11/30/2011 12:10	0.1	0.1	0.2
64	11/30/2011 12:11	0.1	0.1	0.2
65	11/30/2011 12:12	0.1	0.1	0.2
66	11/30/2011 12:13	0.1	0.1	0.2
67	11/30/2011 12:14	0.1	0.1	0.2
68	11/30/2011 12:15	0.1	0.1	0.2
69	11/30/2011 12:16	0.1	0.1	0.2
70	11/30/2011 12:17	0.1	0.1	0.2
71	11/30/2011 12:18	0.1	0.1	0.2
72	11/30/2011 12:19	0.1	0.1	0.2
73	11/30/2011 12:20	0.1	0.1	0.2
74	11/30/2011 12:21	0.1	0.1	0.2
75	11/30/2011 12:22	0.1	0.1	0.2
76	11/30/2011 12:23	0.1	0.1	0.2
77	11/30/2011 12:24	0.1	0.1	0.1
78	11/30/2011 12:25	0.1	0.1	0.1
79	11/30/2011 12:26	0.1	0.1	0.1
80	11/30/2011 12:27	0.1	0.1	0.1
81	11/30/2011 12:28	0.1	0.1	0.1
82	11/30/2011 12:29	0.1	0.1	0.1
83	11/30/2011 12:30	0.1	0.1	0.1
84	11/30/2011 12:31	0.1	0.1	0.1
85	11/30/2011 12:32	0.1	0.1	0.1
86	11/30/2011 12:33	0.1	0.1	0.1
87	11/30/2011 12:34	0.1	0.1	0.1
88	11/30/2011 12:35	0.1	0.1	0.1
89	11/30/2011 12:36	0.1	0.1	0.1
90	11/30/2011 12:37	0.1	0.1	0.1
91	11/30/2011 12:38	0.1	0.1	0.1
92	11/30/2011 12:39	0.1	0.1	0.1
93	11/30/2011 12:40	0.1	0.1	0.1
94	11/30/2011 12:41	0.1	0.1	0.1
95	11/30/2011 12:42	0	0	0.1
96	11/30/2011 12:43	0	0	0.1
97	11/30/2011 12:44	0	0	0.1
98	11/30/2011 12:45	0	0	0.1
99	11/30/2011 12:46	0	0	0.1
100	11/30/2011 12:47	0	0	0.1
101	11/30/2011 12:48	0	0	0.1
102	11/30/2011 12:49	0	0	0.1
103	11/30/2011 12:50	0	0	0.1
104	11/30/2011 12:51	0	0	0.1
105	11/30/2011 12:52	0	0	0.1
106	11/30/2011 12:53	0	0	0.1
107	11/30/2011 12:54	0	0	0.1
108	11/30/2011 12:55	0	0	0.1
109	11/30/2011 12:56	0	0	0.1
110	11/30/2011 12:57	0	0	0.1
111	11/30/2011 12:58	0	0	0.1
112	11/30/2011 12:59	0	0	0.1
113	11/30/2011 13:00	0	0	0.1
114	11/30/2011 13:01	0	0	0.1
115	11/30/2011 13:02	0	0	0.1
116	11/30/2011 13:03	0	0	0.1
117	11/30/2011 13:04	0	0	0.1
118	11/30/2011 13:05	0	0	0.1
119	11/30/2011 13:06	0	0	0.1
120	11/30/2011 13:07	0	0	0.1
121	11/30/2011 13:08	0	0	0.1
122	11/30/2011 13:09	0	0	0.1
123	11/30/2011 13:10	0	0	0.1
124	11/30/2011 13:11	0	0	0.1
125	11/30/2011 13:12	0	0	0.1
126	11/30/2011 13:13	0	0	0.1
127	11/30/2011 13:14	0	0	0.1

128	11/30/2011 13:15	0	0	0.1
129	11/30/2011 13:16	0	0	0.1
130	11/30/2011 13:17	0	0	0.1
131	11/30/2011 13:18	0	0	0.1
132	11/30/2011 13:19	0	0	0.1
133	11/30/2011 13:20	0	0	0.1
134	11/30/2011 13:21	0	0	0.1
135	11/30/2011 13:22	0	0	0.1
136	11/30/2011 13:23	0	0	0.1
137	11/30/2011 13:24	0	0	0.1
138	11/30/2011 13:25	0	0	0.1
139	11/30/2011 13:26	0	0	0.1
140	11/30/2011 13:27	0	0	0.1
141	11/30/2011 13:28	0	0	0.1
142	11/30/2011 13:29	0	0	0.1
143	11/30/2011 13:30	0	0	0.1
144	11/30/2011 13:31	0	0	0.1
145	11/30/2011 13:32	0	0	0.1
146	11/30/2011 13:33	0	0	0.1
147	11/30/2011 13:34	0	0	0.1
148	11/30/2011 13:35	0	0	0.1
149	11/30/2011 13:36	0	0	0.1
150	11/30/2011 13:37	0	0	0.1
151	11/30/2011 13:38	0	0	0.1
152	11/30/2011 13:39	0	0	0.1
153	11/30/2011 13:40	0	0	0.1
154	11/30/2011 13:41	0	0	0.1
155	11/30/2011 13:42	0	0	0.1
156	11/30/2011 13:43	0	0	0.1
157	11/30/2011 13:44	0	0	0.1
158	11/30/2011 13:45	0	0	0.1
159	11/30/2011 13:46	0	0	0
160	11/30/2011 13:47	0	0	0
161	11/30/2011 13:48	0	0	0
162	11/30/2011 13:49	0	0	0
163	11/30/2011 13:50	0	0	0
164	11/30/2011 13:51	0	0	0
165	11/30/2011 13:52	0	0	0.1
166	11/30/2011 13:53	0	0	0
167	11/30/2011 13:54	0	0	0
168	11/30/2011 13:55	0	0	0
169	11/30/2011 13:56	0	0	0
170	11/30/2011 13:57	0	0	0
171	11/30/2011 13:58	0	0	0
172	11/30/2011 13:59	0	0	0
173	11/30/2011 14:00	0	0	0
174	11/30/2011 14:01	0	0	0
175	11/30/2011 14:02	0	0	0
176	11/30/2011 14:03	0	0	0
177	11/30/2011 14:04	0	0	0
178	11/30/2011 14:05	0	0	0
179	11/30/2011 14:06	0	0	0
180	11/30/2011 14:07	0	0	0
181	11/30/2011 14:08	0	0	0
182	11/30/2011 14:09	0	0	0
183	11/30/2011 14:10	0	0	0
184	11/30/2011 14:11	0	0	0
185	11/30/2011 14:12	0	0	0
186	11/30/2011 14:13	0	0	0
187	11/30/2011 14:14	0	0	0
188	11/30/2011 14:15	0	0	0
189	11/30/2011 14:16	0	0	0
190	11/30/2011 14:17	0	0	0
191	11/30/2011 14:18	0	0	0
192	11/30/2011 14:19	0	0	0
193	11/30/2011 14:20	0	0	0
194	11/30/2011 14:21	0	0	0
195	11/30/2011 14:22	0	0	0
196	11/30/2011 14:23	0	0	0

197	11/30/2011 14:24	0	0	0
198	11/30/2011 14:25	0	0	0
199	11/30/2011 14:26	0	0	0
200	11/30/2011 14:27	0	0	0
201	11/30/2011 14:28	0	0	0
202	11/30/2011 14:29	0	0	0
203	11/30/2011 14:30	0	0	0
204	11/30/2011 14:31	0	0	0
205	11/30/2011 14:32	0	0	0
206	11/30/2011 14:33	0	0	0
207	11/30/2011 14:34	0	0	0
208	11/30/2011 14:35	0	0	0
209	11/30/2011 14:36	0	0	0
210	11/30/2011 14:37	0	0	0
211	11/30/2011 14:38	0	0	0
212	11/30/2011 14:39	0	0	0
213	11/30/2011 14:40	0	0	0
214	11/30/2011 14:41	0	0	0
215	11/30/2011 14:42	0	0	0
216	11/30/2011 14:43	0	0	0
217	11/30/2011 14:44	0	0	0
218	11/30/2011 14:45	0	0	0
219	11/30/2011 14:46	0	0	0
220	11/30/2011 14:47	0	0	0
221	11/30/2011 14:48	0	0	0
222	11/30/2011 14:49	0	0	0
223	11/30/2011 14:50	0	0	0
224	11/30/2011 14:51	0	0	0
225	11/30/2011 14:52	0	0	0
226	11/30/2011 14:53	0	0	0
227	11/30/2011 14:54	0	0	0
228	11/30/2011 14:55	0	0	0
229	11/30/2011 14:56	0	0	0
230	11/30/2011 14:57	0	0	0
231	11/30/2011 14:58	0	0	0
232	11/30/2011 14:59	0	0	0
233	11/30/2011 15:00	0	0	0
234	11/30/2011 15:01	0	0	0
235	11/30/2011 15:02	0	0	0
236	11/30/2011 15:03	0	0	0
237	11/30/2011 15:04	0	0	0
238	11/30/2011 15:05	0	0	0
239	11/30/2011 15:06	0	0	0
240	11/30/2011 15:07	0	0	0
241	11/30/2011 15:08	0	0	0
242	11/30/2011 15:09	0	0	0
243	11/30/2011 15:10	0	0	0
244	11/30/2011 15:11	0	0	0
245	11/30/2011 15:12	0	0	0
246	11/30/2011 15:13	0	0	0
247	11/30/2011 15:14	0	0	0
248	11/30/2011 15:15	0	0	0
249	11/30/2011 15:16	0	0	0
250	11/30/2011 15:17	0	0	0
251	11/30/2011 15:18	0	0	0
252	11/30/2011 15:19	0	0	0
253	11/30/2011 15:20	0	0	0
254	11/30/2011 15:21	0	0	0
255	11/30/2011 15:22	0	0	0
256	11/30/2011 15:23	0	0	0

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 005724
User ID: 00000001 Site ID: 00000214
Data Points: 253 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 11/30/2011 10:17

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	11/30/2011 11:10	1.1		1.2		1.4	
2	11/30/2011 11:11	0.8		0.9		1.1	
3	11/30/2011 11:12	0.8		1.1		1.4	
4	11/30/2011 11:13	1.1		1.2		1.4	
5	11/30/2011 11:14	0.9		1		1.3	
6	11/30/2011 11:15	0.7		0.8		1.1	
7	11/30/2011 11:16	0.6		0.6		0.7	
8	11/30/2011 11:17	0.5		0.5		0.6	
9	11/30/2011 11:18	0.5		0.5		0.5	
10	11/30/2011 11:19	0.4		0.4		0.5	
11	11/30/2011 11:20	0.4		0.4		0.5	
12	11/30/2011 11:21	0.4		0.4		0.4	
13	11/30/2011 11:22	0.4		0.4		0.4	
14	11/30/2011 11:23	0.3		0.3		0.4	
15	11/30/2011 11:24	0.3		0.3		0.4	
16	11/30/2011 11:25	0.3		0.3		0.4	
17	11/30/2011 11:26	0.3		0.3		0.4	
18	11/30/2011 11:27	0.3		0.3		0.4	
19	11/30/2011 11:28	0.3		0.3		0.4	
20	11/30/2011 11:29	0.3		0.3		0.3	
21	11/30/2011 11:30	0.3		0.3		0.3	
22	11/30/2011 11:31	0.3		0.3		0.3	
23	11/30/2011 11:32	0.3		0.3		0.3	
24	11/30/2011 11:33	0.3		0.3		0.3	
25	11/30/2011 11:34	0.3		0.3		0.3	
26	11/30/2011 11:35	0.3		0.3		0.3	
27	11/30/2011 11:36	0.3		0.3		0.3	
28	11/30/2011 11:37	0.2		0.2		0.3	
29	11/30/2011 11:38	0.2		0.2		0.3	
30	11/30/2011 11:39	0.2		0.2		0.3	
31	11/30/2011 11:40	0.3		0.3		0.3	
32	11/30/2011 11:41	0.3		0.3		0.3	
33	11/30/2011 11:42	0.3		0.3		0.3	
34	11/30/2011 11:43	0.3		0.3		0.3	
35	11/30/2011 11:44	0.3		0.3		0.3	
36	11/30/2011 11:45	0.3		0.3		0.3	
37	11/30/2011 11:46	0.3		0.3		0.3	
38	11/30/2011 11:47	0.3		0.3		0.3	
39	11/30/2011 11:48	0.3		0.3		0.3	
40	11/30/2011 11:49	0.2		0.2		0.3	
41	11/30/2011 11:50	0.2		0.2		0.3	
42	11/30/2011 11:51	0.3		0.3		0.3	
43	11/30/2011 11:52	0.3		0.3		0.3	
44	11/30/2011 11:53	0.3		0.3		0.3	
45	11/30/2011 11:54	0.3		0.3		0.3	
46	11/30/2011 11:55	0.2		0.2		0.3	
47	11/30/2011 11:56	0.2		0.2		0.3	
48	11/30/2011 11:57	0.2		0.2		0.3	
49	11/30/2011 11:58	0.3		0.3		0.3	
50	11/30/2011 11:59	0.3		0.3		0.3	
51	11/30/2011 12:00	0.3		0.3		0.3	
52	11/30/2011 12:01	0.3		0.3		0.3	
53	11/30/2011 12:02	0.2		0.2		0.3	
54	11/30/2011 12:03	0.2		0.2		0.3	
55	11/30/2011 12:04	0.2		0.2		0.3	
56	11/30/2011 12:05	0.2		0.2		0.3	
57	11/30/2011 12:06	0.2		0.2		0.3	
58	11/30/2011 12:07	0.2		0.2		0.3	

59	11/30/2011 12:08	0.2	0.2	0.3
60	11/30/2011 12:09	0.3	0.4	0.9
61	11/30/2011 12:10	0.3	0.3	0.3
62	11/30/2011 12:11	0.2	0.2	0.3
63	11/30/2011 12:12	0.2	0.2	0.3
64	11/30/2011 12:13	0.2	0.2	0.3
65	11/30/2011 12:14	0.2	0.2	0.3
66	11/30/2011 12:15	0.2	0.2	0.3
67	11/30/2011 12:16	0.2	0.2	0.3
68	11/30/2011 12:17	0.2	0.2	0.3
69	11/30/2011 12:18	0.2	0.2	0.3
70	11/30/2011 12:19	0.2	0.2	0.3
71	11/30/2011 12:20	0.2	0.2	0.3
72	11/30/2011 12:21	0.2	0.2	0.3
73	11/30/2011 12:22	0.2	0.2	0.3
74	11/30/2011 12:23	0.2	0.2	0.3
75	11/30/2011 12:24	0.2	0.2	0.3
76	11/30/2011 12:25	0.2	0.2	0.2
77	11/30/2011 12:26	0.2	0.2	0.2
78	11/30/2011 12:27	0.2	0.2	0.2
79	11/30/2011 12:28	0.2	0.2	0.2
80	11/30/2011 12:29	0.2	0.2	0.2
81	11/30/2011 12:30	0.2	0.2	0.3
82	11/30/2011 12:31	0.2	0.2	0.3
83	11/30/2011 12:32	0.2	0.2	0.2
84	11/30/2011 12:33	0.2	0.2	0.2
85	11/30/2011 12:34	0.2	0.2	0.3
86	11/30/2011 12:35	0.2	0.2	0.3
87	11/30/2011 12:36	0.2	0.2	0.3
88	11/30/2011 12:37	0.2	0.2	0.3
89	11/30/2011 12:38	0.2	0.2	0.2
90	11/30/2011 12:39	0.2	0.2	0.3
91	11/30/2011 12:40	0.2	0.2	0.2
92	11/30/2011 12:41	0.2	0.2	0.2
93	11/30/2011 12:42	0.2	0.2	0.2
94	11/30/2011 12:43	0.2	0.2	0.2
95	11/30/2011 12:44	0.2	0.2	0.2
96	11/30/2011 12:45	0.2	0.2	0.2
97	11/30/2011 12:46	0.2	0.2	0.2
98	11/30/2011 12:47	0.2	0.2	0.2
99	11/30/2011 12:48	0.2	0.2	0.2
100	11/30/2011 12:49	0.2	0.2	0.2
101	11/30/2011 12:50	0.2	0.2	0.2
102	11/30/2011 12:51	0.2	0.2	0.2
103	11/30/2011 12:52	0.2	0.2	0.2
104	11/30/2011 12:53	0.2	0.2	0.2
105	11/30/2011 12:54	0.2	0.2	0.3
106	11/30/2011 12:55	0.2	0.2	0.2
107	11/30/2011 12:56	0.2	0.2	0.2
108	11/30/2011 12:57	0.2	0.2	0.2
109	11/30/2011 12:58	0.2	0.2	0.2
110	11/30/2011 12:59	0.2	0.2	0.2
111	11/30/2011 13:00	0.2	0.2	0.2
112	11/30/2011 13:01	0.2	0.2	0.2
113	11/30/2011 13:02	0.2	0.2	0.2
114	11/30/2011 13:03	0.2	0.2	0.2
115	11/30/2011 13:04	0.2	0.2	0.2
116	11/30/2011 13:05	0.2	0.2	0.2
117	11/30/2011 13:06	0.2	0.2	0.2
118	11/30/2011 13:07	0.2	0.2	0.2
119	11/30/2011 13:08	0.2	0.2	0.2
120	11/30/2011 13:09	0.2	0.2	0.2
121	11/30/2011 13:10	0.2	0.2	0.2
122	11/30/2011 13:11	0.2	0.2	0.2
123	11/30/2011 13:12	0.2	0.2	0.2
124	11/30/2011 13:13	0.2	0.2	0.2
125	11/30/2011 13:14	0.2	0.2	0.2
126	11/30/2011 13:15	0.2	0.2	0.2
127	11/30/2011 13:16	0.2	0.2	0.2

128	11/30/2011 13:17	0.2	0.2	0.2
129	11/30/2011 13:18	0.2	0.2	0.2
130	11/30/2011 13:19	0.2	0.2	0.2
131	11/30/2011 13:20	0.2	0.2	0.2
132	11/30/2011 13:21	0.2	0.2	0.2
133	11/30/2011 13:22	0.2	0.2	0.2
134	11/30/2011 13:23	0.2	0.2	0.2
135	11/30/2011 13:24	0.2	0.2	0.2
136	11/30/2011 13:25	0.2	0.2	0.2
137	11/30/2011 13:26	0.2	0.2	0.2
138	11/30/2011 13:27	0.2	0.2	0.2
139	11/30/2011 13:28	0.2	0.2	0.2
140	11/30/2011 13:29	0.2	0.2	0.2
141	11/30/2011 13:30	0.2	0.2	0.2
142	11/30/2011 13:31	0.2	0.2	0.2
143	11/30/2011 13:32	0.2	0.2	0.2
144	11/30/2011 13:33	0.2	0.2	0.3
145	11/30/2011 13:34	0.2	0.2	0.2
146	11/30/2011 13:35	0.2	0.2	0.2
147	11/30/2011 13:36	0.2	0.2	0.2
148	11/30/2011 13:37	0.2	0.2	0.2
149	11/30/2011 13:38	0.2	0.2	0.2
150	11/30/2011 13:39	0.2	0.2	0.3
151	11/30/2011 13:40	0.2	0.2	0.2
152	11/30/2011 13:41	0.2	0.2	0.2
153	11/30/2011 13:42	0.2	0.2	0.2
154	11/30/2011 13:43	0.2	0.2	0.2
155	11/30/2011 13:44	0.2	0.2	0.3
156	11/30/2011 13:45	0.2	0.2	0.2
157	11/30/2011 13:46	0.2	0.2	0.3
158	11/30/2011 13:47	0.2	0.2	0.3
159	11/30/2011 13:48	0.2	0.2	0.3
160	11/30/2011 13:49	0.2	0.2	0.3
161	11/30/2011 13:50	0.2	0.2	0.3
162	11/30/2011 13:51	0.2	0.2	0.3
163	11/30/2011 13:52	0.2	0.2	0.3
164	11/30/2011 13:53	0.2	0.2	0.2
165	11/30/2011 13:54	0.2	0.2	0.2
166	11/30/2011 13:55	0.2	0.2	0.2
167	11/30/2011 13:56	0.2	0.2	0.2
168	11/30/2011 13:57	0.2	0.2	0.2
169	11/30/2011 13:58	0.2	0.2	0.2
170	11/30/2011 13:59	0.2	0.2	0.2
171	11/30/2011 14:00	0.2	0.2	0.2
172	11/30/2011 14:01	0.2	0.2	0.3
173	11/30/2011 14:02	0.2	0.2	0.3
174	11/30/2011 14:03	0.2	0.2	0.3
175	11/30/2011 14:04	0.2	0.2	0.3
176	11/30/2011 14:05	0.2	0.2	0.3
177	11/30/2011 14:06	0.2	0.2	0.2
178	11/30/2011 14:07	0.2	0.2	0.2
179	11/30/2011 14:08	0.2	0.2	0.2
180	11/30/2011 14:09	0.2	0.2	0.2
181	11/30/2011 14:10	0.2	0.2	0.2
182	11/30/2011 14:11	0.2	0.2	0.3
183	11/30/2011 14:12	0.2	0.2	0.2
184	11/30/2011 14:13	0.2	0.2	0.2
185	11/30/2011 14:14	0.2	0.2	0.2
186	11/30/2011 14:15	0.2	0.2	0.3
187	11/30/2011 14:16	0.2	0.2	0.2
188	11/30/2011 14:17	0.2	0.2	0.2
189	11/30/2011 14:18	0.2	0.2	0.2
190	11/30/2011 14:19	0.2	0.2	0.2
191	11/30/2011 14:20	0.2	0.2	0.3
192	11/30/2011 14:21	0.2	0.2	0.3
193	11/30/2011 14:22	0.2	0.2	0.2
194	11/30/2011 14:23	0.2	0.2	0.2
195	11/30/2011 14:24	0.2	0.2	0.3
196	11/30/2011 14:25	0.2	0.2	0.3

197	11/30/2011 14:26	0.2	0.2	0.2
198	11/30/2011 14:27	0.2	0.2	0.2
199	11/30/2011 14:28	0.2	0.2	0.2
200	11/30/2011 14:29	0.2	0.2	0.2
201	11/30/2011 14:30	0.2	0.2	0.2
202	11/30/2011 14:31	0.2	0.2	0.2
203	11/30/2011 14:32	0.2	0.2	0.3
204	11/30/2011 14:33	0.2	0.2	0.2
205	11/30/2011 14:34	0.2	0.2	0.3
206	11/30/2011 14:35	0.2	0.2	0.3
207	11/30/2011 14:36	0.2	0.2	0.3
208	11/30/2011 14:37	0.2	0.2	0.3
209	11/30/2011 14:38	0.2	0.2	0.3
210	11/30/2011 14:39	0.2	0.2	0.3
211	11/30/2011 14:40	0.2	0.2	0.3
212	11/30/2011 14:41	0.2	0.2	0.3
213	11/30/2011 14:42	0.2	0.2	0.3
214	11/30/2011 14:43	0.2	0.2	0.3
215	11/30/2011 14:44	0.2	0.2	0.3
216	11/30/2011 14:45	0.2	0.2	0.2
217	11/30/2011 14:46	0.2	0.2	0.3
218	11/30/2011 14:47	0.2	0.2	0.3
219	11/30/2011 14:48	0.2	0.2	0.3
220	11/30/2011 14:49	0.2	0.2	0.2
221	11/30/2011 14:50	0.2	0.2	0.3
222	11/30/2011 14:51	0.2	0.2	0.2
223	11/30/2011 14:52	0.2	0.2	0.3
224	11/30/2011 14:53	0.2	0.2	0.3
225	11/30/2011 14:54	0.2	0.2	0.3
226	11/30/2011 14:55	0.2	0.2	0.2
227	11/30/2011 14:56	0.2	0.2	0.3
228	11/30/2011 14:57	0.2	0.2	0.3
229	11/30/2011 14:58	0.2	0.2	0.2
230	11/30/2011 14:59	0.2	0.2	0.2
231	11/30/2011 15:00	0.2	0.2	0.3
232	11/30/2011 15:01	0.2	0.2	0.2
233	11/30/2011 15:02	0.2	0.2	0.3
234	11/30/2011 15:03	0.2	0.2	0.3
235	11/30/2011 15:04	0.2	0.2	0.3
236	11/30/2011 15:05	0.2	0.2	0.3
237	11/30/2011 15:06	0.2	0.2	0.3
238	11/30/2011 15:07	0.2	0.2	0.3
239	11/30/2011 15:08	0.2	0.2	0.2
240	11/30/2011 15:09	0.2	0.2	0.2
241	11/30/2011 15:10	0.2	0.2	0.2
242	11/30/2011 15:11	0.2	0.2	0.2
243	11/30/2011 15:12	0.2	0.2	0.2
244	11/30/2011 15:13	0.2	0.2	0.2
245	11/30/2011 15:14	0.1	0.2	0.3
246	11/30/2011 15:15	0.2	0.2	0.2
247	11/30/2011 15:16	0.2	0.2	0.2
248	11/30/2011 15:17	0.2	0.2	0.3
249	11/30/2011 15:18	0.2	0.2	0.2
250	11/30/2011 15:19	0.2	0.2	0.3
251	11/30/2011 15:20	0.2	0.2	0.3
252	11/30/2011 15:21	0.2	0.2	0.2
253	11/30/2011 15:22	0.2	0.2	0.3

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530113009
Firmware Version	2.8
Calibration Date	7/21/2011
Test Name	MANUAL_001
Test Start Time	11:05:00 AM
Test Start Date	11/30/2011
Test Length [D:H:M]	0:04:17
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.032
Mass Minimum [mg/m3]	0.009
Mass Maximum [mg/m3]	0.288
Mass TWA [mg/m3]	0.017
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	257

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.018		
120	0.012		
180	0.013		
240	0.019		
300	0.016		
360	0.019		
420	0.018		
480	0.288		
540	0.028		
600	0.027		
660	0.024		
720	0.038		
780	0.012		
840	0.016		
900	0.013		
960	0.088		
1020	0.015		
1080	0.013		
1140	0.013		
1200	0.013		
1260	0.009		
1320	0.017		
1380	0.016		
1440	0.021		
1500	0.012		
1560	0.011		
1620	0.013		
1680	0.059		
1740	0.039		
1800	0.038		
1860	0.045		
1920	0.064		
1980	0.041		
2040	0.026		
2100	0.029		
2160	0.049		
2220	0.039		
2280	0.059		
2340	0.081		
2400	0.057		
2460	0.042		
2520	0.04		
2580	0.061		
2640	0.034		
2700	0.039		
2760	0.032		
2820	0.034		
2880	0.015		
2940	0.028		

3000	0.036
3060	0.059
3120	0.054
3180	0.051
3240	0.049
3300	0.052
3360	0.065
3420	0.024
3480	0.013
3540	0.026
3600	0.015
3660	0.024
3720	0.038
3780	0.05
3840	0.033
3900	0.045
3960	0.024
4020	0.011
4080	0.019
4140	0.056
4200	0.023
4260	0.015
4320	0.019
4380	0.017
4440	0.02
4500	0.022
4560	0.041
4620	0.014
4680	0.011
4740	0.026
4800	0.016
4860	0.013
4920	0.027
4980	0.023
5040	0.02
5100	0.017
5160	0.021
5220	0.013
5280	0.02
5340	0.021
5400	0.012
5460	0.041
5520	0.014
5580	0.013
5640	0.018
5700	0.011
5760	0.012
5820	0.01
5880	0.012
5940	0.011
6000	0.012
6060	0.011
6120	0.014
6180	0.012
6240	0.011
6300	0.012
6360	0.014
6420	0.015
6480	0.01
6540	0.01
6600	0.012
6660	0.014
6720	0.011
6780	0.012
6840	0.014
6900	0.016
6960	0.014
7020	0.012
7080	0.014

7140	0.021
7200	0.047
7260	0.036
7320	0.036
7380	0.031
7440	0.026
7500	0.039
7560	0.05
7620	0.049
7680	0.04
7740	0.029
7800	0.064
7860	0.034
7920	0.029
7980	0.03
8040	0.025
8100	0.033
8160	0.026
8220	0.034
8280	0.052
8340	0.029
8400	0.02
8460	0.014
8520	0.017
8580	0.022
8640	0.034
8700	0.055
8760	0.047
8820	0.032
8880	0.037
8940	0.038
9000	0.043
9060	0.023
9120	0.031
9180	0.04
9240	0.048
9300	0.044
9360	0.043
9420	0.039
9480	0.043
9540	0.034
9600	0.038
9660	0.055
9720	0.084
9780	0.042
9840	0.03
9900	0.032
9960	0.031
10020	0.046
10080	0.033
10140	0.023
10200	0.022
10260	0.015
10320	0.016
10380	0.015
10440	0.021
10500	0.025
10560	0.023
10620	0.028
10680	0.045
10740	0.059
10800	0.051
10860	0.052
10920	0.033
10980	0.025
11040	0.044
11100	0.046
11160	0.047
11220	0.057

11280	0.059
11340	0.048
11400	0.039
11460	0.027
11520	0.023
11580	0.027
11640	0.052
11700	0.03
11760	0.047
11820	0.037
11880	0.045
11940	0.03
12000	0.05
12060	0.049
12120	0.035
12180	0.02
12240	0.037
12300	0.037
12360	0.03
12420	0.042
12480	0.06
12540	0.045
12600	0.039
12660	0.024
12720	0.034
12780	0.031
12840	0.029
12900	0.044
12960	0.034
13020	0.047
13080	0.045
13140	0.089
13200	0.059
13260	0.109
13320	0.052
13380	0.051
13440	0.025
13500	0.022
13560	0.035
13620	0.049
13680	0.034
13740	0.042
13800	0.021
13860	0.026
13920	0.03
13980	0.024
14040	0.021
14100	0.026
14160	0.026
14220	0.023
14280	0.021
14340	0.02
14400	0.019
14460	0.07
14520	0.019
14580	0.019
14640	0.023
14700	0.025
14760	0.023
14820	0.028
14880	0.04
14940	0.029
15000	0.03
15060	0.022
15120	0.025
15180	0.02
15240	0.03
15300	0.04
15360	0.032

15420	0.029

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530113010
Firmware Version	2.8
Calibration Date	7/21/2011
Test Name	MANUAL_001
Test Start Time	11:10:17 AM
Test Start Date	11/30/2011
Test Length [D:H:M]	0:04:14
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.039
Mass Minimum [mg/m3]	0.007
Mass Maximum [mg/m3]	1.77
Mass TWA [mg/m3]	0.02
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	254

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.508		
120	0.273		
180	0.108		
240	0.256		
300	0.078		
360	0.169		
420	0.054		
480	0.034		
540	0.03		
600	0.057		
660	0.022		
720	0.036		
780	0.015		
840	0.018		
900	0.017		
960	0.012		
1020	0.018		
1080	0.01		
1140	0.009		
1200	0.023		
1260	0.022		
1320	0.017		
1380	0.01		
1440	0.018		
1500	0.033		
1560	0.041		
1620	0.037		
1680	0.045		
1740	0.15		
1800	0.059		
1860	0.033		
1920	0.024		
1980	0.029		
2040	0.056		
2100	0.033		
2160	0.06		
2220	0.058		
2280	0.059		
2340	0.03		
2400	0.027		
2460	0.044		
2520	0.02		
2580	0.039		
2640	0.018		
2700	0.021		
2760	0.009		
2820	0.017		
2880	0.019		
2940	0.059		

3000	0.046
3060	0.047
3120	0.036
3180	0.053
3240	0.056
3300	0.016
3360	0.02
3420	0.025
3480	0.017
3540	0.037
3600	0.033
3660	0.037
3720	0.037
3780	0.031
3840	0.026
3900	0.019
3960	0.037
4020	0.053
4080	0.017
4140	0.011
4200	0.012
4260	0.02
4320	0.02
4380	0.024
4440	0.029
4500	0.015
4560	0.012
4620	0.024
4680	0.009
4740	0.014
4800	0.022
4860	0.027
4920	0.025
4980	0.016
5040	0.011
5100	0.01
5160	0.023
5220	0.012
5280	0.016
5340	0.037
5400	0.012
5460	0.015
5520	0.012
5580	0.01
5640	0.012
5700	0.007
5760	0.018
5820	0.01
5880	0.01
5940	0.008
6000	0.01
6060	0.008
6120	0.008
6180	0.009
6240	0.009
6300	0.009
6360	0.083
6420	0.009
6480	0.01
6540	0.01
6600	0.007
6660	0.01
6720	0.015
6780	0.016
6840	0.01
6900	0.009
6960	0.009
7020	0.038
7080	0.037

7140	0.026
7200	0.027
7260	0.019
7320	0.014
7380	0.039
7440	0.036
7500	0.02
7560	0.023
7620	0.031
7680	0.036
7740	0.025
7800	0.018
7860	0.021
7920	0.012
7980	0.018
8040	0.03
8100	0.017
8160	0.025
8220	0.019
8280	0.011
8340	0.012
8400	0.014
8460	0.012
8520	0.033
8580	0.035
8640	0.035
8700	0.019
8760	0.027
8820	0.031
8880	0.021
8940	0.017
9000	0.021
9060	0.044
9120	0.037
9180	0.043
9240	0.03
9300	0.032
9360	0.073
9420	0.025
9480	0.032
9540	0.048
9600	0.054
9660	0.026
9720	0.026
9780	0.02
9840	0.023
9900	0.038
9960	0.018
10020	0.021
10080	0.011
10140	0.013
10200	0.011
10260	0.012
10320	0.017
10380	0.017
10440	0.016
10500	0.026
10560	0.035
10620	0.036
10680	0.04
10740	0.039
10800	0.027
10860	0.02
10920	0.041
10980	0.044
11040	0.037
11100	0.055
11160	0.055
11220	0.031

11280	0.032
11340	0.013
11400	0.016
11460	0.025
11520	0.028
11580	0.018
11640	0.023
11700	0.036
11760	0.037
11820	0.039
11880	0.056
11940	0.027
12000	0.027
12060	0.016
12120	0.027
12180	0.029
12240	0.054
12300	0.04
12360	1.77
12420	0.045
12480	0.02
12540	0.022
12600	0.023
12660	0.021
12720	0.02
12780	0.041
12840	0.031
12900	0.048
12960	0.042
13020	0.057
13080	0.075
13140	0.072
13200	0.039
13260	0.024
13320	0.021
13380	0.018
13440	0.033
13500	0.022
13560	0.026
13620	0.022
13680	0.019
13740	0.026
13800	0.026
13860	0.021
13920	0.02
13980	0.022
14040	0.021
14100	0.023
14160	0.022
14220	0.018
14280	0.017
14340	0.019
14400	0.016
14460	0.017
14520	0.019
14580	0.021
14640	0.017
14700	0.02
14760	0.032
14820	0.029
14880	0.019
14940	0.018
15000	0.017
15060	0.02
15120	0.027
15180	0.018
15240	0.022

AECOM

Client: Nat'l Grid
Location: Metropolitan - Lowes
Date: 12/1/11
Field Personnel: JS & JE

Project:
Project Number:
Weather: 40°F - Sunny, 5MPH wind
Ambient Noise: 66.1

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
745	0.1	.014	0.3	0.0	.010	75.4	setting up drill
800	0.2	.143	0.2	0.0	.012	82.1	Begin drilling MW23
815	0.1	.009	0.2	0.0	.012	75.9	"
830	0.0	.008	0.2	0.0	.010	81.0	
845	0.0	.008	0.4	0.0	.009	82.4	Drilling MW23
900	0.0	.007	0.3	0.0	.009	83.3	"
915	0.0	.008	0.3	0.0	.009	68.7	"
930	0.0	.007	0.2	0.0	.012	76.1	"
945	0.0	.007	0.4	0.0	.014	78.0	"
1000	0.0	.007	0.0	0.0	.007	82.1	
1015	0.0	.007	0.1	0.0	.015	61.1	
1035	0.0	.006	0.2	0.0	.007	81.0	
1055	0.0	.009	0.4	0.0	.008	83.6	Filling MW23
1115	0.0	.006	0.2	0.0	.008	84.3	"
1130	0.0	.007	0.3	0.0	.010	77.2	Grouting complete

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 902685
User ID: 00000001 Site ID: 00000096
Data Points: 2 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 12/01/2011 07:10

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	12/1/2011 7:13	0.5		0.7		0.9	
2	12/1/2011 7:14	0.5		26.8		99.8	L

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 902685
User ID: 00000001 Site ID: 00000097
Data Points: 232 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 12/01/2011 07:10

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	12/1/2011 7:42	0.1		0.1		0.1	
2	12/1/2011 7:43	0.1		0.1		0.1	
3	12/1/2011 7:44	0.1		0.1		0.1	
4	12/1/2011 7:45	0		0		0.1	
5	12/1/2011 7:46	0		0		0.1	
6	12/1/2011 7:47	0.1		0.1		0.1	
7	12/1/2011 7:48	0.1		0.1		0.1	
8	12/1/2011 7:49	0		0		0.1	
9	12/1/2011 7:50	0.1		0.1		0.1	
10	12/1/2011 7:51	0.1		0.1		0.1	
11	12/1/2011 7:52	0.1		0.1		0.1	
12	12/1/2011 7:53	0.1		0.1		0.1	
13	12/1/2011 7:54	0.1		0.1		0.1	
14	12/1/2011 7:55	0.1		0.1		0.1	
15	12/1/2011 7:56	0.1		0.1		0.1	
16	12/1/2011 7:57	0.1		0.1		0.1	
17	12/1/2011 7:58	0.1		0.1		0.1	
18	12/1/2011 7:59	0.1		0.1		0.1	
19	12/1/2011 8:00	0.1		0.1		0.1	
20	12/1/2011 8:01	0		0		0.1	
21	12/1/2011 8:02	0		0.1		0.2	
22	12/1/2011 8:03	0		0.1		0.2	
23	12/1/2011 8:04	0		0		0.1	
24	12/1/2011 8:05	0		0		0.1	
25	12/1/2011 8:06	0.1		0.1		0.1	
26	12/1/2011 8:07	0		0		0.1	
27	12/1/2011 8:08	0		0		0.1	
28	12/1/2011 8:09	0		0		0.1	
29	12/1/2011 8:10	0.1		0.1		0.1	
30	12/1/2011 8:11	0		0		0.1	
31	12/1/2011 8:12	0		0		0.1	
32	12/1/2011 8:13	0		0		0.1	
33	12/1/2011 8:14	0		0		0.1	
34	12/1/2011 8:15	0		0		0.1	
35	12/1/2011 8:16	0		0		0.1	
36	12/1/2011 8:17	0		0		0.1	
37	12/1/2011 8:18	0		0		0.1	
38	12/1/2011 8:19	0		0		0.1	
39	12/1/2011 8:20	0		0		0.1	
40	12/1/2011 8:21	0		0		0.1	
41	12/1/2011 8:22	0		0		0.1	
42	12/1/2011 8:23	0		0		0.1	
43	12/1/2011 8:24	0		0		0	
44	12/1/2011 8:25	0		0		0.1	
45	12/1/2011 8:26	0		0		0.1	
46	12/1/2011 8:27	0		0		0	
47	12/1/2011 8:28	0		0		0	
48	12/1/2011 8:29	0		0		0	
49	12/1/2011 8:30	0		0		0	
50	12/1/2011 8:31	0		0		0	
51	12/1/2011 8:32	0		0		0	
52	12/1/2011 8:33	0		0		0	
53	12/1/2011 8:34	0		0		0	
54	12/1/2011 8:35	0		0		0	
55	12/1/2011 8:36	0		0		0	
56	12/1/2011 8:37	0		0		0	
57	12/1/2011 8:38	0		0		0	
58	12/1/2011 8:39	0		0		0	

59	12/1/2011 8:40	0	0	0
60	12/1/2011 8:41	0	0	0
61	12/1/2011 8:42	0	0	0
62	12/1/2011 8:43	0	0	0
63	12/1/2011 8:44	0	0	0
64	12/1/2011 8:45	0	0	0
65	12/1/2011 8:46	0	0	0
66	12/1/2011 8:47	0	0	0
67	12/1/2011 8:48	0	0	0
68	12/1/2011 8:49	0	0	0
69	12/1/2011 8:50	0	0	0
70	12/1/2011 8:51	0	0	0
71	12/1/2011 8:52	0	0	0
72	12/1/2011 8:53	0	0	0
73	12/1/2011 8:54	0	0	0
74	12/1/2011 8:55	0	0	0
75	12/1/2011 8:56	0	0	0
76	12/1/2011 8:57	0	0	0
77	12/1/2011 8:58	0	0	0
78	12/1/2011 8:59	0	0	0
79	12/1/2011 9:00	0	0	0
80	12/1/2011 9:01	0	0	0
81	12/1/2011 9:02	0	0	0
82	12/1/2011 9:03	0	0	0
83	12/1/2011 9:04	0	0	0
84	12/1/2011 9:05	0	0	0
85	12/1/2011 9:06	0	0	0
86	12/1/2011 9:07	0	0	0
87	12/1/2011 9:08	0	0	0
88	12/1/2011 9:09	0	0	0
89	12/1/2011 9:10	0	0	0
90	12/1/2011 9:11	0	0	0
91	12/1/2011 9:12	0	0	0
92	12/1/2011 9:13	0	0	0
93	12/1/2011 9:14	0	0	0
94	12/1/2011 9:15	0	0	0
95	12/1/2011 9:16	0	0	0
96	12/1/2011 9:17	0	0	0
97	12/1/2011 9:18	0	0	0
98	12/1/2011 9:19	0	0	0
99	12/1/2011 9:20	0	0	0
100	12/1/2011 9:21	0	0	0
101	12/1/2011 9:22	0	0	0
102	12/1/2011 9:23	0	0	0
103	12/1/2011 9:24	0	0	0
104	12/1/2011 9:25	0	0	0
105	12/1/2011 9:26	0	0	0
106	12/1/2011 9:27	0	0	0
107	12/1/2011 9:28	0	0	0
108	12/1/2011 9:29	0	0	0
109	12/1/2011 9:30	0	0	0
110	12/1/2011 9:31	0	0	0
111	12/1/2011 9:32	0	0	0
112	12/1/2011 9:33	0	0	0
113	12/1/2011 9:34	0	0	0
114	12/1/2011 9:35	0	0	0
115	12/1/2011 9:36	0	0	0
116	12/1/2011 9:37	0	0	0
117	12/1/2011 9:38	0	0	0
118	12/1/2011 9:39	0	0	0
119	12/1/2011 9:40	0	0	0
120	12/1/2011 9:41	0	0	0
121	12/1/2011 9:42	0	0	0
122	12/1/2011 9:43	0	0	0
123	12/1/2011 9:44	0	0	0
124	12/1/2011 9:45	0	0	0
125	12/1/2011 9:46	0	0	0
126	12/1/2011 9:47	0	0	0
127	12/1/2011 9:48	0	0	0

128	12/1/2011 9:49	0	0	0
129	12/1/2011 9:50	0	0	0
130	12/1/2011 9:51	0	0	0
131	12/1/2011 9:52	0	0	0
132	12/1/2011 9:53	0	0	0
133	12/1/2011 9:54	0	0	0
134	12/1/2011 9:55	0	0	0
135	12/1/2011 9:56	0	0	0
136	12/1/2011 9:57	0	0	0
137	12/1/2011 9:58	0	0	0
138	12/1/2011 9:59	0	0	0
139	12/1/2011 10:00	0	0	0
140	12/1/2011 10:01	0	0	0
141	12/1/2011 10:02	0	0	0
142	12/1/2011 10:03	0	0	0
143	12/1/2011 10:04	0	0	0
144	12/1/2011 10:05	0	0	0
145	12/1/2011 10:06	0	0	0
146	12/1/2011 10:07	0	0	0
147	12/1/2011 10:08	0	0	0
148	12/1/2011 10:09	0	0	0
149	12/1/2011 10:10	0	0	0
150	12/1/2011 10:11	0	0	0
151	12/1/2011 10:12	0	0	0
152	12/1/2011 10:13	0	0	0
153	12/1/2011 10:14	0	0	0
154	12/1/2011 10:15	0	0	0
155	12/1/2011 10:16	0	0	0
156	12/1/2011 10:17	0	0	0
157	12/1/2011 10:18	0	0	0
158	12/1/2011 10:19	0	0	0
159	12/1/2011 10:20	0	0	0
160	12/1/2011 10:21	0	0	0
161	12/1/2011 10:22	0	0	0
162	12/1/2011 10:23	0	0	0
163	12/1/2011 10:24	0	0	0
164	12/1/2011 10:25	0	0	0
165	12/1/2011 10:26	0	0	0
166	12/1/2011 10:27	0	0	0
167	12/1/2011 10:28	0	0	0
168	12/1/2011 10:29	0	0	0
169	12/1/2011 10:30	0	0	0
170	12/1/2011 10:31	0	0	0
171	12/1/2011 10:32	0	0	0
172	12/1/2011 10:33	0	0	0
173	12/1/2011 10:34	0	0	0
174	12/1/2011 10:35	0	0	0
175	12/1/2011 10:36	0	0	0
176	12/1/2011 10:37	0	0	0
177	12/1/2011 10:38	0	0	0
178	12/1/2011 10:39	0	0	0
179	12/1/2011 10:40	0	0	0
180	12/1/2011 10:41	0	0	0
181	12/1/2011 10:42	0	0	0
182	12/1/2011 10:43	0	0	0
183	12/1/2011 10:44	0	0	0
184	12/1/2011 10:45	0	0	0
185	12/1/2011 10:46	0	0	0
186	12/1/2011 10:47	0	0	0
187	12/1/2011 10:48	0	0	0
188	12/1/2011 10:49	0	0	0
189	12/1/2011 10:50	0	0	0
190	12/1/2011 10:51	0	0	0
191	12/1/2011 10:52	0	0	0
192	12/1/2011 10:53	0	0	0
193	12/1/2011 10:54	0	0	0
194	12/1/2011 10:55	0	0	0
195	12/1/2011 10:56	0	0	0
196	12/1/2011 10:57	0	0	0

197	12/1/2011 10:58	0	0	0
198	12/1/2011 10:59	0	0	0
199	12/1/2011 11:00	0	0	0
200	12/1/2011 11:01	0	0	0
201	12/1/2011 11:02	0	0	0
202	12/1/2011 11:03	0	0	0
203	12/1/2011 11:04	0	0	0
204	12/1/2011 11:05	0	0	0
205	12/1/2011 11:06	0	0	0
206	12/1/2011 11:07	0	0	0
207	12/1/2011 11:08	0	0	0
208	12/1/2011 11:09	0	0	0
209	12/1/2011 11:10	0	0	0
210	12/1/2011 11:11	0	0	0
211	12/1/2011 11:12	0	0	0
212	12/1/2011 11:13	0	0	0
213	12/1/2011 11:14	0	0	0
214	12/1/2011 11:15	0	0	0
215	12/1/2011 11:16	0	0	0
216	12/1/2011 11:17	0	0	0
217	12/1/2011 11:18	0	0	0
218	12/1/2011 11:19	0	0	0
219	12/1/2011 11:20	0	0	0
220	12/1/2011 11:21	0	0	0
221	12/1/2011 11:22	0	0	0
222	12/1/2011 11:23	0	0	0
223	12/1/2011 11:24	0	0	0
224	12/1/2011 11:25	0	0	0
225	12/1/2011 11:26	0	0	0
226	12/1/2011 11:27	0	0	0
227	12/1/2011 11:28	0	0	0
228	12/1/2011 11:29	0	0	0
229	12/1/2011 11:30	0	0	0
230	12/1/2011 11:31	0	0	0
231	12/1/2011 11:32	0	0	0
232	12/1/2011 11:33	0	0	0

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 005724
User ID: 00000001 Site ID: 00000216
Data Points: 234 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 12/01/2011 07:12

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100	100
Low Alarm Levels:	50	50	50

Line#	Date Time	Min(ppm)	Alarm	Avg(ppm)	Alarm	Max(ppm)	Alarm
1	12/1/2011 7:40	0		0		0	
2	12/1/2011 7:41	0		0		0	
3	12/1/2011 7:42	0		0		0	
4	12/1/2011 7:43	0		0		0	
5	12/1/2011 7:44	0		0		0	
6	12/1/2011 7:45	0		0		0	
7	12/1/2011 7:46	0		0		0	
8	12/1/2011 7:47	0		0		0	
9	12/1/2011 7:48	0		0		0	
10	12/1/2011 7:49	0		0		0	
11	12/1/2011 7:50	0		0		0	
12	12/1/2011 7:51	0		0		0	
13	12/1/2011 7:52	0		0		0	
14	12/1/2011 7:53	0		0		0	
15	12/1/2011 7:54	0		0		0	
16	12/1/2011 7:55	0		0		0	
17	12/1/2011 7:56	0		0		0	
18	12/1/2011 7:57	0		0		0	
19	12/1/2011 7:58	0		0		0	
20	12/1/2011 7:59	0		0		0	
21	12/1/2011 8:00	0		0		0	
22	12/1/2011 8:01	0		0		0	
23	12/1/2011 8:02	0		0		0	
24	12/1/2011 8:03	0		0		0	
25	12/1/2011 8:04	0		0		0	
26	12/1/2011 8:05	0		0		0	
27	12/1/2011 8:06	0		0		0	
28	12/1/2011 8:07	0		0		0	
29	12/1/2011 8:08	0		0		0	
30	12/1/2011 8:09	0		0		0	
31	12/1/2011 8:10	0		0		0	
32	12/1/2011 8:11	0		0		0	
33	12/1/2011 8:12	0		0		0	
34	12/1/2011 8:13	0		0		0	
35	12/1/2011 8:14	0		0		0	
36	12/1/2011 8:15	0		0		0	
37	12/1/2011 8:16	0		0		0	
38	12/1/2011 8:17	0		0		0	
39	12/1/2011 8:18	0		0		0	
40	12/1/2011 8:19	0		0		0	
41	12/1/2011 8:20	0		0		0	
42	12/1/2011 8:21	0		0		0	
43	12/1/2011 8:22	0		0		0	
44	12/1/2011 8:23	0		0		0	
45	12/1/2011 8:24	0		0		0	
46	12/1/2011 8:25	0		0		0	
47	12/1/2011 8:26	0		0		0	
48	12/1/2011 8:27	0		0		0	
49	12/1/2011 8:28	0		0		0	
50	12/1/2011 8:29	0		0		0	
51	12/1/2011 8:30	0		0		0	
52	12/1/2011 8:31	0		0		0	
53	12/1/2011 8:32	0		0		0	
54	12/1/2011 8:33	0		0		0	
55	12/1/2011 8:34	0		0		0	
56	12/1/2011 8:35	0		0		0	
57	12/1/2011 8:36	0		0		0	
58	12/1/2011 8:37	0		0		0	

59	12/1/2011 8:38	0	0	0
60	12/1/2011 8:39	0	0	0
61	12/1/2011 8:40	0	0	0
62	12/1/2011 8:41	0	0	0
63	12/1/2011 8:42	0	0	0
64	12/1/2011 8:43	0	0	0
65	12/1/2011 8:44	0	0	0
66	12/1/2011 8:45	0	0	0
67	12/1/2011 8:46	0	0	0
68	12/1/2011 8:47	0	0	0
69	12/1/2011 8:48	0	0	0
70	12/1/2011 8:49	0	0	0
71	12/1/2011 8:50	0	0	0
72	12/1/2011 8:51	0	0	0
73	12/1/2011 8:52	0	0	0
74	12/1/2011 8:53	0	0	0
75	12/1/2011 8:54	0	0	0
76	12/1/2011 8:55	0	0	0
77	12/1/2011 8:56	0	0	0
78	12/1/2011 8:57	0	0	0
79	12/1/2011 8:58	0	0	0
80	12/1/2011 8:59	0	0	0
81	12/1/2011 9:00	0	0	0
82	12/1/2011 9:01	0	0	0
83	12/1/2011 9:02	0	0	0
84	12/1/2011 9:03	0	0	0
85	12/1/2011 9:04	0	0	0
86	12/1/2011 9:05	0	0	0
87	12/1/2011 9:06	0	0	0
88	12/1/2011 9:07	0	0	0
89	12/1/2011 9:08	0	0	0
90	12/1/2011 9:09	0	0	0
91	12/1/2011 9:10	0	0	0
92	12/1/2011 9:11	0	0	0
93	12/1/2011 9:12	0	0	0
94	12/1/2011 9:13	0	0	0
95	12/1/2011 9:14	0	0	0
96	12/1/2011 9:15	0	0	0
97	12/1/2011 9:16	0	0	0
98	12/1/2011 9:17	0	0	0
99	12/1/2011 9:18	0	0	0
100	12/1/2011 9:19	0	0	0
101	12/1/2011 9:20	0	0	0
102	12/1/2011 9:21	0	0	0
103	12/1/2011 9:22	0	0	0
104	12/1/2011 9:23	0	0	0
105	12/1/2011 9:24	0	0	0
106	12/1/2011 9:25	0	0	0
107	12/1/2011 9:26	0	0	0
108	12/1/2011 9:27	0	0	0
109	12/1/2011 9:28	0	0	0
110	12/1/2011 9:29	0	0	0
111	12/1/2011 9:30	0	0	0
112	12/1/2011 9:31	0	0	0
113	12/1/2011 9:32	0	0	0
114	12/1/2011 9:33	0	0	0
115	12/1/2011 9:34	0	0	0
116	12/1/2011 9:35	0	0	0
117	12/1/2011 9:36	0	0	0
118	12/1/2011 9:37	0	0	0
119	12/1/2011 9:38	0	0	0
120	12/1/2011 9:39	0	0	0
121	12/1/2011 9:40	0	0	0
122	12/1/2011 9:41	0	0	0
123	12/1/2011 9:42	0	0	0
124	12/1/2011 9:43	0	0	0
125	12/1/2011 9:44	0	0	0
126	12/1/2011 9:45	0	0	0
127	12/1/2011 9:46	0	0	0

128	12/1/2011 9:47	0	0	0
129	12/1/2011 9:48	0	0	0
130	12/1/2011 9:49	0	0	0
131	12/1/2011 9:50	0	0	0
132	12/1/2011 9:51	0	0	0
133	12/1/2011 9:52	0	0	0
134	12/1/2011 9:53	0	0	0
135	12/1/2011 9:54	0	0	0
136	12/1/2011 9:55	0	0	0
137	12/1/2011 9:56	0	0	0
138	12/1/2011 9:57	0	0	0
139	12/1/2011 9:58	0	0	0
140	12/1/2011 9:59	0	0	0
141	12/1/2011 10:00	0	0	0
142	12/1/2011 10:01	0	0	0
143	12/1/2011 10:02	0	0	0
144	12/1/2011 10:03	0	0	0
145	12/1/2011 10:04	0	0	0
146	12/1/2011 10:05	0	0	0
147	12/1/2011 10:06	0	0	0
148	12/1/2011 10:07	0	0	0
149	12/1/2011 10:08	0	0	0
150	12/1/2011 10:09	0	0	0
151	12/1/2011 10:10	0	0	0
152	12/1/2011 10:11	0	0	0
153	12/1/2011 10:12	0	0	0
154	12/1/2011 10:13	0	0	0
155	12/1/2011 10:14	0	0	0
156	12/1/2011 10:15	0	0	0
157	12/1/2011 10:16	0	0	0
158	12/1/2011 10:17	0	0	0
159	12/1/2011 10:18	0	0	0
160	12/1/2011 10:19	0	0	0
161	12/1/2011 10:20	0	0	0
162	12/1/2011 10:21	0	0	0
163	12/1/2011 10:22	0	0	0
164	12/1/2011 10:23	0	0	0
165	12/1/2011 10:24	0	0	0
166	12/1/2011 10:25	0	0	0
167	12/1/2011 10:26	0	0	0
168	12/1/2011 10:27	0	0	0
169	12/1/2011 10:28	0	0	0
170	12/1/2011 10:29	0	0	0
171	12/1/2011 10:30	0	0	0
172	12/1/2011 10:31	0	0	0
173	12/1/2011 10:32	0	0	0
174	12/1/2011 10:33	0	0	0
175	12/1/2011 10:34	0	0	0
176	12/1/2011 10:35	0	0	0
177	12/1/2011 10:36	0	0	0
178	12/1/2011 10:37	0	0	0
179	12/1/2011 10:38	0	0	0
180	12/1/2011 10:39	0	0	0
181	12/1/2011 10:40	0	0	0
182	12/1/2011 10:41	0	0	0
183	12/1/2011 10:42	0	0	0
184	12/1/2011 10:43	0	0	0
185	12/1/2011 10:44	0	0	0
186	12/1/2011 10:45	0	0	0
187	12/1/2011 10:46	0	0	0
188	12/1/2011 10:47	0	0	0
189	12/1/2011 10:48	0	0	0
190	12/1/2011 10:49	0	0	0
191	12/1/2011 10:50	0	0	0
192	12/1/2011 10:51	0	0	0
193	12/1/2011 10:52	0	0	0
194	12/1/2011 10:53	0	0	0
195	12/1/2011 10:54	0	0	0
196	12/1/2011 10:55	0	0	0

197	12/1/2011 10:56	0	0	0
198	12/1/2011 10:57	0	0	0
199	12/1/2011 10:58	0	0	0
200	12/1/2011 10:59	0	0	0
201	12/1/2011 11:00	0	0	0
202	12/1/2011 11:01	0	0	0
203	12/1/2011 11:02	0	0	0
204	12/1/2011 11:03	0	0	0
205	12/1/2011 11:04	0	0	0
206	12/1/2011 11:05	0	0	0
207	12/1/2011 11:06	0	0	0
208	12/1/2011 11:07	0	0	0
209	12/1/2011 11:08	0	0	0
210	12/1/2011 11:09	0	0	0
211	12/1/2011 11:10	0	0	0
212	12/1/2011 11:11	0	0	0
213	12/1/2011 11:12	0	0	0
214	12/1/2011 11:13	0	0	0
215	12/1/2011 11:14	0	0	0
216	12/1/2011 11:15	0	0	0
217	12/1/2011 11:16	0	0	0
218	12/1/2011 11:17	0	0	0
219	12/1/2011 11:18	0	0	0
220	12/1/2011 11:19	0	0	0
221	12/1/2011 11:20	0	0	0
222	12/1/2011 11:21	0	0	0
223	12/1/2011 11:22	0	0	0
224	12/1/2011 11:23	0	0	0
225	12/1/2011 11:24	0	0	0
226	12/1/2011 11:25	0	0	0
227	12/1/2011 11:26	0	0	0
228	12/1/2011 11:27	0	0	0
229	12/1/2011 11:28	0	0	0
230	12/1/2011 11:29	0	0	0
231	12/1/2011 11:30	0	0	0
232	12/1/2011 11:31	0	0	0
233	12/1/2011 11:32	0	0	0
234	12/1/2011 11:33	0	0	0

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530113009
Firmware Version	2.8
Calibration Date	7/21/2011
Test Name	MANUAL_002
Test Start Time	7:39:04 AM
Test Start Date	12/1/2011
Test Length [D:H:M]	0:03:54
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.011
Mass Minimum [mg/m3]	0.005
Mass Maximum [mg/m3]	0.242
Mass TWA [mg/m3]	0.005
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	234

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.028		
120	0.011		
180	0.012		
240	0.009		
300	0.012		
360	0.013		
420	0.01		
480	0.01		
540	0.01		
600	0.011		
660	0.012		
720	0.013		
780	0.015		
840	0.012		
900	0.014		
960	0.013		
1020	0.013		
1080	0.009		
1140	0.012		
1200	0.123		
1260	0.134		
1320	0.171		
1380	0.242		
1440	0.094		
1500	0.006		
1560	0.006		
1620	0.007		
1680	0.009		
1740	0.007		
1800	0.008		
1860	0.008		
1920	0.009		
1980	0.015		
2040	0.009		
2100	0.015		
2160	0.014		
2220	0.01		
2280	0.009		
2340	0.009		
2400	0.01		
2460	0.009		
2520	0.009		
2580	0.008		
2640	0.008		
2700	0.007		
2760	0.007		
2820	0.007		
2880	0.006		
2940	0.007		

3000	0.007
3060	0.008
3120	0.007
3180	0.007
3240	0.007
3300	0.008
3360	0.005
3420	0.006
3480	0.006
3540	0.007
3600	0.009
3660	0.007
3720	0.007
3780	0.006
3840	0.008
3900	0.007
3960	0.006
4020	0.006
4080	0.006
4140	0.006
4200	0.007
4260	0.006
4320	0.007
4380	0.006
4440	0.007
4500	0.006
4560	0.007
4620	0.006
4680	0.008
4740	0.008
4800	0.011
4860	0.009
4920	0.007
4980	0.007
5040	0.006
5100	0.006
5160	0.007
5220	0.008
5280	0.009
5340	0.008
5400	0.007
5460	0.008
5520	0.008
5580	0.01
5640	0.008
5700	0.008
5760	0.009
5820	0.009
5880	0.039
5940	0.014
6000	0.008
6060	0.007
6120	0.007
6180	0.007
6240	0.007
6300	0.008
6360	0.008
6420	0.007
6480	0.012
6540	0.01
6600	0.007
6660	0.006
6720	0.007
6780	0.008
6840	0.01
6900	0.01
6960	0.008
7020	0.009
7080	0.008

7140	0.009
7200	0.01
7260	0.008
7320	0.011
7380	0.01
7440	0.008
7500	0.008
7560	0.007
7620	0.007
7680	0.007
7740	0.007
7800	0.008
7860	0.006
7920	0.007
7980	0.007
8040	0.009
8100	0.006
8160	0.007
8220	0.006
8280	0.006
8340	0.005
8400	0.007
8460	0.007
8520	0.007
8580	0.005
8640	0.006
8700	0.008
8760	0.008
8820	0.009
8880	0.009
8940	0.007
9000	0.006
9060	0.006
9120	0.007
9180	0.006
9240	0.006
9300	0.008
9360	0.007
9420	0.006
9480	0.006
9540	0.006
9600	0.008
9660	0.006
9720	0.007
9780	0.006
9840	0.005
9900	0.006
9960	0.007
10020	0.006
10080	0.008
10140	0.014
10200	0.012
10260	0.012
10320	0.01
10380	0.008
10440	0.008
10500	0.006
10560	0.006
10620	0.006
10680	0.006
10740	0.006
10800	0.007
10860	0.009
10920	0.01
10980	0.015
11040	0.01
11100	0.007
11160	0.007
11220	0.007

11280	0.006
11340	0.007
11400	0.007
11460	0.007
11520	0.007
11580	0.007
11640	0.007
11700	0.007
11760	0.007
11820	0.006
11880	0.007
11940	0.008
12000	0.009
12060	0.006
12120	0.007
12180	0.006
12240	0.007
12300	0.007
12360	0.007
12420	0.006
12480	0.006
12540	0.007
12600	0.007
12660	0.007
12720	0.008
12780	0.009
12840	0.009
12900	0.007
12960	0.005
13020	0.006
13080	0.008
13140	0.008
13200	0.008
13260	0.007
13320	0.009
13380	0.009
13440	0.008
13500	0.006
13560	0.007
13620	0.007
13680	0.009
13740	0.008
13800	0.007
13860	0.007
13920	0.007
13980	0.007
14040	0.008

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530113010
Firmware Version	2.8
Calibration Date	7/21/2011
Test Name	MANUAL_002
Test Start Time	7:41:37 AM
Test Start Date	12/1/2011
Test Length [D:H:M]	0:03:54
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.012
Mass Minimum [mg/m3]	0.007
Mass Maximum [mg/m3]	0.162
Mass TWA [mg/m3]	0.006
Photometric User Cal	1
Flow User Cal	1
Errors	
Number of Samples	234

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.049		
120	0.031		
180	0.011		
240	0.009		
300	0.02		
360	0.029		
420	0.013		
480	0.017		
540	0.012		
600	0.021		
660	0.019		
720	0.023		
780	0.014		
840	0.022		
900	0.019		
960	0.017		
1020	0.013		
1080	0.013		
1140	0.029		
1200	0.068		
1260	0.01		
1320	0.01		
1380	0.009		
1440	0.126		
1500	0.008		
1560	0.008		
1620	0.008		
1680	0.01		
1740	0.008		
1800	0.013		
1860	0.01		
1920	0.011		
1980	0.013		
2040	0.044		
2100	0.02		
2160	0.013		
2220	0.012		
2280	0.012		
2340	0.011		
2400	0.013		
2460	0.014		
2520	0.01		
2580	0.01		
2640	0.01		
2700	0.013		
2760	0.01		
2820	0.009		
2880	0.01		
2940	0.009		

3000	0.009
3060	0.01
3120	0.01
3180	0.01
3240	0.01
3300	0.01
3360	0.009
3420	0.008
3480	0.007
3540	0.008
3600	0.01
3660	0.011
3720	0.01
3780	0.013
3840	0.009
3900	0.011
3960	0.009
4020	0.009
4080	0.009
4140	0.008
4200	0.009
4260	0.009
4320	0.009
4380	0.01
4440	0.01
4500	0.008
4560	0.008
4620	0.008
4680	0.009
4740	0.009
4800	0.011
4860	0.013
4920	0.01
4980	0.009
5040	0.008
5100	0.007
5160	0.01
5220	0.009
5280	0.015
5340	0.01
5400	0.008
5460	0.01
5520	0.01
5580	0.01
5640	0.009
5700	0.009
5760	0.011
5820	0.01
5880	0.014
5940	0.013
6000	0.009
6060	0.009
6120	0.008
6180	0.009
6240	0.01
6300	0.01
6360	0.009
6420	0.011
6480	0.011
6540	0.013
6600	0.009
6660	0.008
6720	0.008
6780	0.012
6840	0.013
6900	0.012
6960	0.01
7020	0.011
7080	0.01

7140	0.009
7200	0.009
7260	0.011
7320	0.01
7380	0.011
7440	0.066
7500	0.009
7560	0.008
7620	0.013
7680	0.008
7740	0.008
7800	0.009
7860	0.008
7920	0.008
7980	0.011
8040	0.01
8100	0.007
8160	0.007
8220	0.008
8280	0.007
8340	0.007
8400	0.008
8460	0.008
8520	0.009
8580	0.021
8640	0.007
8700	0.008
8760	0.008
8820	0.011
8880	0.013
8940	0.01
9000	0.008
9060	0.007
9120	0.008
9180	0.008
9240	0.008
9300	0.016
9360	0.012
9420	0.007
9480	0.007
9540	0.007
9600	0.007
9660	0.008
9720	0.008
9780	0.007
9840	0.008
9900	0.009
9960	0.009
10020	0.008
10080	0.008
10140	0.011
10200	0.015
10260	0.016
10320	0.012
10380	0.01
10440	0.009
10500	0.009
10560	0.007
10620	0.008
10680	0.009
10740	0.009
10800	0.012
10860	0.01
10920	0.011
10980	0.013
11040	0.012
11100	0.011
11160	0.008
11220	0.008

11280	0.008
11340	0.009
11400	0.008
11460	0.008
11520	0.162
11580	0.031
11640	0.03
11700	0.014
11760	0.007
11820	0.007
11880	0.007
11940	0.009
12000	0.008
12060	0.007
12120	0.008
12180	0.007
12240	0.007
12300	0.008
12360	0.008
12420	0.007
12480	0.007
12540	0.008
12600	0.008
12660	0.007
12720	0.007
12780	0.009
12840	0.011
12900	0.009
12960	0.007
13020	0.007
13080	0.007
13140	0.01
13200	0.009
13260	0.009
13320	0.009
13380	0.011
13440	0.015
13500	0.009
13560	0.008
13620	0.008
13680	0.008
13740	0.008
13800	0.01
13860	0.009
13920	0.007
13980	0.008
14040	0.008

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-14
Date: 04/01/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes Benzene	Draeger Tubes Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800	13886	5432	S/N	06088			CAMP SETUP; BEGIN
DN	800	06586	11821	S/N				LOGGING @ 0815
UP	815	0.0	0.019		0.0	N/A	N/A	NOISE:
DN	815	0.0	0.031		—	N/A	N/A	
UP	830	0.0	0.018		0.0	N/A	N/A	Breaking up concrete
DN	830	0.0	0.024		—	N/A	N/A	
UP	845	0.0	0.023		0.0	N/A	N/A	
DN	845	0.0	0.024		—	N/A	N/A	
UP	900	0.0	0.020		0.0	N/A	N/A	jackhammering
DN	900	0.0	0.026		—			
UP	915	0.0	0.021		0.0			
DN	915	0.0	0.030		—			
UP	930	0.0	0.026		0.0	—	—	
DN	930	0.0	0.019		0.0	—	—	
UP	945	0.0	0.026		0.0	—	—	preclear
DN	945	0.0	0.025		—	—	—	"
UP	1000	0.0	0.026		0.0	—	—	"
DN	1000	0.0	0.028		—	—	—	"
UP	1015	0.0	0.026		0.0	—	—	"
DN	1015	0.0	0.030		—	—	—	"
UP	1030	0.0	0.027		0.0	—	—	"
DN	1030	0.0	0.031		—	—	—	"
UP	1045	0.0	0.030		0.0	—	—	have to abandon hole-
DN	1045	0.0	0.034		—	—	—	pipe (4") @ 2.5' bgs
UP	1100	0.0	0.028		0.0	—	—	backfilling hole
DN	1100	0.0	0.036		—	—	—	
UP	1115	0.0	0.031		0.0	—	—	
DN	1115	0.0	0.045		—	—	—	
UP	1130	0.0	0.036		0.0	—	—	
DN	1130	0.0	0.051		—	—	—	
UP	1145	0.0	0.027		0.0	—	—	moving to new SB-14
DN	1145	0.0	0.041		—	—	—	
UP	1200	0.0	0.041		0.0	—	—	excessive dust
DN	1200	0.0	0.566		—	—	—	not continuous
UP	1215	0.0	0.038		0.0	—	—	jackhammering
DN	1215	0.0	0.051		—	—	—	
UP	1230	0.0	0.048		0.0	—	—	
DN	1230	0.0	0.042		—	—	—	
UP	1245	0.0	0.043		0.0	—	—	
DN	1245	0.0	0.049		—	—	—	

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300	0.0	0.049		0.0	N/A →		preclear
DN	1300	0.0	0.053		—	—	—	
UP	1315	0.0	0.029		0.0	—	—	
DN	1315	0.0	0.039		—	—	—	
UP	1330	0.0	0.027		0.0	—	—	
DN	1330	0.0	0.031		—	—	—	
UP	1345	0.0	0.038		0.0	—	—	
DN	1345	0.0	0.030		—	—	—	
UP	1400	0.0	0.024		0.0	—	—	setting cryptocrill
DN	1400	0.0	0.031		—	—	—	
UP	1415	0.0	0.033		0.0	—	—	
DN	1415	0.0	0.026		—	—	—	
UP	1430	0.0	0.036		0.0	—	—	
DN	1430	0.0	0.028		—	—	—	
UP	1445	0.0	0.044		0.0	—	—	
DN	1445	0.0	0.029		—	—	—	STARTED DRILLING SB-14
UP	1500	0.0	0.041		0.0	—	—	
DN	1500	0.0	0.024		—	—	—	
UP	1515	0.0	0.036		0.0	—	—	
DN	1515	0.0	0.024		—	—	—	
UP	1530	0.0	0.032		0.0	—	—	
DN	1530	0.0	0.027		—	—	—	
UP	1545	0.0	0.042		0.0	—	—	
DN	1545	0.0	0.031		—	—	—	
UP	1600	0.0	0.016		0.0	—	—	
DN	1600	0.0	0.025		—	—	—	
UP	1615	0.0	0.029		0.0	—	—	
DN	1615	0.0	0.033		—	—	—	
UP	1630	0.0	0.027		0.0	—	—	
DN	1630	0.0	0.034		—	—	—	
UP	1645	END OF DAY						
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

4/1/10

Comments:

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: MERQ
Date: 4/2/10

AECOM

Temp ~70°F, wind calm. Sunny, very few clouds.

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745	SET UP CAMP						
DN	745							
UP	800	SET UP CAMP.						
DN	800							
UP	815	0.0	0.047	—	0.0	—	—	TRYING TO RETRIEVE CASING IN SB-14
DN	815	0.0	0.029	—	—	—	—	
UP	830	0.0	0.027	—	0.0	—	—	SB-14 advance.
DN	830	2.6	0.028	—	—	—	—	dwnwind PID side by side w/upwind still reading 2.7ppm
UP	845	0.0	0.130	—	0.0	—	—	
DN	845	2.6	0.121	—	—	—	—	
UP	900	0.0	0.032	—	0.0	—	—	SB-14. 40-50' sample.
DN	900	0.7	0.044	—	—	—	—	
UP	0917 ~~915~~	0.0	0.030		0.0	—	—	SB14 pulled up 40-50' sample.
DN	0917 ~~915~~	2.8	0.030	—	—	—	—	
UP	930	0.0	0.036	—	0.0	—	—	SB14
DN	930	2.8	0.035	—	—	—	—	
UP	945	0.0	0.048	calm	0.0	—	—	84.9 dB. run
DN	945	2.8	0.038	—	—	—	—	SB14 ~~completed~~ 50'-55', 55'-60' samples.
UP	1000	0.0	0.041	calm.	—	—	—	79.0 dB.
DN	1000	2.9	0.039	—	0.0	—	—	SB14 completed 50'-55', 55'-60' samples.
UP	1010 ~~1015~~	0.0	0.028	calm	0.0	—	—	SB14 60'-70' sample run.
DN	1000 ~~1015~~	3.0	0.064	—	—	—	—	80.5 dB
UP	1030	0.0	0.046	calm	0.0	—	—	SB-14 boring @ 70' bgs.
DN	1030	3.3	0.041	—	—	—	—	70.9 dB
UP	1045	break - no work						SB-14 completed to depth
DN	1045	break - no work						70' bgs. Will tremie grout.
UP	1100	0.0	0.029	calm	0.0	—	—	SB-14 begin mixing + pumping grout. 70'-0'.
DN	1100	3.3	0.030	—	—	—	—	79.5 dB
UP	1115	0.0	0.026	calm	0.0	—	—	SB-14 tremi-grouting.
DN	1115	3.3	0.018	—	—	—	—	80.4 dB
UP	1130	0.0	0.025	calm	0.0	—	—	SB-14 tremi-grouting
DN	1130	3.2	0.032	—	—	—	—	79.8 dB
UP	1145	NOT MEASURED.						
DN	1145	NOT MEASURED.						
UP	1200 ~~1200~~	0.0	0.009	calm	0.0	—	—	SB-14 grout to surface, mobilizing
DN	1200 ~~1200~~	3.2	0.014	—	—	—	—	72.2 dB equipment to laydown area.
UP	1215							
DN	1215							
UP	1230							
DN	1230							
UP	1245	0.0	0.512	calm	0.0	—	—	JACKHAMMERING 2ND SB-2 LOCATION
DN	1245	3.2	0.074	—				

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips		Activity/Notes
						Benzene	Hydorgen Cyanide	
UP	1300	0.0	0.017	CALM	0.0	—	—	J' HAMMERING SB-2
DN	1300	3.3	0.016	—	—	—	—	
UP	1315	0.0	0.184	CALM	0.0	—	—	" "
DN	1315	DEAD	0.014	—	—	—	—	
UP	1330	0.0	0.024	CALM	0.0	—	—	
DN	1330	DEAD	0.014	—	—	—	—	" "
UP	1345	0.0	0.020	CALM	0.0	—	—	
DN	1345	3.3	0.014	—	—	—	—	" "
UP	1400							
DN	1400							
UP	1415							
DN	1415							
UP	1430							
DN	1430							
UP	1445							
DN	1445							
UP	1500							
DN	1500							
UP	1515							
DN	1515							
UP	1530							
DN	1530							
UP	1545							
DN	1545							
UP	1600							
DN	1600							
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By: _____

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: METRO MGP SB-1
Date: 4/5/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							
DN	815							
UP	830							NOTE: CONTRACTOR IS DOING BRICK WORK ON SIDE OF SANITATION BUILDING NEAR DW CAMP. THEY ARE GEN. FAR MORE DUST THAN WE ARE.
DN	830							
UP	845							
DN	845							
UP	900							
DN	900							
UP	915							
DN	915							
UP	930							
DN	930							
UP	945	0.7	0.020	CALM	0.7	—	—	JACKHAMMERING SB-1
DN	945	0.5	0.071	—	—	—	—	
UP	1000	0.5	0.032	CALM	0.7			" "
DN	1000	0.4	0.044	—	—	—	—	
UP	1015	0.5	0.036	CALM	~~0.5~~ 1.3	—	—	" "
DN	1015	0.7	0.066	—	—	—	—	
UP	1030	0.5	0.011	MILD BREEZE	0.8	—	—	HAND-CLEARING SB-1
DN	1030	0.7	0.052	—	—	—	—	
UP	1045	0.5	0.028	CALM	0.8	—	—	" " "
DN	1045	0.8	0.020	—	—	—	—	
UP	1100	0.7	0.085	CALM		—	—	" " "
DN	1100	0.7	0.022	—	—	—	—	
UP	1115	0.7	0.112	CALM	1.2	—	—	JACK HAM. 2ND SB-1 LOC.
DN	1115	0.5	0.110	—	—	—	—	
UP	1130	0.5	0.046	CALM	2.4			" " " " "
DN	1130	0.9	0.030	—	—	—	—	
UP	1145	0.8	0.037	CALM	0.8	—	—	" " " " "
DN	1145	1.1	0.074	—	—	—	—	
UP	1200	0.9	0.028	CALM	0.8	—	—	" " " " "
DN	1200	1.0	0.044	—	—	—	—	
UP	1215	0.9	0.016	CALM	2.1	—	—	HAND-CLEARING SB-1 (#2)
DN	1215	1.1	0.020	—	—	—	—	
UP	1230	0.9	0.022	CALM	1.1	—	—	" "
DN	1230	1.2	0.029	—	—	—	—	
UP	1245	0.9	0.022	CALM	0.7	—	—	" "
DN	1245	1.4	0.030	—	—	—	—	

SB-1 (#2)

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300	1.0	0.021	CALM	0.9	—	—	COMPLETED SB-1 (#2) PRECLEAR
DN	1300	1.3	0.028	—	—	—	—	
UP	1315	~~1.0~~	~~0.004~~	~~CALM~~				
DN	1315							
UP	1330							
DN	1330							NO SUB. WORK (PAKING FLAT)
UP	1345							
DN	1345							
UP	1400							
DN	1400	1.2	0.004	CALM	0.9	—	—	
UP	1415	1.5	0.062	—	—	—	—	
DN	1415							
UP	1430							
DN	1430							
UP	1445	1.5	0.090	SWIRLING	1.3	—	—	SAWCUTTING SB-1 #3
DN	1445	1.5	0.028	—	—	—	—	
UP	1500	1.3	0.042	SWIRL	1.5	—	—	J-HAM SB-1 #3
DN	1500	1.5	0.080	—	—	—	—	
UP	1515							
DN	1515							
UP	1530							
DN	1530							
UP	1545							
DN	1545							
UP	1600	1.4	0.012	SWIRL	1.0	—	—	HAND-CLEAR SB-1 #3
DN	1600	1.6	0.028	—	—	—	—	
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By: _____

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: METRO MGP SB-2 (ATTEMPT #2)
Date: 4/5/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745	0.0	0.018	CALM	0.0	—	—	HAND-CLEAR SB-2
DN	745	0.2	0.019	—	—	—	—	
UP	800	0.0	0.025		0.3	—	—	" " "
DN	800	0.2	0.082	—	—	—	—	
UP	815	0.2	0.021	CALM	0.4	—	—	" " "
DN	815	0.1	0.085	—	—	—	—	
UP	830							
DN	830							
UP	845							
DN	845							
UP	900							
DN	900							
UP	915							
DN	915							
UP	930							
DN	930							
UP	945							
DN	945							
UP	1000							
DN	1000							
UP	1015							
DN	1015							
UP	1030							
DN	1030							
UP	1045							
DN	1045							
UP	1100							
DN	1100							
UP	1115							
DN	1115							
UP	1130							
DN	1130							
UP	1145							
DN	1145							
UP	1200							
DN	1200							
UP	1215							
DN	1215							
UP	1230							
DN	1230							
UP	1245							
DN	1245							

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips		Activity/Notes
						Benzene	Hydorgen Cyanide	
UP	1300							
DN	1300							
UP	1315							
DN	1315							
UP	1330							
DN	1330							
UP	1345							
DN	1345							
UP	1400							
DN	1400							
UP	1415							
DN	1415							
UP	1430							
DN	1430							
UP	1445							
DN	1445							
UP	1500							
DN	1500							
UP	1515							
DN	1515							
UP	1530							
DN	1530							
UP	1545							
DN	1545							
UP	1600							
DN	1600							
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By: _____

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: METRO SB-1
Date: 4/6/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							
DN	815							
UP	830							
DN	830							
UP	845							
DN	845							
UP	900							
DN	900							
UP	915							
DN	915							
UP	930							
DN	930							
UP	945							
DN	945							
UP	1000	0.0	0.141	CALM	1.3	—	—	~~DRL~~ SHAING UP TO DRILL SB-1
DN	1000	3.2	0.152	—	—	—	—	
UP	1015							
DN	1015							
UP	1030							
DN	1030							
UP	1045							
DN	1045							
UP	1100							
DN	1100							
UP	1115							
DN	1115							
UP	1130							
DN	1130							
UP	1145							
DN	1145							
UP	1200	0.0	NM	CALM	0.7	—	—	DRILLING SB-1
DN	1200	3.3	0.140	—	—	—	—	
UP	1215							
DN	1215							
UP	1230							DOWN AGAIN
DN	1230							
UP	1245							
DN	1245							

SB-1

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips		Activity/Notes
						Benzene	Hydorgen Cyanide	
UP	1300							
DN	1300							
UP	1315	0.0	NM	CALM	0.3			DRILLING SB-1
DN	1315	3.5	0.066	—	—	—	—	
UP	1330							
DN	1330							
UP	1345							
DN	1345							
UP	1400							
DN	1400							
UP	1415							
DN	1415							
UP	1430	0.0	NM	CALM	0.3	—	—	DRILLING SB-1
DN	1430	3.4	0.052	—	—	—	—	
UP	1445	0.0	NM	CALM	0.3	—	—	" "
DN	1445	3.9	0.057	—	—	—	—	
UP	1500							
DN	1500							
UP	1515							
DN	1515							
UP	1530							
DN	1530							
UP	1545							
DN	1545							
UP	1600							
DN	1600							
UP	1615	0.0	NM	CALM	0.4	—	—	DRILLING SB-1 NOTE: MASONS ARE
DN	1615	3.5	0.062	—	—	—	—	SWEEPING UP — LOTS OF DUST
UP	1630							DUST TRAK @ 0.450
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site:
Date: 4/7/2010.

Temp ~75-80°F, clear, wind <5mph from South

SB-1/MW-1

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes		Activity/Notes
						Benzene	Hydorgen Cyanide	
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							
DN	815							
UP	830							
DN	830							
UP	845							
DN	845							
UP	900							
DN	900							
UP	915							
DN	915							
UP	930							
DN	930							
UP	945							
DN	945							
UP	1000							
DN	1000							
UP	1015							
DN	1015							
UP	1030							
DN	1030							
UP	1045							
DN	1045							
UP	1100							
DN	1100							
UP	1115							
DN	1115							
UP	1130							
DN	1130							
UP	1145							
DN	1145							
UP	1200							
DN	1200							
UP	1215							
DN	1215							
UP	1230							
DN	1230							
UP	1245							
DN	1245							

AECOM

4/7/2010. SB-1 | MW-1.

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydrogen Cyanide	Activity/Notes
UP	1300							
DN	1300							
UP	1315							
DN	1315							
UP	1330							
DN	1330							
UP	1345	Set up camp. Was down during well construction.						
DN	1345	↓	↓	↓	↓	↓	↓	↓
UP	1350 1400	0.0	0.031	S to N	0.1	—	—	SB/MW 1 D/I well installation
DN	1350 1400	0.4	0.050	—	—	—	—	76.2 dB.
UP	1400 1415	0.0	0.032	S to N	0.1.	—	—	SB/MW 1D/I well installation
DN	1400 1415	0.4	0.046	—	—	—	—	70.0 dB. paint odors from sanitation bldg
UP	1415 1430	0.1	0.016	S to N		—	—	SB/MW 1 I Well installation.
DN	1415 1430	0.5	0.037	—	—	—	—	70.0 dB paint odors from sanitation bldg.
UP	1430 1445	0.1	0.010	S to N	0.1	—	—	Rig off @ 1425 odors as above.
DN	1430 1445	0.5	0.036	—	—	—	—	77.8 dB comple MW 1 I/D well installed.
UP	1445 1500	0.1	0.008	S to N	0.2.	—	—	Rig off crew on water break
DN	1445 1500	0.6	0.028	—	—	—	—	70.0 dB paint odors continue.
UP	1515	0.1	0.017	S-N	0.1	—	—	DRILLERS ON H_2O BREAK @ 1500
DN	1515	0.6	0.040	—	—	—	—	80.2 dB INSTALLING MW-1 D/M
UP	1530	0.3	0.011	S-N	0.1	—	—	INSTALLING MW-1
DN	1530	0.6	0.028	—	—	—	—	72.5 DB
UP	1545	0.2	0.020	S-N	0.1	—	—	71.8 DB INSTALLING MW-1 SLIGHT PAINT ODOR
DN	1545	0.6	0.039	—	—	—	—	
UP	1600	0.2	0.018	S-N	0.1	—		70.6 DB COMPLETED MW-1 D/M
DN	1600	0.6	0.032	—	—	—	—	
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By: _____

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: FMR METRO
Date: 4/8/10 SB-1

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							
DN	815							
UP	830							
DN	830							
UP	845							
DN	845							
UP	900							
DN	900							NOTE: SAN. CREW IS WORKING ADJ. TO UW CAMP LOCATION. LOT OF DUST THERE
UP	915							
DN	915							
UP	930							
DN	930							
UP	945	0.0	0.070	S-N	0.0	—	—	ADVANCING BORING FOR SB-1/MW-1S
DN	945	0.1	0.072	—	—	—	—	DB - 80.3
UP	1000	0.0	0.064	S-N	0.0	—	—	ADV.
DN	1000	0.0	0.061	—	—	—	—	DB - 80.8
UP	1015	0.0	0.062	S-N	0.0	—	—	INSTALLING SB-1/MW-1S
DN	1015	0.1	0.050	—	—	—	—	DB = 78.5
UP	1030	0.0	0.152	S-N	0.0	—	—	INST. SB-1/MW-1S → LOT OF DUST FROM
DN	1030	0.4	0.058	—	—	—	—	DB - 85.2 → JACKHAMMERING NEXT TO US
UP	1045	0.1	0.081	S-N	0.1	—	—	INST. MW-1S → SAN. DEPT STILL JACKHAM. ↓ SAN. DEPT.
DN	1045	0.3	0.062	—	—	—	—	DB = 71.6
UP	1100	DEAD BATT	0.042	S-N	0.0	—	—	MW-1S COMPLETE
DN	1100	0.1	0.048	—	—	—	—	DB 75.2
UP	1115	0.0	0.051	S-N	0.1	—	—	BREAKING TO INSTALL ROAD BOXES. CHANGED PID BATTERY
DN	1115	0.3	0.048	—	—	—	—	DB = 70.1
UP	1130							
DN	1130							
UP	1145	0.2	0.054	S-N	0.2	—	—	INST. ROADBOXES @ SB-1 → SAN. CREW ON BREAK
DN	1145	0.1	0.044	—	—	—	—	DB = 72.5
UP	1200							
DN	1200							
UP	1215	0.1	0.058	S-N	0.2	—	—	INST. SB-1 ROADBOXES → CREW STILL ON BREAK
DN	1215	0.1	0.046	—	—	—	—	DB = 70.8
UP	1230							
DN	1230							
UP	1245							MOVED TO SB-2
DN	1245							

FMR METRO MGP
4/8/10 SB-2 (LOC #3)

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300							CHANGING BATTERY IN UW PID + W.A. PID AGAIN
DN	1300							
UP	1315							
DN	1315							
UP	1330							
DN	1330							
UP	1345	NOT ON	0.040	E-W	0.1	—	—	JACKHAMMERING SB-2
DN	1345	0.0	0.044	—	—	—	—	DB = 84.5
UP	1400	0.0	0.032	E-W	*	—	—	JACKHAM. SB-2
DN	1400	0.2	0.072	—	—	—	—	DB = 85.1
UP	1415	0.2	0.045	E-W	*	—	—	JACKHAM SB-2
DN	1415	0.2	0.104	—	—	—	—	DB = 85.6
UP	1430	0.1	0.085	E-W	0.0	—	—	PRE-CLEARING SB-2 * W.A. PID KEEPS TURNING OFF BATT. OK.
DN	1430	0.2	0.059	—	—	—	—	DB = 74.5
UP	1445	0.1	0.035	E-W	OFF	—	—	HAND-CLEARING SB-2
DN	1445	0.5	0.044	—	—	—	—	DB = 73.2
UP	1500	0.2	0.036	E-W	OFF	—	—	BACKFILLING SB-2
DN	1500	0.5	0.042	—	•	—	—	DB = 72.5
UP	1515							
DN	1515							
UP	1530							
DN	1530							
UP	1545							
DN	1545							
UP	1600							
DN	1600							
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By: SW

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-2
Date: 4/9/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800	0.0	0.040	E-W	0.0	—	—	SETTING UP ON SB-2
DN	800	0.0	0.030	—	—	—	—	DB = 81.6
UP	815							
DN	815							
UP	830							
DN	830							
UP	845							
DN	845							
UP	900	0.7	0.028	EW	0.2	—	—	PREPARING TO START DRILLING SB-2
DN	900	0.3	0.019	—	—	—	—	DB = 88.1
UP	915	0.4	0.028	E-W	0.0	—	—	DRILLING SB-2
DN	915	0.0	0.024	—	—	—	—	DB = 83.7
UP	930	0.6	0.047	E-W	0.2	—	—	DRILLING SB-2
DN	930	0.0	0.040	—	—	—	—	DB - 89.5
UP	945	0.7	0.033	E-W	0.0	—	—	DRILLING SB-2
DN	945	0.0	0.032	—	—	—	—	DB = 88.5
UP	1000	0.6	0.016	E-W	0.4	—	—	DRILLING SB-2
DN	1000	0.0	0.014	—	—	—	—	DB = 74.7
UP	1015	0.7	0.027	E-W	0.6	—	—	DRILLING SB-2
DN	1015	0.0	0.012	—	—	—	—	DB = 83.9
UP	1030	0.6	0.024	E-W	0.4	—	—	DRILL SB-2
DN	1030	0.0	0.012	—	—	—	—	DB = 87.7
UP	1045							
DN	1045							
UP	1100							
DN	1100							
UP	1115	0.6	0.016	E-W	0.6	—	—	DRILL SB-2
DN	1115	0.0	0.016	—	—	—	—	DB = 70.0
UP	1130							
DN	1130							
UP	1145							
DN	1145							
UP	1200							
DN	1200							
UP	1215	0.4	0.025	SWIRL	0.6	—	—	DRILL SB-2
DN	1215	0.0	0.017	—	—	—	—	DB = 86.7
UP	1230	0.4	0.024	SWIRL	0.4	—	—	DRILL SB-2
DN	1230	0.0	0.016	—	—	—	—	DB = 77.7
UP	1245							
DN	1245							

SB-2
4/9/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300	0.4	0.017	SWIRL	0.4	—	—	COMPLETED DRILLING @ SB-2
DN	1300	0.0	0.017	—	—	—	—	DB - 73.4
UP	1315	0.4	0.019	SWIRL	0.6	—	—	WAITING FOR WELL MATERIALS
DN	1315	0.0	0.018	—	—	—	—	DB = 71.6
UP	1330	~~0.4~~	~~0.019~~					
DN	1330		~~0.018~~					
UP	1345	0.4	0.019	SWIRL	0.6	—	—	TRUCK IN WAY, WAITING TO GET WELL IN.
DN	1345	0.0	0.018	—	—	—	—	DB = 72.1
UP	1400							
DN	1400							
UP	1415							
DN	1415							
UP	1430	0.4	0.022	SWIRL	0.6	—	—	INSTALLING MW-2D
DN	1430	0.0	0.019	—	—	—	—	DB = 70.0
UP	1445							
DN	1445							
UP	1500							
DN	1500							
UP	1515							
DN	1515							
UP	1530							
DN	1530							
UP	1545							
DN	1545							
UP	1600							
DN	1600							
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-12
Date: 4/12/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							
DN	815							
UP	830							
DN	830							
UP	845							
DN	845							
UP	900							
DN	900							
UP	915	0.0	0.017	N-S	0.0	—	—	PRE-CLEAR SB-12
DN	915	0.0	0.021	—	—	—	—	DB = 72.1
UP	930	0.0	0.021	N-S	0.0	—	—	PRE-CLEAR SB-12
DN	930	2.3	0.022	—	—	—	—	DB = 78.2
UP	945	0.0	0.019	N-S	0.0	—	—	PRE-CLEAR SB-12 [SWITCHING UW TO DW
DN	945	2.4	0.017	—	—	—	—	DB = 75.4 UW D.T. KEEPS] → FALSE READING
UP	1000	NM	0.019	N-S	0.0	—	—	PRE-CLEAR SPIKING TO 0.3 BUT NO DUST
DN	1000	0.1	0.017	—	—	—	—	DB = 71.8
UP	1015	NM	0.017	N-S	0.0	—	—	PRE CLEAR
DN	1015	0.1	0.019	—	—	—	—	DB = 72.7
UP	1030	NM	0.018	N-S	0.0	—	—	PC SB-12
DN	1030	0.0	0.017	—	—	—	—	DB = 72.2
UP	1045	NM	0.011	N-S	0.0	—	—	PC SB-12
DN	1045	0.1	0.018	—	—	—	—	DB = 72.4
UP	1100	~~NM~~	~~0.012~~	~~N-S~~	~~0.0~~	—	—	~~MOVING RIG TO~~
DN	1100							
UP	1115							
DN	1115							
UP	1130	NM	0.012	N-S	0.0	—	—	MOVING RIG TO SB-12
DN	1130	0.0	0.018	—	—	—	—	DB = 70.6
UP	1145	NM	0.007	N-S	0.0	—	—	SETTING UP RIG @ SB-12
DN	1145	0.0	0.022	—	—	—	—	DB = 76.6
UP	1200	NM	0.006	N-S	0.0	—	—	SETTING UP RIG ON SB-12
DN	1200	0.0	0.020	—	—	—	—	DB = 78.2
UP	1215	NM	0.007	N-S	0.0	—	—	SETTING RIG @ SB-12
DN	1215	0.0	0.020	—	—	—	—	DB = 78.4
UP	1230	NM	0.006	N-S	0.0	—	—	DRILLING SB-12
DN	1230	0.0	0.020	—	—	—	—	DB = 84.8
UP	1245	NM	0.006	N-S	0.4	—	—	DRILLING
DN	1245	0.2	0.019					DB = 84.8

SB-12

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300							
DN	1300							
UP	1315	NM	0.007	N-S	DEAD*	—	—	DRILLING SB-2 *CHANGING BATTERIES
DN	1315	~~[illegible]~~	0.018	—	—	—	—	DB = 80.1
UP	1330							
DN	1330							
UP	1345	NM	0.021	N-S	0.3	—	—	LUNCH
DN	1345	0.1	0.018	—	—	—	—	DB = 70.4
UP	1400							
DN	1400							
UP	1415	NM	0.012	N-S	1.6	—	—	DRILLING SB-12
DN	1415	0.3	0.020	—	—	—	—	DB = 76.4
UP	1430	NM	0.003	N-S	0.9	—	—	DRILLING SB-12
DN	1430	0.2	0.021	—	—	—	—	DB = 82.5
UP	1445	~~NM~~	~~0.005~~	~~N-S~~				
DN	1445							
UP	1500	NM	0.005	N-S	0.7	—	—	DRILLING SB-12
DN	1500	0.2	0.020	—	—	—	—	DB = 83.8
UP	1515	~~NM~~	~~0.004~~	~~N-S~~	~~0.9~~	~~—~~	~~—~~	~~D~~
DN	1515							
UP	1530	NM	0.004	N-S	0.7	—	—	DRILLING SB-12
DN	1530	0.3	0.026	—	—	—	—	DB = 82.8
UP	1545							
DN	1545							
UP	1600							
DN	1600							
UP	1615							
DN	1615							
UP	1630	NM	0.000	N-S	0.4	—	—	GROUTING SB-12
DN	1630	0.2	0.013	—	—	—	—	DB = 79.7
UP	1645							
DN	1645							
UP	1700	NM	0.005	N-S	0.3	—	—	GROUTING
DN	1700	0.2	0.015	—	—	—	—	DB = 80.1
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-3
Date: 4/13/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700	0.1	0.012	N-E	0.0	—	—	PRE-CLEAR SB-3
DN	700	2.3*	0.013	—	—	—	—	* DW PID KEEPS READING ~2.5, EVEN IN FRESH CAL.
UP	715							SWAPPING DW TO DW LOCATION AGAIN
DN	715							
UP	730	NM	0.014	W-E	0.0	—	—	PRE-CLEAR
DN	730	0.2	0.020	—	—	—	—	DB = 70.4
UP	745	NM	0.014	W-E	0.0	—	—	PRE-CLEAR
DN	745	0.2	0.012	—	—	—	—	DB = 76.2
UP	800	NM	0.019	W-E	0.0	—	—	JACKHAMMERING SB-3
DN	800	0.3	0.013	—	—	—	—	DB = 79.2
UP	815							
DN	815							
UP	830	NM	0.022	W-E	0.0	—	—	PREPPING RIG FOR SB-3 * DT. TURNED OFF, BACK ON,
DN	830	0.4	0.020*	—	—	—	—	DB = 71.4 WEIRD SPIKE TO 0.995. NO DUST OK NOW
UP	845	NM	0.013	W-E	0.0	—	—	STARTING TO DRILL SB-3
DN	845	0.4	0.016	—	—	—	—	DB = 79.2
UP	900	NM	0.037	W-E	0.0	—	—	DRILLING SB-3
DN	900	0.4	0.017	—	—	—	—	~~DRILL~~ DB = 81.7
UP	915	NM	0.056	W-E	0.0	—	—	DRILLING SB-5
DN	915	0.4	0.018	—	—	—	—	DB = 91.6
UP	930							
DN	930							
UP	945							
DN	945							
UP	1000							
DN	1000							
UP	1015							
DN	1015							
UP	1030	0.5	0.016	W-E	0.5	—	—	DRILLING SB-3 DW PID SEEMS TO BE WORKING NOW
DN	1030	0.2	0.020	—	—	—	—	DB = 78.7
UP	1045							
DN	1045							
UP	1100	0.5	0.018	W-E	0.4	—	—	DRILL SB-3
DN	1100	0.1	0.016	—	—	—	—	DB = 88.6
UP	1115	0.5	0.019	W-E	0.3	—	—	DRILL SB-3
DN	1115	0.1	0.016	—	—	—	—	DB = 87.8
UP	1130	0.5	0.020	W-E	0.3	—	—	DRILL SB-3
DN	1130	0.1	0.015	—	—	—	—	DB = 86.9
UP	1145							
DN	1145							
UP	1200	0.5	0.021	W-E	0.2	—	—	BREAK
DN	1200	0.2	0.018	—	—	—	—	DB = 70.6
UP	1215							
DN	1215							
UP	1230							
DN	1230							
UP	1245	0.6	0.018	W-E	0.0	—	—	GETTING WELL MATERIALS
DN	1245	0.2	0.016	—	—	—	—	DB = 72.3

SB-3

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips		Activity/Notes
						Benzene	Hydorgen Cyanide	
UP	1300	0.5	0.021	W-E	0.3	—	—	DRILLING SB-3
DN	1300	0.1	0.058	—	—	—	—	DB: 84.5
UP	1315							
DN	1315							
UP	1330	0.6	0.082	W-E	0.2	—	—	INST. MW-3I NOTE: CLOUD of SMOKE COMMING
DN	1330	0.2	0.118	—	—	—	—	DB = 72.3 FROM ASPHALT PLANT
UP	1345							
DN	1345							
UP	1400	0.6	0.044	W-E	0.[illegible]	—	—	SETTING MW3 PAIR CLOUD FROM A.P IS PASSING
DN	1400	0.2	0.060	—	—	—	—	DB = 74.4
UP	1415							
DN	1415							
UP	1430	0.6	0.018	W-E	0.0	—	—	SETTING MW3 PAIR
DN	1430	0.2	0.024	—	—	—	—	DB = 75.4
UP	1445							
DN	1445							
UP	1500	0.6	0.024	W-E	0.0	—	—	SETTING MW3 PAIR
DN	1500	0.2	0.028	—	—	—	—	DB = 74.3
UP	1515							
DN	1515							
UP	1530	0.6	0.026	W-E	0.0	—	—	SETTING MW3 PAIR
DN	1530	0.2	0.024	—	—	—	—	DB = 74.4
UP	1545							
DN	1545							
UP	1600	0.6	0.022	W-E	0.2	—	—	SETTING MW3 PAIR
DN	1600	0.2	0.018	—	—	—	—	DB = 72.5
UP	1615							
DN	1615							
UP	1630	0.6	0.011	W-E	0.4	—	—	SETTING MW3 PAIR
DN	1630	0.1	0.014	—	—	—	—	DB = 72.8
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By: _____

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-15
Date: 4/14/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydrogen Cyanide	Activity/Notes
UP	700	NM*	0.060	W-E	0.0	—	—	JACKHAMMERING SB-13* DW PID ACTING UP AGAIN. MOVED UW TO DW LOC
DN	700	0.0	0.062	—	—	—	—	
UP	715	No readings equipment data logging.						
DN	715	No readings						
UP	0735 ~~730~~	0.4	0.069	W-E	0.0	—	—	PRE-clear SB-15. DW PID WORKING AGAIN
DN	0735 ~~730~~	0.2	0.062	—	—	—	—	76.9 dB. - changed batteries on dust trak.
UP	0750 ~~745~~	0.4	0.070	W-E	0.0.	—	—	Pre-clear SB-15
DN	0750 ~~745~~	0.2	0.073	—	—	—	—	79.0 dB
UP	800	0.4	0.067	W-E	0.0	—	—	PRE-CLEAR SB-15
DN	800	0.3	0.079	—	—	—	—	DB=
UP	815	0.4	0.078	W-E	0.0	—	—	PRE-CLEAR SB-15 COMPLETE
DN	815	0.3	0.079	—	—	—	—	
UP	830	0.5	0.081	W-E	0.0	—	—	SB: 15
DN	830	0.4	0.095	—	—	—	—	79.1 dB.
UP	845	0.6	0.097	W-E	0.0.	—	—	no work.
DN	845	0.5	0.081	—	—	—	—	79.0 dB
UP	900	0.7	0.128	W-E	0.0	—	—	SETTING UP ON SB-15 NOTE! ASPHALT PLANT IS CREATING CLOUD AGAIN.
DN	900	0.7	0.196	—	—	—	—	DB=
UP	915	0.7	0.128	W-E	0.0	—	—	SETTING UP ON SB-15 ASPH. PLANT STILL MAKING CLOUD.
DN	915	0.6	0.121	W-E	—	—	—	DB=
UP	930	0.6	0.068	W-E	0.0	—	—	DRILLING SB-15
DN	930	0.4	0.072	—	—	—	—	DB=
UP	945	0.5	0.062	W-E	0.0	—	—	DRILL SB-15
DN	945	0.4	0.063	—	—	—	—	DB=87.5
UP	1000	0.4	0.035	W-E	0.0	—	—	DRILL
DN	1000	0.3	0.034	—	—	—	—	DB=87.6
UP	1015	0.4	0.037	W-E	0.0	—	—	SB-15 no work.
DN	1015	0.3	0.033	—	—	—	—	79.2 dB
UP	1030	0.3.	0.033	W-E	0.0	—	—	SB-15. no work
DN	1030	0.3	0.032.	—	—	—	—	
UP	1045	0.4	0.030	W-E	0.0	—	—	DRILL SB-15
DN	1045	0.3	0.033	—	—	—	—	DB=92.7
UP	1100	0.4	0.020	W-E	0.0	—	—	SB-15 advancing
DN	1100	0.3	0.020.	—	—	—	—	dB-85.1
UP	1115	0.3	0.013	W-E	0.0	—	—	SB-15
DN	1115	0.4	0.043.	—	—	—	—	dB-87.4.
UP	1130	0.2	0.010	W-E	0.0	—	—	SB-15
DN	1130	0.2	0.023.	—	—	—	—	dB. 88.6
UP	1145	0.1	0.005	W-E	0.2	—	—	SB-15
DN	1145	0.3	0.017.	—	—	—	—	dB: 88.7
UP	1200	0.1	0.008	W-E	0.0	—	—	SB-15
DN	1200	0.3	0.[illegible]	—	—	—	—	dB-89.7. change batteries
UP	1215	no readings						SB-15
DN	1215	no readings		W				
UP	1230	0.1	0.009.	W-E	0.0	—	—	SB-15
DN	1230	0.3	0.014	—	—	—	—	77.6 dB.
UP	1245	0.1	0.010.	W-E	0.0	—	—	SB-15 advancing
DN	1245	0.3	0.013	—	—	—	—	90.8 dB.

SB-15 / SB-13

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300	0.1	0.004	W-E	0.0	—	—	GROUTING SB-15
DN	1300	0.3	0.016	—	—	—	—	DB = 85.8
UP	1315	0.1	0.000	W-E	0.0	—	—	GROUT SB-15
DN	1315	0.3	0.014	—	—	—	—	DB = 85.7
UP	1330							
DN	1330							
UP	1345							
DN	1345							
UP	1400							
DN	1400							
UP	1415							
DN	1415							
UP	1430							
DN	1430							
UP	1445							
DN	1445							SB-13
UP	1500							
DN	1500							
UP	1515	0.1	0.001	W-E	0.0	—	—	PRE-CLEAR SB-13
DN	1515	0.3	0.021	W-E	—	—	—	DB = 79.7
UP	1530							TREAK
DN	1530							
UP	1545	0.2	0.001	W-E	0.0	—	—	PRE-CLEAR
DN	1545	0.3	0.020	—	—	—	—	DB = 78.2
UP	1600	0.2	0.001	W-E	0.0	—	—	PRE-CLEAR
DN	1600	0.3	0.020	—	—	—	—	DB = 74.4
UP	1615	0.2	0.009	W-E	0.3	—	—	PRE-CLEAR
DN	1615	0.3	0.018	—	—	—	—	DB = 73.9
UP	1630	0.2	0.009	W-E	0.2	—	—	SETTING UP RIG (SB-13
DN	1630	0.6	0.040	—	—	—	—	DB = 81.8
UP	1645	0.2	0.002	W-E	0.0	—	—	SET UP
DN	1645	0.6	0.034	—	—	—	—	DB = 80.1
UP	1700	0.2	0.002	W-E	0.0	—	—	SET UP
DN	1700	0.6	0.038	—	—	—	—	DB = 74.3
UP	1715	0.2	0.012	W-E	0.0	—	—	DRILL SB-13
DN	1715	0.7	0.028	—	—	—	—	DB = 84.8
UP	1730	0.3	0.002	W-E	0.4	—	—	DRILL SB-13
DN	1730	0.8	0.021	—	—	—	—	DB = 88.1
UP	1745							
DN	1745							
UP	1800	0.3	0.009	W-E	0.0	—	—	DRILL SB-13
DN	1800	0.7	0.030	—	—	—	—	DB = 91.8
UP	1815							
DN	1818							
UP	1830	0.3	DEAD	W-E	0.8	—	—	DRILL SB-13
DN	1830	0.6	0.018	—	—	—	—	DB = 77.8
UP	1845							
DN	1845							

Comments:

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-13
Date: 4/15/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800	0.0	DEAD BATT	W-E	0.0	—	—	DRILLING SB-13 CHANGING BATT IN W D.T.
DN	800	0.1	0.055	—	—	—	—	DB=88.2
UP	815							
DN	815							
UP	830	0.0	BATT.	W-E	0.0	—	—	DRILL SB-13
DN	830	0.2	0.056	—	—	—	—	DB=79.8
UP	845							
DN	845	0.0	0.036	W-E	0.0	—	—	DRILL SB-13
UP	900	0.2	0.052	—	—	—	—	DB=88.6
DN	900							
UP	915							
DN	915							
UP	930	0.0	0.026	W-E	0.0	—	—	GROUT SB-13
DN	930	0.2	0.055	—	—	—	—	DB=77.8
UP	945							
DN	945							
UP	1000	0.0	0.028	W-E	0.0	—	—	GROUT SB-13
DN	1000	0.2	0.036	—	—	—	—	DB = 78.5
UP	1015							
DN	1015							
UP	1030							
DN	1030							
UP	1045							
DN	1045							MOVING EQUIPMENT / DECON
UP	1100							
DN	1100							
UP	1115							
DN	1115							
UP	1130							
DN	1130							
UP	1145							SB-10
DN	1145							
UP	1205 ~~1200~~	0.3	0.015	W-E	0.0	—	—	JACKHAMMER SB-10
DN	1205 ~~1200~~	0.0	0.026	—	—	—	—	DB=81.8
UP	1215	0.3	0.011	W-E	0.4	—	—	HAND-CLEAR SB-10
DN	1215	0.4	0.018	—	—	—	—	DB=71.3
UP	1230	0.3	0.009	W-E	0.4	—	—	PRE-CLEAR SB-10
DN	1230	0.5	0.023	—	—	—	—	DB=72.3
UP	1245	0.3	0.038	W-E	0.4	—	—	PRE-CLEAR SB-10
DN	1245	0.4	0.034	—	—	—	—	DB=78.7

SB-10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300	0.2	0.002	W-E	OFF	—	—	PRE-CLEAR SB-10
DN	1300	0.9	0.021	—	—	—	—	DB=82.3 TURNED ON PID BACK ON
UP	1315							
DN	1315	0.2	0.009	W-E	0.4	—	—	CORING THRU CONCRETE @ SB-10
UP	1330	0.3	0.088	—	—	—	—	DB=92.3
DN	1330							
UP	1345	0.2	0.007	W-E	0.4	—	—	CORING CONCRETE
DN	1345	0.3	0.065	—	—	—	—	90.7
UP	1400	0.2	0.008	W-E	0.4	—	—	DRILLING SB-10
DN	1400	0.3	0.029	—	—	—	—	DB 90.6
UP	1415	0.2	0.016	W-E	0.4	—	—	DRILL SB-10
DN	1415	0.3	0.045	—	—	—	—	DB=88.1
UP	1430	0.2	0.009	W-E	0.6	—	—	drill SB-10.
DN	1430	0.6	0.031	—	—	—	—	73.9 dB
UP	1445	0.2	0.000	W-E	0.6	—	—	drill SB-10
DN	1445	0.3	0.026	—	—	—	—	80.2
UP	1500	0.2	0.013	W-E	0.5	—	—	BREAK
DN	1500	0.3	0.023	—	—	—	—	77.3
UP	1515							
DN	1515							
UP	1530	0.2	0.013	W-E	0.5	—	—	DRILL SB-10
DN	1530	0.3	0.040	—	—	—	—	88.9
UP	1545	0.2	0.009	W-E	0.5	—	—	DRILL SB-10
DN	1545	0.3	0.034	—	—	—	—	89.1
UP	1600	0.2	0.025	W-E	0.5	—	—	DRILL SB-10
DN	1600	0.3	0.032	—	—	—	—	92.1
UP	1615							
DN	1615							
UP	1630	0.2	0.008	W-E	0.6	—	—	DRILL SB-10
DN	1630	0.3	0.027	—	—	—	—	82.1
UP	1645							
DN	1645							
UP	1700	0.2	0.007	W-E	0.4	—	—	PREPPING TO GROUT SB-15
DN	1700	0.3	0.017	—	—	—	—	77.8
UP	1715							
DN	1715							
UP	1730	0.2	0.001	W-E	0.6	—	—	GROUTING SB-10
DN	1730	0.5	0.023	—	—	—	—	76.6
UP	1745	0.2	0.001	W-E	0.6	—	—	GROUTING
DN	1745	0.4	0.030	—	—	—	—	78.1
UP	1800	0.2	0.003	W-E	0.6	—	—	GROUTING
DN	1800	0.4	0.023	—	—	—	—	76.1
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-11
Date: 4/19/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							
DN	815							
UP	830							
DN	830							
UP	845							
DN	845							
UP	900							
DN	900							
UP	915							
DN	915							
UP	930	0.1	0.009	W-E	0.6	—	—	PRE-CLEAR SB-11
DN	930	0.3	0.009	—	—	—	—	DB = 88.8
UP	945	0.3	0.012	W-E	0.4	—	—	PC SB-11
DN	945	0.5	0.092	—	—	—	—	DB = 81.2
UP	1000	0.4	0.009	W-E	0.4	—	—	PC SB-11
DN	1000	0.6	0.032	—	—	—	—	DB = 81.4
UP	1015	~~0.5~~	~~0.010~~	~~W-E~~	~~0.7~~	~~—~~	~~—~~	~~PC SB-11~~
DN	1015	~~0.6~~	~~0.011~~	~~—~~	~~—~~	~~—~~	~~—~~	~~DB = 80.1~~
UP	1030	0.5	0.010	W-E	0.7	—	—	PC SB-11
DN	1030	0.6	0.011	—	—	—	—	DB = 80.1
UP	1045	0.5	0.011	W-E	0.5	—	—	SETTING UP TO DRILL SB-11
DN	1045	0.7	0.010	—	—	—	—	DB = 80.3
UP	1100	0.5	0.005	W-E	0.5	—	—	STILL SETTING UP NOTE: RE-CAL'D PIDS
DN	1100	0.7	0.015	—	—	—	—	DB = 81.4
UP	1115	0.5	0.007	W-E	0.0			DRILLING SB-11
DN	1115	0.0	0.010	—	—	—	—	DB = 87.5
UP	1130	0.5	0.007	W-E	0.2	—	—	DRILL SB-11
DN	1130	0.1	0.009	—	—	—	—	DB = 83.4
UP	1145	0.5	0.008	W-E	0.0	—	—	DRILL SB-11
DN	1145	0.0	0.007	—	—	—	—	DB = 88.5
UP	1200	0.4	0.008	W-E	0.0	—	—	DRILL SB-11
DN	1200	0.0	0.016	—	—	—	—	DB = 86.8
UP	1215	0.4	0.009	W-E	0.0	—	—	DRILL SB-11
DN	1215	0.0	0.013	—	—	—	—	DB = 87.2
UP	1230							
DN	1230							
UP	1245	0.3	0.008	W-E	0.2	—	—	DRILL SB-11 BATTERIES DYING IN UP
DN	1245	0.0	0.010	—	—	—	—	DB = 79.2 PID + DUST TRAK

SB-11
4/19/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300							
DN	1300							
UP	1315	0.0	0.008	W-E	0.2	—	—	DRILL SB-11 BATTERIES DIED IN UNI PID
DN	1315	0.0	0.010	—	—	—	—	DB = 92.3 → NO REPLACEMENT HOLDER
UP	1330							
DN	1330							
UP	1345	—	0.005	W-E	0.1	—	—	DRILL SB-11
DN	1345	0.0	0.015	—	—	—	—	DB = 90.4
UP	1400	—	0.007	W-E	0.1	—	—	DRILL SB-11
DN	1400	0.0	0.012	—	—	—	—	DB = 91.6
UP	1415	—	0.006	W-E	0.0	—	—	DRILL SB-11
DN	1415	0.0	0.009	—	—	—	—	DB = 89.5
UP	1430							
DN	1430							
UP	1445	—	0.004	W-E	0.0	—	—	GROUTING SB-11
DN	1445	0.0	0.015	—	—	—	—	DB = 78.3
UP	1500							
DN	1500							
UP	1515	—	0.005	W-E	0.0	—	—	GROUTING SB-11
DN	1515	0.0	0.014	—	—	—	—	DB = 82.6
UP	1530							
DN	1530							
UP	1545							
DN	1545							
UP	1600							
DN	1600							
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-18
Date: 4/20/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745	0.0	0.016	W-E	0.1	—	—	PREP FOR SB-18 RECALING DW P/D.
DN	745	2.4	0.014	—	—	—	—	DB=80.2
UP	800	0.2	0.016	W-E	0.2	—	—	PRE-CLEAR SB-18
DN	800	0.1	0.021	—	—	—	—	DB=83.4
UP	815	0.2	0.025	W-E	0.2	—	—	PRE-CLEAR SB-18
DN	815	0.1	0.019	—	—	—	—	DB=87.3
UP	830	0.1	0.021 ~~0.15~~	W-E	0.2	—	—	PRE-CLEAR SB-18 change upwind dust mult PID. bottle nes.
DN	830	0.1	0.031	—	—	—	—	DB=74.5
UP	845	0.2	0.017	W-E	0.2	—	—	PRE-CLEAR SB-18
DN	845	0.4	0.027	—	—	—	—	DB=80.1
UP	900	0.2	0.024	W-E	0.4	—	—	Pre-clear SB-18
DN	900	0.4	0.026	—	—	—	—	dB=77.5
UP	915	0.1	0.015	W-E	0.3.	—	—	Pre-clear SB-18.
DN	915	0.4	0.047	—	—	—	—	84.6 dB
UP	930	0.1	0.026	W-E	0.4	—	—	Pre-clear SB-18.
DN	930	0.5	0.063	—	—	—	—	dB: 76.7.
UP	945	0.1	0.028	W-E	0.4	—	—	PREP TO DRILL SB-18
DN	945	0.5	0.044	—	—	—	—	DB=75.8
UP	1000	0.1	0.008	W-E	0.4	—	—	DRILLING SB-18
DN	1000	0.5	0.028	—	—	—	—	DB=85.7
UP	1015	0.1	0.008	W-E	0.5	—	—	DRILL SB-18
DN	1015	0.1	0.024	—	—	—	—	DB=83.4
UP	1030	0.1	0.010	W-E	0.5	—	—	DRILL SB-18
DN	1030	0.0	0.025	—	—	—	—	DB=85.4
UP	1045	0.1	0.017	W-E	0.4	—	—	DRILL SB-18
DN	1045	0.0	0.027	—	—	—	—	DB=83.3
UP	1100							
DN	1100							
UP	1115	0.1	0.024	W-E	0.4	—	—	DRILL SB-18
DN	1115	0.0	0.035	—	—	—	—	DB=80.1
UP	1130	0.1	-0.004*	N-E	0.4	—	—	DRILL SB-18 * WILL RE-ZERO D.T.
DN	1130	0.0	0.036	—	—	—	—	DB=84.4
UP	1145	0.1	-0.005	W-E	0.4	—	—	DRILL SB-18
DN	1145	0.0	0.034	—	—	—	—	DB=85.6
UP	1200	0.0	-0.006	W-E	0.5	—	—	DRILL SB-18
DN	1200	0.0	0.010	—	—	—	—	DB=84.8
UP	1215							
DN	1215							
UP	1230	0.0	-0.004	W-E	0.8	—	—	DRILL SB18
DN	1230	0.0	0.009	—	—	—	—	DB=89.8
UP	1245	0.0	—	W-E	0.7	—	—	DRILL SB18
DN	1245	0.0	0.009	—	—	—	—	DB=91.2

SB-18
4/20/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips		Activity/Notes
						Benzene	Hydorgen Cyanide	
UP	1300	0.0	—	W-E	0.5	—	—	DRILLING SB-18
DN	1300	0.0	0.009	—	—	—	—	DB = 88.9
UP	1315							
DN	1315							
UP	1330	0.0	-0.005	W-E	0.6	—	—	FINISHED DRILLING SB-18
DN	1330	0.0	0.008	—	—	—	—	DB = 79.1
UP	1345							
DN	1345							
UP	1400							
DN	1400							
UP	1415							
DN	1415							
UP	1430							
DN	1430							
UP	1445							
DN	1445							
UP	1500							
DN	1500							
UP	1515							
DN	1515							
UP	1530							
DN	1530							
UP	1545							
DN	1545							
UP	1600							
DN	1600							
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-6
Date: 4/21/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700	0.0	0.036	W-E	0.1	—	—	DRILLING SB-6
DN	700	0.0	0.034	—	—	—	—	DB: 85.5
UP	715	0.2	0.035	W-E	0.3	—	—	DRILLING SB-6
DN	715	2.7*	0.036	—	—	—	—	DB = 80.1 * RE-CALING
UP	730	0.2	0.035	W-E	0.3	—	—	DRILL SB-6
DN	730	2.9*	0.038	—	—	—	—	DB = 80.0 * PID WONT CAL. PROPERLY. SWITCHING W/ UW
UP	745	~~0.3~~	0.036	W-E	0.4	—	—	DRILL SB-6
DN	745	0.3	0.042	—	—	—	—	DB = 86.2
UP	800	~~—~~	~~0.035~~	~~W-E~~	~~0.4~~	~~—~~	~~—~~	~~DRILL SB-6~~
DN	800	~~0.2~~	~~0.040~~	~~—~~	~~—~~	~~—~~	~~—~~	~~DB = 88.2~~
UP	815	—	0.035	W-E	0.4	—	—	DRILL SB-6
DN	815	0.2	0.040	—	—	—	—	DB = 88.2
UP	830	—	0.034	W-E	0.4	—	—	RUNNING CASING @ SB-6
DN	830	0.3	0.039	—	—	—	—	DB = 82.3
UP	845							
DN	845							
UP	900							
DN	900							
UP	915	—	0.038	W-E	0.4	—	—	INSTALLING MW-6
DN	915	0.3	0.043	—	—	—	—	DB = 84.2
UP	930							
DN	930							
UP	945							
DN	945							
UP	1000							
DN	1000							
UP	1015							
DN	1015							
UP	1030							
DN	1030							
UP	1045	—	0.015	W-E	0.4	—	—	SETTING MW-6
DN	1045	0.3	0.037	—	—	—	—	DB = 79.2
UP	1100							
DN	1100							
UP	1115							
DN	1115							
UP	1130	—	0.008	W-E	0.4	—	—	MW-6S/I INSTALLED, PACKING UP TO MOVE
DN	1130	0.3	0.040	—	—	—	—	DB = 80.4
UP	1145							
DN	1145							
UP	1200							
DN	1200							
UP	1215		MOVING EQUIPMENT					
DN	1215							
UP	1230							
DN	1230							
UP	1245							
DN	1245							

4/21/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300							
DN	1300							
UP	1315							
DN	1315							
UP	1330							
DN	1330							
UP	1345		MOVING TO SB5					
DN	1345							
UP	1400							
DN	1400							
UP	1415							
DN	1415							SB-5
UP	1430							
DN	1430							
UP	1445	—	0.015	E-W	0.4	—	—	PRE-CLEAR SB5
DN	1445	0.2	0.038	—	—	—	—	DB = 93.6
UP	1500							
DN	1500							
UP	1515	—	0.017	E-W	0.4	—	—	PRE-CLEAR SB5
DN	1515	0.2	0.027	—	—	—	—	DB = 81.5
UP	1530	—	0.014	E-W	0.4	—	—	PRE-CLEAR SB5
DN	1530	0.2	0.050	—	—	—	—	DB = 77.1
UP	1545							
DN	1545							
UP	1600	—	0.027	E-W	0.4	—	—	PRE-CLEAR SB5
DN	1600	0.2	0.040	—	—	—	—	DB = 79.1
UP	1615	—	0.019	E-W	0.4	—	—	PRE-CLEAR SB5
DN	1615	0.3	0.026	—	—	—	—	DB = 80.4
UP	1630	—	0.018	E-W	0.4	—	—	PRE-CLEAR SB5
DN	1630	0.3	0.050	—	—	—	—	DB = 77.9
UP	1645	—	0.020	E-W	0.4	—	—	DRILLING SB5
DN	1645	0.5	0.036	—	—	—	—	DB - 85.4
UP	1700	—	0.064	E-W	0.4	—	—	DRILLING SB5 WIND IS WHIPPING NOW
DN	1700	0.3	0.050	—	—	—	—	DB = 89.2
UP	1715	—	0.022	E-W	0.5	—	—	DRILL SB5
DN	1715	0.4	0.047	—	—	—	—	DB = 92.6
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-5
Date: 4/22/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700	0.4	0.117	E-W	0.4	—	—	DRILL SB5 * DW PID STILL WONT HOLD CAL.
DN	700	2.6*	0.188	—	—	—	—	DB = 89.1 SWITCHING W/ UW
UP	715							
DN	715							
UP	730							
DN	730							
UP	745	—	0.110	E-W	0.4	—	—	DRILL SB5
DN	745	0.4	0.111	—	—	—	—	DB = 92.1
UP	800	—	~~0.090~~	~~E-W~~	~~0.4~~	—	—	
DN	800	0.6	0.084	—	—	—	—	
UP	815	—	0.090	E-W	0.4	—	—	DRILL SB5 SWITCHED BATTERIES W/ D. TRAIL (UW DIED)
DN	815	0.6	0.084	—	—	—	—	DB = 85.3
UP	830	—	0.077	E-W	0.3	—	—	DRILL SB5
DN	830	0.7	0.084	—	—	—	—	DB = 78.4
UP	845	—	0.081	E-W	0.4	—	—	DRILL SB-5
DN	845	0.7	0.086	—	—	—	—	DB = 89.9
UP	900							
DN	900							
UP	915	—	0.072	E-W	0.4	—	—	DRILL SB5
DN	915	0.7	0.087	—	—	—	—	DB = 91.1
UP	930							
DN	930							
UP	945							
DN	945			R16 DOWN (DETERMINING DEPTH OF MW-5I)				
UP	1000							
DN	1000							
UP	1015							
DN	1015							
UP	1030	—	0.047	E-W	0.4	—	—	RUNNING CASING FOR MW-5I
DN	1030	0.6	0.065	—	—	—	—	DB = 90.0
UP	1045							
DN	1045							
UP	1100	—	0.039	E-W	0.4	—	—	INSTALLING MW-5I/5D
DN	1100	0.6	0.060	—	—	—	—	DB = 80.6
UP	1115							
DN	1115							
UP	1130							
DN	1130							
UP	1145							
DN	1145							
UP	1200	—	0.022	E-W	0.4	—	—	INSTALLING MW-5I/5D
DN	1200	0.3	0.049	—	—	—	—	DB = 84.4
UP	1215							
DN	1215							
UP	1230							
DN	1230							
UP	1245							
DN	1245							

SB-5
4/22/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips		Activity/Notes
						Benzene	Hydorgen Cyanide	
UP	1300							
DN	1300							
UP	1315							
DN	1315							
UP	1330							
DN	1330							
UP	1345							
DN	1345							
UP	1400	—	0.036	E-W	0.3	—	—	GROUTING MW-5I/5D
DN	1400	0.2	0.047	—	—	—	—	DB=90.1
UP	1415							
DN	1415							
UP	1430	—	0.017	E-W	0.3	—	—	GROUTING COMPLETE @ 5I/5D
DN	1430	0.2	0.046	—	—	—	—	DB=80.9
UP	1445							
DN	1445							
UP	1500							
DN	1500							
UP	1515							
DN	1515							
UP	1530							
DN	1530							
UP	1545							
DN	1545							
UP	1600							
DN	1600							
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: MW-55
Date: 4/27/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							* PID TO BE REPLACED TODAY. UW PID
DN	815							IS IN THE DW LOCATION.
UP	830							
DN	830							
UP	845	— *	0.039	E-W	0.0	—	—	PREPPING TO DRILL BORING FOR MW-55
DN	845	0.4	0.049	—	—	—	—	DB = 86.2
UP	900							
DN	900							
UP	915	—	0.037	E-W	0.0	—	—	PRE-CLEAR MW-55
DN	915	0.7	0.059	—	—	—	—	DB = 92.6
UP	930	—	0.030	E-W	0.0	—	—	PRE-CLEAR MW-55
DN	930	0.6	0.041	—	—	—	—	DB = 84.3
UP	945	—	0.046	E-W	0.0	—	—	PC MW-55
DN	945	0.7	0.051	—	—	—	—	DB = 88.1
UP	1000							
DN	1000							
UP	1015	—	0.038	E-W	0.0	—	—	CORING THRU STONE FLOOR @ MW-55
DN	1015	0.7	0.054	—	—	—	—	DB = 95.4
UP	1030							
DN	1030							
UP	1045							
DN	1045							
UP	1100							
DN	1100							
UP	1115	—	0.027	E-W	0.4	—	—	SETTING MW-55
DN	1115	0.6	0.041	—	*	—	—	DB = 88.9
UP	1130							
DN	1130							
UP	1145		MOVING TO SB-4			NOTE		DW PID APPEARS TO BE CALIBRATED NOW.
DN	1145							SWITCHING UW/DW PIDS BACK.
UP	1200							
DN	1200							
UP	1215							
DN	1215					NOTE		NEW PID ARRIVED, UW IS BACK @ UW LOC.
UP	1230							
DN	1230							
UP	1245							
DN	1245							

SB4
4/27/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydrogen Cyanide	Activity/Notes
UP	1300	0.4	0.015	W-E	0.4	—	—	CORING ASPHALT @ SB-4
DN	1300	0.0	0.023	—	—	—	—	DB = 88.4
UP	1315	0.3	0.018	W-E	0.3	—	—	PRE-CLEAR SB-4
DN	1315	0.0	0.028	—	—	—	—	DB = 91.2
UP	1330	0.3	0.009	W-E	0.3	—	—	PC SB-4
DN	1330	0.0	—	—	—	—	—	DB = 84.6 DW D.T. BATT. DIED. WILL REPL.
UP	1345							
DN	1345							
UP	1400							
DN	1400							
UP	1415	0.1	0.012	W-E	0.3	—	—	SETTING UP TO DRILL SB-4
DN	1415	0.0	0.014	—	—	—	—	DB = 88.2 DW D.T. DIED AGAIN BUT RUNNING AGAIN
UP	1430							
DN	1430							
UP	1445							
DN	1445							
UP	1500	0.1	0.001	W-E	0.3	—	—	DRILLING SB4
DN	1500	0.0	0.039	—	—	—	—	DB = 89.5
UP	1515							
DN	1515							
UP	1530							
DN	1530							
UP	1545							
DN	1545							
UP	1600	0.1	0.001	W-E	0.3	—	—	DRILL SB4
DN	1600	0.0	0.011	—	—	—	—	DB = 92.3
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700	0.1	0.002	W-E	0.5	—	—	DRILL SB4
DN	1700	0.0	0.003	—	—	—	—	DB = 88.9
UP	1715							
DN	1715							
UP	1730	0.1	0.000	W-E	0.5	—	—	DRILL SB-4 DW. D.T. KEEPS DYING
DN	1730	0.0	0.004	—	—	—	—	DB = 88.7
UP	1745							
DN	1745							
UP	1800	0.1	0.002	W-E	0.5	—	—	WRAPPING UP FOR THE DAY
DN	1800	0.0	—	—	—	—	—	DB = 81.8
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By: _____

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-7
Date: 4/28/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes		Activity/Notes
						Benzene	Hydorgen Cyanide	
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							
DN	815							
UP	830							
DN	830							
UP	845							
DN	845							
UP	900							
DN	900							
UP	915							
DN	915							
UP	930							
DN	930							
UP	945							
DN	945							
UP	1000							
DN	1000							
UP	1015							
DN	1015							
UP	1030							
DN	1030							
UP	1045							
DN	1045							
UP	1100							
DN	1100							
UP	1115							
DN	1115							
UP	1130							
DN	1130							
UP	1145							
DN	1145							
UP	1200							
DN	1200							
UP	1215							
DN	1215							
UP	1230							
DN	1230							
UP	1245							
DN	1245							

SB-7 4/28/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips		Activity/Notes
						Benzene	Hydorgen Cyanide	
UP	1300	0.0	0.012	W-E	0.1	—	—	STARTING TO PRE-CLEAR SB-7
DN	1300	0.0	0.024	—	—	—	—	DB = 89.6
UP	1315	0.2	0.011	W-E	0.1	—	—	CORING SIDEWALK @ SB-7
DN	1315	0.0	0.013	—	—	—	—	DB = 87.5
UP	1330	0.2	0.009	W-E	0.0	—	—	PRE-CLEAR SB-7
DN	1330	0.0	0.009	—	—	—	—	DB = 88.1
UP	1345	0.0	0.010	W-E	0.0	—	—	PC SB-7
DN	1345	0.0	0.007	—	—	—	—	DB 84.2
UP	1400							
DN	1400							
UP	1415	0.0	0.012	W-E	0.0	—	—	
DN	1415	0.0	0.007	—	—	—	—	DB = 81.1
UP	1430							
DN	1430							
UP	1445	0.0	0.020	W-E	0.0	—	—	DRILLING SB-7
DN	1445	0.0	0.012	—	—	—	—	DB = 85.6
UP	1500							
DN	1500							
UP	1515							
DN	1515							
UP	1530							
DN	1530							
UP	1545	DEAD BAT	0.006	W-E	0.0	—	—	CLEANING UP FOR THE DAY
DN	1545	0.0	0.008	—	—	—	—	
UP	1600							
DN	1600							
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By: _____

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-7
Date: 4/29/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							
DN	815							
UP	830							
DN	830							
UP	845							
DN	845							
UP	900							
DN	900							
UP	915	0.0	0.009	W-E	0.0	—	—	STARTING TO DRILL SB-7 AGAIN
DN	915	0.0	0.022	—	—	—	—	DB = 87.9
UP	930	0.0	0.024	W-E	0.0	—	—	DRILLING SB-7
DN	930	0.0	0.018	—	—	—	—	DB = 92.5
UP	945	~~0.1~~	~~0.015~~	W				
DN	945	~~0.0~~	~~0.016~~					
UP	1000	0.1	0.015	W-E	0.0	—	—	DRILL SB-7
DN	1000	0.0	0.016	—	—	—	—	DB = 90.1
UP	1015	0.0	0.011	W-E	0.0	—	—	DRILL SB-7
DN	1015	0.0	0.023	—	—	—	—	DB = 89.1
UP	1030	0.0	0.016	W-E	0.0	—	—	DRILLING SB-7 COMPLETE
DN	1030	0.0	0.014	—	—	—	—	DB = 86.8
UP	1045							
DN	1045							
UP	1100	0.1	0.011	W-E	0.0	—	—	PREPPING TO SET MW-7S/7I
DN	1100	0.0	0.017	—	—	—	—	DB = 83.1
UP	1115							
DN	1115							
UP	1130	0.0	0.010	W-E	0.0	—	—	STARTING TO INSTALL MW-7S/7I
DN	1130	0.0	0.016	—	—	—	—	DB = 84.1
UP	1145							
DN	1145							
UP	1200							
DN	1200							
UP	1215	0.0	0.004	W-E	0.0	—	—	INSTALLING MW-7S/7I
DN	1215	0.0	0.020	—	—	—	—	DB = 83.0
UP	1230							
DN	1230							
UP	1245							
DN	1245							

SB-7
4/29/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips		Activity/Notes
						Benzene	Hydorgen Cyanide	
UP	1300	0.1	0.004	W-E	0.0	—	—	INSTALLING MW-7S/7I
DN	1300	0.0	0.042	—	—	—	—	DB = 82.4
UP	1315							
DN	1315							
UP	1330	0.0	0.031	W-E	0.0	—	—	FINISHED INST. OF MW-7S/7I
DN	1330	0.0	0.026	—	—	—	—	DB = 83.7
UP	1345							
DN	1345							
UP	1400							
DN	1400							
UP	1415							
DN	1415							
UP	1430							
DN	1430							
UP	1445							
DN	1445							
UP	1500							
DN	1500							
UP	1515							
DN	1515							
UP	1530							
DN	1530							
UP	1545							
DN	1545							
UP	1600							
DN	1600							
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By: _____

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-17
Date: 5/3/10

AECOM

Location	Time (PM)	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							
DN	815							
UP	830							
DN	830							
UP	845							
DN	845							
UP	900	0.4	0.017	W-E	0.0	—	—	PRE-CLEAR SB-17
DN	900	0.0	0.026	—	—	—	—	DB = 83.4
UP	915							
DN	915							
UP	930	0.9*	0.014	W-E	0.0	—	—	PC SB-17
DN	930	0.2	0.027	—	—	—	—	DB = 85.6
UP	945	0.9*	0.024	W-E	0.0	—	—	PC SB-17
DN	945	0.1	0.044	—	—	—	—	DB = 86.2
UP	1000	0.6*	0.018	—	—	—	—	~~DB = 80.4~~ PC - SB-17
DN	1000	0.0	0.025	—	—	—	—	DB = 80.4
UP	1015	0.5	0.014	—	—	—	—	PC - SB-17
DN	1015	0.3	0.019*	—	—	—	—	DB - 78.1 * LOW BAT.
UP	1030	0.5	0.041	—	0.3	—	—	DB - 84.1 BAT CHANGED
DN	1030	0.0	0.025	—	—	—	—	PC - SB-17
UP	1045	0.4	0.026	—	0.3	—	—	PC - SB-17
DN	1045	0.0	0.026	—	—	—	—	DB - 79.8
UP	1100	0.6	0.020	—	0.5	—	—	PC - SB-17
DN	1100	0.1	0.026	—	—	—	—	DB - 80.4
UP	1115	0.5	0.018	—	0.6	—	—	PC - SB-17
DN	1115	0.2	0.026	—	—	—	—	dB - 85.5
UP	1130	0.4	0.037	—	0.7	—	—	PC - SB-17
DN	1130	0.5	0.030	—	—	—	—	dB - 78.2
UP	1145	0.5	0.021	—	0.6	—	—	PC - SB-17
DN	1145	0.0	0.028	—	—	—	—	dB - 78.2
UP	1200	0.8*	0.026	—	0.8	—	—	PC - SB-17
DN	1200	0.2	0.048	—	—	—	—	dB - 82.5
UP	1215	0.5	0.030	—	0.8	—	—	Prep to drill - SB-17
DN	1215	0.3	0.047	—	—	—	—	dB - 89.1
UP	1230	0.7	0.027	W-E	0.8	—	—	drilling SB-17
DN	1230	0.3	0.036	—	—	—	—	dB 90.1
UP	1245	0.6	0.024	—	0.8	—	—	drilling SB-17
DN	1245	0.4	0.039	—	—	—	—	dB - 92.1

SB-17
5/4/10

AECOM

Location	AM Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300	0.5	0.038	W-E	1.0	—	—	Drilling SB-17
DN	1300	0.5	0.046	—	—	—	—	dB-94.1
UP	1315	0.6	0.024	—	1.1	—	—	Drilling SB-17
DN	1315	0.5	0.034	—	—	—	—	dB-82.3
UP	1330	0.8	0.033	W-E	1.2	—	—	Drilling SB-17
DN	1330	0.5	0.043	—	—	—	—	dB-87.6
UP	1345	0.5	0.030	—	1.0	—	—	Drilling SB-17
DN	1345	0.6	0.043	—	—	—	—	dB-89.1
UP	1400	0.6	0.035	W-E	1.1	—	—	Drilling SB-17
DN	1400	0.6	0.044	—	—	—	—	dB-93.1
UP	1415	0.6	0.033	—	1.2	—	—	Drilling SB-17
DN	1415	0.5	0.039	—	—	—	—	dB-85.3
UP	1430	0.5	0.029	—	1.3	—	—	Drilling SB-17
DN	1430	0.5	0.030	—	—	—	—	dB-83.1
UP	1445	0.6	0.028	W-E	1.2	—	—	Break
DN	1445	0.4	0.036	—	—	—	—	dB-77.8
UP	1500	0.6	0.033	W-E	2.1	—	—	Drilling SB-17
DN	1500	0.4	0.041	—	—	—	—	dB-84.5
UP	1515	0.6	0.03	—	2.6	—	—	Drilling SB-17
DN	1515	0.3	0.042	—	—	—	—	dB-85.7
UP	1530	0.7	0.041	W-E	3.2	—	—	Clean up
DN	1530	0.3	0.043	—	—	—	—	dB-76.9
UP	1545	0.7	0.037	W-E	—	—	—	Clean up - SB-17 Drilling Complete
DN	1545	0.4	0.051	—	—	—	—	dB-82.4
UP	1600							
DN	1600							
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By: _____

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-17 / SB-8
Date: 5/4/10 PM

AECOM

Location	PM Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815	0.3	0.013	E-W	—	—	—	Prep for Grouting SB-17 - Work Zone PID NOT working
DN	815	0.0	0.021	E-W	—	—	—	DB-90.4
UP	830	0.3	0.011	W-E	0.2	—	—	PREP FOR GROUT SB-17 - WIND CHANGED - SWAPPED CAMP LOCATION
DN	830	0.0	0.031	W-E	—	—	—	dB-92.9
UP	845	0.2	0.011	W-E	0.1	—	—	PREP FOR GROUTING SB-17
DN	845	0.1	0.014	—	—	—	—	dB-91.8
UP	900	0.3	0.010	—	0.2	—	—	PREP FOR GROUT SB-17
DN	900	0.0	0.013	—	—	—	—	dB-91.6
UP	915	0.5	0.014	—	0.3	—	—	GROUTING SB-17
DN	915	0.0	0.018	—	—	—	—	dB-86.1
UP	930	0.5	0.038	W-E	0.4	—	—	GROUTING SB-17
DN	930	0.3	0.014	—	—	—	—	dB-92.1
UP	945	0.5	0.011	W-E	0.4	—	—	GROUTING SB-17
DN	945	0.0	0.016	—	—	—	—	dB 91.6
UP	1000	0.4	0.016	W-E	0.5	—	—	GROUTING SB-17
DN	1000	0.1	0.067	W-E	—	—	—	dB-88.9
UP	1015	0.5	0.011	W-E	0.1	—	—	CAMP Relocated to SB-8
DN	1015	0.1	0.016	W-E	—	—	—	dB-79.0
UP	1030	0.4	0.014	W-E	0.6	—	—	PRE-CLEAR - SB-8
DN	1030	0.0	0.042	—	—	—	—	dB-84.1
UP	1045	0.8	0.025	W-E	0.6	—	—	PC - SB-8
DN	1045	0.2	0.022	—	—	—	—	dB-83.0
UP	1100	0.5	0.021	—	0.6	—	—	Break
DN	1100	0.2	0.024	—	—	—	—	dB-76.0
UP	1115	0.6	0.022	W-E	0.7	—	—	& BREAK
DN	1115	0.0	0.022	W-E	—	—	—	dB-78.9
UP	1130	0.5	0.022	W-E	0.8	—	—	PC - SB-8
DN	1130	0.1	0.023	—	—	—	—	dB-84.5
UP	1145	0.7	0.025	W-E	0.9	—	—	PC-SB-8
DN	1145	0.0	0.028	—	—	—	—	dB-82.6
UP	1200	0.7	0.028	W-E	0.9	—	—	PC-SB-8
DN	1200	0.2	0.046	—	—	—	—	dB-91.5
UP	1215	0.7	0.022	W-E	0.9	—	—	PC-SB-8
DN	1215	0.1	0.022	W-E	—	—	—	dB-82.2
UP	1230	0.6	0.024	W-E	5.0	—	—	PC-SB-8 - 2 generators running
DN	1230	0.7	0.039	W-E	—	—	—	dB 82.6
UP	1245	0.6	0.041	W-E	1.1	—	—	PC-SB-8
DN	1245	0.3	0.064	W-E	—	—	—	dB 83.5

SB-8/1~~8~~6
5/4/10 - 5/5/10

AECOM

Location	AM Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300	0.8	0.018	W-E	1.4	—	—	PC-SB-8
DN	1300	0.3	0.091	W-E	—	—	—	dB-91.6
UP	1315	0.6	0.019	—	1.1	—	—	PC-SB-8 and 1~~8~~16 - CAMP STATIONS MOVED TO CONTAIN BOTH HOLES
DN	1315	0.1	0.024	—	—	—	—	dB -78.8
UP	1330	0.6	0.017	W-E	1.0	—	—	PC-SB-8 + 1~~8~~16
DN	1330	0.0	0.020	W-E	—	—	—	dB 81.5
UP	1345	0.7	0.019	W-E	1.1	—	—	PC-SB-8 + 1~~8~~16
DN	1345	0.1	0.021	W-E	—	—	—	dB - 78.4
UP	1400	0.6	0.024	W-E	1.1	—	—	PC-SB-8 + 1~~8~~16 - SB-8 complete.
DN	1400	0.0	0.029	W-E	—	—	—	dB - 76.5
UP	1415	0.6	0.028	W-E	1.0	—	—	PC-SB 1~~8~~16
DN	1415	0.0	0.033	W-E	—	—	—	dB - 77.9
UP	1430	0.7	0.034	—	1.1	—	—	PC-SB-1~~8~~16
DN	1430	0.0	0.028	—	—	—	—	dB - 77.7
UP	1445	0.7	0.026	W-E	1.2	—	—	PC SB-1~~8~~16
DN	1445	0.0	0.051	W-E	—	—	—	dB - 76.1
UP	1500	0.7	0.028	W-E	1.2	—	—	PC SB-1~~8~~16
DN	1500	0.0	0.055	W-E	—	—	—	dB - 75.3
UP	1515	0.7	0.026	W-E	1.1	—	—	PC SB-1~~8~~16
DN	1515	0.1	0.032	W-E	—	—	—	dB - 72.4
UP	1530	0.8	0.029	W-E	1.2	—	—	PC-SB-1~~8~~16
DN	1530	0.1	0.057	W-E	—	—	✓	dB 72.3
UP	1545	0.7	0.026	W-E	1.3	—	—	PC SB-1~~8~~16
DN	1545	0.1	0.028	W-E	—	—	—	dB- 73.2
UP	1600	0.7	0.024	W-E	1.3	—	—	PC-SB-1~~8~~16 - PRE CLEAR COMPLETE
DN	1600	0.1	0.028	W-E	—	—	—	dB 80.4
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: SB-8 SB-16
Date: 5/5/10

AECOM

Location	PM Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745	0.0	0.020	E-W	0.0	—	—	PREP TO DRILL SB-8
DN	745	0.1	0.025	E-W	—	—	—	dB - 82.4
UP	800	0.0	0.016	E-W	0.0	—	—	dB - 87.6
DN	800	0.2	0.034	E-W	—	—	—	PREP FOR DRILLING SB-8
UP	815	0.1	0.014	E-W	0.1	—	—	DRILLING SB-8
DN	815	0.2	0.026	E-W	—	—	—	dB - 87.6
UP	830	0.1	0.011	E-W	0.4	—	—	DRILLING SB-8
DN	830	0.2	0.023	E-W	—	—	—	dB - 89.4
UP	845	0.1	0.009	E-W	0.1	—	—	DRILLING SB-8
DN	845	0.1	0.019	E-W	—	—	—	dB - 90.2
UP	900	0.2	0.009	E-W	0.1	—	—	DRILLING SB-8
DN	900	0.1	0.016	E-W	—	—	—	dB - 88.5 PAT IN DUST TEAK CHANGE
UP	915	0.2	0.010	E-W	0.1	—	—	DRILLING SB-8
DN	915	0.2	0.015	E-W	—	—	—	dB - 88.9
UP	930	0.1	0.014	E-W	0.2	—	—	DRILLING SB-8
DN	930	0.1	0.021	E-W	—	—	—	dB - 88.8
UP	945	0.1	0.011	E-W	0.2	—	—	DRILLING SB-8
DN	945	0.2	0.023	E-W	—	—	—	dB - 89.8
UP	1000	0.2	0.019	E-W	0.2	—	—	INSTALLING MW-8
DN	1000	0.1	0.029	E-W	—	—	—	dB - 87.8
UP	1015	0.2	0.023	E-W	0.3	—	—	INSTALLING MW-8
DN	1015	0.2	0.018	E-W	—	—	—	dB - 93.8
UP	1030	0.3	0.024	E-W	0.3	—	—	INSTALLING MW-8
DN	1030	0.2	0.038	E-W	—	—	—	dB - 80.9
UP	1045	0.3	0.028	E-W	0.3	—	—	INSTALLING MW-8
DN	1045	0.2	0.050	E-W	—	—	—	dB - 85.2
UP	1100	0.2	0.027	E-W	0.3	—	—	INSTALLING MW-8
DN	1100	0.2	0.041	E-W	—	—	—	dB - 82.1
UP	1115	0.2	0.036	E-W	0.4	—	—	INSTALLING MW-8
DN	1115	0.3	0.041	E-W	—	—	—	dB - 85.9
UP	1130	0.2	0.032	E-W	0.5	—	—	INSTALLING MW-8
DN	1130	0.3	0.049	E-W	—	—	—	dB - 83.3
UP	1145	0.3	0.037	E-W	0.5	—	—	INSTALLING MW-8
DN	1145	0.3	0.045	E-W	—	—	—	dB - 90.2
UP	1200	0.3	0.031	E-W	0.5	—	—	INSTALLING MW-8
DN	1200	0.3	0.042	E-W	—	—	—	dB - 85.1
UP	1215	0.3	0.032	E-W	0.7	—	—	MW-8 Complete
DN	1215	0.2	0.044	E-W	—	—	—	dB - 89.1
UP	1230	0.2	0.057	E-W	0.7	—	—	SETTING UP ON SB-16
DN	1230	0.3	0.042	E-W	—	—	—	dB - 84.9
UP	1245	0.4	0.041	E-W	0.7	—	—	SETTING UP ON SB-16
DN	1245	0.2	0.057	E-W	—	—	—	dB - 85.0

SB-16
5/6/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300	0.3	0.059	E-W	0.7	—	—	SETTING UP ON SB-16
DN	1300	0.3	0.061	E-W	—	—	—	dB-91.9
UP	1315	0.2	0.036	E-W	1.0	—	—	DRILLING SB-16
DN	1315	0.3	0.044	E-W	—	—	—	dB-94.5
UP	1330	0.4	0.039	E-W	1.6	—	—	DRILLING SB-16
DN	1330	0.3	0.051	E-W	—	—	—	dB-93.6
UP	1345	0.4	0.039	E-W	1.2	—	—	DRILLING SB-16
DN	1345	0.3	0.051	E-W	—	—	—	dB-84.1
UP	1400	0.4	0.037*	E-W	1.1	—	—	DRILLING SB-16 * Changed BAT on DUST TRAK
DN	1400	0.3	0.050	E-W	—	—	—	dB-84.4
UP	1415	0.5	0.042	E-W	1.6	—	—	DRILLING SB-16
DN	1415	0.3	0.046	E-W	—	—	—	dB-89.2
UP	1430	0.5	0.044	E-W	1.0	—	—	DRILLING SB-16
DN	1430	0.3	0.054*	E-W	—	—	—	dB-90.2 * - CHANGED BAT IN DUST TRAK
UP	1445	0.3	0.045	E-W	1.4	—	—	DRILLING SB-16
DN	1445	0.3	0.052	E-W	—	—	—	dB-85.9
UP	1500	0.5	0.041	E-W	1.6	—	—	DRILLING SB-16
DN	1500	0.3	0.057	E-W	—	—	—	dB-93.1
UP	1515	0.6	0.044	E-W	1.7	—	—	DRILLING SB-16
DN	1515	0.3	0.055	E-W	—	—	—	dB-76.1
UP	1530	0.5	0.043	E-W	1.8	—	—	DRILLING SB-16
DN	1530	0.2	0.040	E-W	—	—	—	dB-79.1
UP	1545	0.6	0.041	E-W	4.0	—	—	DRILLING SB-16
DN	1545	0.4	0.044	E-W	—	—	—	dB-88.8
UP	1600	0.5	0.040	E-W	1.8	—	—	DRILLING SB-16 - LOW BAT ON DOWN DUST TRACK
DN	1600	0.3	0.043*	E-W	—	—	—	dB-87.9
UP	1615	0.6	—	E-W	1.9	—	—	DRILLING SB-16 - UP DUST TRACK SHUT DOWN to
DN	1615	0.3	0.053	E-W	—	—	—	dB-90.7 Provide BAT FOR DOWN DUST TRACK
UP	1630	0.6	—	E-W	2.1	—	—	Prep for Grout SB-16
DN	1630	0.3	0.049	E-W	—	—	—	dB-87.1
UP	1645	0.6	—	E-W	2.1	—	—	Grout Complete -
DN	1645	0.3	0.069	E-W	—	—	—	dB-88.1
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By:

AECOM

Client: National Grid
Location: Pathmark - TP-1
Date: 5/19/2010
Field Personnel: J. Pfeffer, P. Swain

Project: Metropolitan
Project Number: 60137361
Weather: Temp 65°F overcast, wind W-E ~5mph
Ambient Noise: 9.15 dB

Community Air Monitoring Plan / Noise Field Log

Time	Upwind PID	Upwind Dust Trak	Work Area PID	Downwind PID	Downwind Dust Trak	dB Readings[1]	Comments
0845	Set up camp. upwind and downwind						
0905	0.1	0.006	0.0	0.0	0.012	79.1	Actual Excavation not yet started
0926	0.1	0.006	0.0	0.0	0.006	79.7	Changed Downwind Dust TRAK BATS
0955	0.0	0.007	0.0	0.0	0.007	81.4	Changed UP-PID BATS + Work PID BAT
1005	0.0	0.007	0.0	0.0	0.017	79.8	LAST READING PRIOR TO SAW CUT + Excavation
1015	0.0	0.006	0.0	0.0	0.027	92.5	SAW CUTTING ASPHALT
1030	0.0	0.006	0.0	0.0	0.012	83.1	SETTING UP CONTAINMENT + Back Hoe
1045	0.0	0006	0.0	0.0	0.019	87.1	Excavating
1100	0.1	0.006	0.0	0.0	0.010	87.8	Excavating
1115	0.2	0.006	0.0	0.0	0.011	80.6	Excavating
1130	0.0	0.006	0.0	0.0	0.013	82.1	Cleaning out hole by hand
1145	0.1	0.004	0.0	0.0 * BAT LOW	0.006	83.5	Cutting asphalt to extend excavation
~~1200~~ 1150	- LUNCH - ALL WORK STOPPED						
1250	—	0.004	0.0	0.0	0.015	81.1	UPWIND PID SWAPPED TO Downwind due to DEAD BAT
1300	—	0.002	0.0 * LOW BAT	0.0	0.008	82.2	Resume Excavating
1315	—	0.001	0.0 * low BAT	0.0	0.012	85.5	Excavating
1330	0.0 *	0.01	0.0 *	0.0 *	0.002	79.3	Excavating
1345	0.0	0.000	0.0	0.0	0.011	87.0	*1 PID BEING USED FOR ALL PID READ
1400	0.1	0.000	0.0	0.0	0.022	85.7	Excavating
1415	0.0	0.001	0.0	0.0	0.012	79.4	Backfilling
1430	0.0	0.007	0.0	0.0	0.001	93.2	CAMP SET UP @ TEST PIT #2
1445	0.0	0.002	0.0	0.0	0.011	87.8	Cutting Asphalt
							Asphalt cutting Complete — End of work for The DAY

AECOM-Environment

CAMP Station Real Time Air Monitoring Results

Site: Metropolitan Former MGP Site

Date: 9/14/10 TUESDAY

NO WORK ON MONDAY 9/13/10 FOR CAMP.

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700	NO WORK						SCOPE OF WORK!
DN	700							TWO LOCATIONS FOR
UP	715							UTILITY PRE-CLEARANCE
DN	715							TO 5' bgs.
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							
DN	815							
UP	830							
DN	830							
UP	0855 ~~845~~	SET UP CAMP	UPWIND	& DOWNWIND.	DATA LOGGING	EVERY 1	MINUTE	
DN	0855 ~~845~~							
UP	900	—	—	—	—	—	—	START PRE-CLEAR SB-9. (1st loc)
DN	900	—	—	—	—	—	—	
UP	915	0.0	0.080	W→E	0.1	—	—	pre-clear SB-9
DN	915	0.0	0.077	—	—	—	—	
UP	930	0.0	0.065	W→E	0.1	—	—	pre-clear SB-9.
DN	930	0.0	0.075	calm	—	—	—	
UP	945	0.0	0.086	W-E	0.3	—	—	pre-clear SB-9
DN	945	0.0	0.105	calm	—	—	—	
UP	1000	0.0	0.089	W-E.	0.2	—	—	pre-clear SB-9
DN	1000	0.0	0.093	calm	—	—	—	
UP	1015	—	—	—	—	—	—	no readings documented. Backfilled SB-9 (1st loc)
DN	1015	—	—	—	—	—	—	
UP	1030	0.0	0.089	W-E	0.2	—	—	pre clear SB-9 (2nd loc).
DN	1030	0.0	0.094	calm	—	—	—	
UP	1045	0.0.	0.090	W-E	0.3	—	—	pre-clear SB-9
DN	1045	0.0.	0.098	calm	—	—	—	
UP	1100	0.0.	0.074	W-E	0.3	—	—	pre-clear SB-9
DN	1100	0.0.	0.083	calm	—	—	—	
UP	1115	CAMP DOWN. location backfilled @ 1105.						
DN	1115							
UP	1130							
DN	1130							
UP	1145							
DN	1145							
UP	1200							
DN	1200							
UP	1215							
DN	1215							
UP	1230							
DN	1230							
UP	1245							
DN	1245							

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: Metropolitan
Date: 9/15/2010

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							
DN	815							
UP	830							
DN	830							
UP	845							
DN	845							
UP	900							
DN	900							
UP	915							
DN	915							
UP	930							
DN	930							
UP	945							
DN	945							
UP	1000							
DN	1000							
UP	1015							
DN	1015							
UP	1030							
DN	1030							
UP	1045	SET UP CAMP - NO WORK PRIOR						
DN	1045							
UP	1100	—	—	—	—	—	—	SB-9 advancement
DN	1100	—	—	—	—	—	—	
UP	1120 ~~1115~~	0.0	0.021	0.0	W→E	—	—	SB-9 advancement via sonic rig.
DN	1120 ~~1115~~	0.0	0.022	—	~5 mph	—	—	
UP	1140 ~~1120~~	0.0	0.013	0.0	W-E	—	—	71.7dB SB9 advancement.
DN	1140 ~~1130~~	0.0	0.019	—	~5 mph	—	—	
UP	1145	—	—	—	—	—	—	
DN	1145	—	—	—	—	—	—	
UP	1200	0.0	0.012	0.0	W→E	—	—	break for lunch
DN	1200	0.0	0.042	—	10 mph	—	—	
UP	1215							
DN	1215							
UP	1230							
DN	1230							
UP	1245							
DN	1245							

9/15/10 @ SB-9

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300	0.0	0.013	W→E	0.0	—	—	drilling SB-9 25-30'
DN	1300	0.0	0.019	5mph	—	—	—	dB=89.2 11
UP	1315	0.0	0.011	W→E	0.0	—	—	drilling SB-9
DN	1315	0.0	0.028	5mph	—	—	—	dB=88.9
UP	1330	0.0	0.012	W→E	0.0	—	—	drilling SB-9
DN	1330	0.1	0.015	5mph	—	—	—	dB=90.1
UP	1345	0.0	0.015	W→E	0.2	—	—	drilling SB-9
DN	1345	0.0	0.017	5mph	—	—	—	dB=86.6
UP	1400	0.0	0.008	W→E	0.0	—	—	drilling SB-9
DN	1400	0.0	0.011	5mph	—	—	—	dB=79.5
UP	1415	0.0	0.018	W→E	0.0	—	—	drilling SB-9
DN	1415	0.1	0.012	5mph	—	—	—	dB=64.2
UP	1430	0.0	0.020	W→E	0.0	—	—	drilling SB-9
DN	1430	0.0	0.018	5mph	—	—	—	dB=86.0
UP	1445	0.0	0.018	W→E	0.0	—	—	drilling SB-9
DN	1445	0.0	0.012	5mph	—	—	—	dB=83.5
UP	1500	0.0	0.017	W→E	0.0	—	—	drilling SB-9
DN	1500	0.0	0.008	5mph	—	—	—	dB=84.5
UP	1515	0.0	0.016	W→E	0.0	—	—	drilling SB-9
DN	1515	0.0	0.066	5mph	—	—	—	dB=84.7
UP	1530	0.0	0.016	W→E	0.0	—	—	@ 72' on SB-9
DN	1530	0.0	0.010	5mph	—	—	—	dB=63.9
UP	1545							skipped no drilling going on
DN	1545							
UP	1600	0.0	0.016	W→E	0.0	—	—	cleaning up for the day
DN	1600	0.0	0.020	5mph	—	—	—	
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: Metropolitan
Date: 9/16/10 SB-9.

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700							Drillers waiting for part to be fixed on drill rig.
DN	700							
UP	715							
DN	715							
UP	730							
DN	730							
UP	745							
DN	745							
UP	800							
DN	800							
UP	815							
DN	815							
UP	830							
DN	830							
UP	845							
DN	845							
UP	900							
DN	900							
UP	915							
DN	915							
UP	930							
DN	930							
UP	945	0.2	0.012	W→E	0.1	—	—	Drillers working on rig
DN	945	0.0	0.016	calm	—	—	—	dB = 94.0 (noise from across the way)
UP	1000	0.4	0.017	W→E	0.0	—	—	
DN	1000	0.2	0.033	calm	—	—	—	Drilling SB-9 70-80'
UP	1015	0.4	0.013	W→E	0.1	—	—	dB = 94.0
DN	1015	0.2	0.010	calm	—	—	—	drilling SB-9 dB = 94.0
UP	1030	0.5	0.012	W→E	0.0	—	—	Finished SB-9 to 80'
DN	1030	0.2	0.020	5 mph	—	—	—	dB = 94.0
UP	1045	0.5	0.012	W→E	0.0	—	—	setting casing to 80' dB = 94.0
DN	1045	0.2	0.012	5 mph	—	—	—	comparing upwind pid w/ workarea PID
UP	1100	0.5	0.014	W→E	0.0	—	—	well construction MW-9D
DN	1100	0.3	0.012	5 mph	—	—	—	dB = 94.0 PID workarea comparison WA = 0.0 upwind = 0.5
UP	1115	0.4	0.010	W→E	0.0	—	—	installing well MW-9D dB = 94.0
DN	1115	0.3	0.011	5 mph	—	—	—	comparison upwind PID = 0.4 WA PID = 0.0
UP	1130	0.5	0.012	W→E	0.0	—	—	installing well MW-9D dB = 94.0
DN	1130	0.3	0.013	5 mph	—	—	—	comparison upwind = 0.5 WA = 0.0
UP	1145	0.5	0.015	W→E	0.0	—	—	installing MW-9D dB = 94
DN	1145	0.3	0.017	5 mph	—	—	—	comparison up = 0.5 WA = 0.0
UP	1200	0.5	0.014	W→E	0.1	—	—	about to start installing MW-9I dB = 94.0
DN	1200	0.3	0.013	5 mph	—	—	—	comparison up = 0.5 WA = 0.0
UP	1215							Lunch
DN	1215							
UP	1230							
DN	1230							
UP	1245	0.0	0.010	W→E	0.1	—	—	Installing MW-9I dB = 94.0
DN	1245	0.3	0.020	5 mph	—	—	—	

work area = 0.0 upwind = 0.5 0.5 on upwind is false

* Recalibrated upwind PID @ 1210 with zero cal gas and 100 butylene 100ppm span cal.

Metro
9/16/10

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Chips: Benzene	Draeger Chips: Hydorgen Cyanide	Activity/Notes
UP	1300	0.0	0.011	W→E	0.0	—	—	Installing MW-9I dB=94.0
DN	1300	0.3	0.010	5mph	—	—	—	
UP	1315	0.0	0.014	W→E	0.0	—	—	" "
DN	1315	0.3	0.014	5mph	—	—	—	
UP	1330	—	—	—	—	—	—	no work.
DN	1330	—	—	—	—	—	—	
UP	1345	0.0	0.014	W→E	0.0	—	—	MW-9I, MW-9D installed.
DN	1345	0.3	0.011	calm	—	—	—	94 dB.
UP	1400	0.0	0.026	W→E	0.1	—	—	grouting MW 9D & 9I
DN	1400	0.3	0.011	Calm	—	—	—	dB=94.0
UP	1415	0.0	0.012	W→E	0.2	—	—	mixing grout.
DN	1415	0.3	0.013	CALM.	—	—	—	~~dB=~~ dB-97.8
UP	1430	0.0	0.012	W→E	0.3	—	—	pulling casing from SB-9
DN	1430	0.3	0.011	calm	—	—	—	dB=90.8
UP	1445	0.0 ~~0.4~~	0.015	W→E	0.8	—	—	Finishing MW9D & 9I
DN	1445	0.4	0.013	calm	—	—	—	dB=89.8
UP	1500	0.0	0.015	W→E	0.0	—	—	drilling hole for MW9S
DN	1500	0.4	0.016	Calm	—	—	—	dB=95.7
UP	1515	0.0	0.019	W→E	0.0	—	—	installing MW9S
DN	1515	0.4	0.015	Calm	—	—	—	dB=91.8
UP	1530	0.0	0.022	W→E	0.0	—	—	Looking for more sand for MW9S
DN	1530	0.4	0.023	calm	—	—	—	dB=81.8
UP	1545	0.0	0.024	W→E	1.0	—	—	Mixing grout
DN	1545	0.4	0.023	calm	—	—	—	dB=95.1
* UP	1600	0.0	0.025	W→E	1.4	—	—	grouting MW 9D & 9I dB=99.1
DN	1600	0.5	0.026	calm	—	—	—	getting biosolve
UP	1615							
DN	1615							
UP	1630							
DN	1630							
UP	1645							
DN	1645							
UP	1700							
DN	1700							
UP	1715							
DN	1715							
UP	1730							
DN	1730							
UP	1745							
DN	1745							
UP	1800							
DN	1800							
UP	1815							
DN	1818							
UP	1830							
DN	1830							
UP	1845							
DN	1845							

Comments:
1450 Checked work area PID with 0.0 cal gas. OK.
*1555 recalibrated workarea PID still reading high applying biosolve @ 1605. work stopped at this time.

Monitoring Completed By:

AECOM-Environment
CAMP Station Real Time Air Monitoring Results
Site: Metropolitan
Date: September 17, 2010.
SB-9.

AECOM

Location	Time	PID (ppm)	Particulate (mg/m3)	Wind Direction/Speed	Work Area Breathing Zone	Draeger Tubes: Benzene	Draeger Tubes: Hydorgen Cyanide	Activity/Notes
UP	700	no work						
DN	700							
UP	715							
DN	715							
UP	730	0.0	0.078	W→E	3.3	—	—	installing well MW9S
DN	730	0.0	0.094	calm	—	—	—	dB = 87 (drizzle)
UP	745	0.0	0.078	W→E	4.7	—	—	installing well - did a benzene colorometric tube in workarea no change in color
DN	745	0.0	0.092	calm	—	—	—	side-by-side upwd = 0.0 WA = 4.7
UP	800	0.0	0.080	W→E	0.0	—	—	installing well MW9S
DN	800	0.4	0.129	calm	—	—	—	dB = 85.0
UP	810 ~~815~~	0.0	0.078	W→E	0.0	—	—	Putting Bentonite chips from 1-3
DN	810 ~~815~~	0.2	0.077	calm	—	—	—	in MW9S. dB = 82.2
UP	820 ~~830~~	0.0	0.067	W→E	0.0	—	—	dB = 81.5
DN	820 ~~830~~	0.2	0.078	calm	—	—	—	
UP	830 ~~845~~	0.0	0.060	W→E	0.0	—	—	dB = 81.6
DN	830 ~~845~~	0.1	0.058	calm	—	—	—	hydrating Bentonite chips
UP	840 ~~900~~	0.0	0.060	W→E	0.1	—	—	setting up to install manhole covers
DN	840 ~~900~~	0.2	0.065	calm	—	—	—	dB = 84.9
UP	850 ~~915~~	0.2	0.081	W→E	0.1	—	—	Installing manhole for MW
DN	850 ~~915~~	0.2	0.074	calm	—	—	—	9D & 9I. dB = 84.6
UP	0927 ~~930~~	0.0	0.036	W→E	0.1	—	—	set road box for MW-9I/D.
DN	0923 ~~930~~	0.0	0.042	calm	—	—	—	81.5 dB.
UP	0930 ~~945~~	0.0	0.041	W→E	0.0	—	—	
DN	0930 ~~945~~	0.0	0.044	calm	—	—	—	80.7 dB.
UP	0945 ~~1000~~	0.0	0.048	W→E	0.0	—	—	
DN	0945 ~~1000~~	0.0	0.047	calm	—	—	—	83.9 dB
UP	1015	0953 TAKE CAMP DOWN						
DN	1015							
UP	1030							
DN	1030							
UP	1045							
DN	1045							
UP	1100							
DN	1100							
UP	1115							
DN	1115							
UP	1130							
DN	1130							
UP	1145							
DN	1145							
UP	1200							
DN	1200							
UP	1215							
DN	1215							
UP	1230							
DN	1230							
UP	1245							
DN	1245							

dB = 84.3

★ setup camp @ 7:27
★ Put filters on @ 7:37
★ 7:53 moved upwind PID to work area turned off log, will move to upwind to get readings every 15 min

Appendix H

Indoor Air Survey Forms

nationalgrid

Ambient Air (Canister) Sample Collection Field Form

Project #	60137361	Consultant	AECOM
Project Name	Metropolitan MGP	Collector	Jesse Lloyd

Sample ID	Amb1	Vacuum gauge "zero" ("Hg)	yes
Start Date/Time	3-30-10 / 2300	Start Pressure ("Hg)	-30
End Date/Time	3-31-10 / 0659	End Pressure ("Hg)	-6
Canister ID	33562	End pressure > "zero"?	yes
Flow controller ID	NA	Sampling duration (intended)	8 hr

Tubing type used NA Length of tubing NA cm Tubing volume NA cc

Volume purged NA cc @ NA min 1 to 3 volumes purged @ < 200cc/min? NA

Weather Conditions at Start of Sampling:

Air temperature (°F) 43-46 Rainfall light/intermittent Wind direction NW

Barometric pressure 29.50 to 29.65 Relative humidity 89% - 93% Wind speed (mph) 5-10

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Barometric pressure steadily rose from 29.50 inHg to 29.65 inHg from 1200 to 0700. Rain was light and intermittent.

Site Plan showing sample location, building(s) being sampled, building HVAC inlet, outdoor air sources, wind direction

Comments:

nationalgrid

Indoor Air (Canister) Sample Collection Field Form

Project #	60137361	Consultant	AECom
Project Name	Metropolitan MGP	Collector	Jesse Lloyd

Sample ID	IA1	Vacuum gauge "zero" ("Hg)	yes
Start Date/Time	3-30-10 / 2252	Start Pressure ("Hg)	-31
End Date/Time	3-31-10 / 0701	End Pressure ("Hg)	-5
Canister ID	12007	End pressure > "zero"?	yes
Flow controller ID	NA	Sampling duration (intended)	8hr
Associated ambient air sample ID	Amb1	Associated sub-slab vapor sample ID	SV1

Tubing type used NA Length of tubing NA cm Tubing volume NA cc

Volume purged NA cc @ NA min 1 to 3 volumes purged @ < 200cc/min? NA

Weather Conditions at Start of Sampling:

Air temperature (°F) 43-46 Rainfall light/intermittent Wind direction NW

Barometric pressure 29.50 to 29.65 Relative humidity 89% - 93% Wind speed (mph) 5-10

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Barometric pressure steadily rose from 29.50 inHg to 29.65 inHg from 1200 to 0700. Rain was light and intermittent.

Indoor air temp (°F) 70 Indoor relative humidity (%) NA

Building Survey and Chemical Inventory Form Completed? yes Photograph IDs

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways

Comments:

nationalgrid **Sub-slab Vapor (Canister) Sample Collection Field Form**

Project #	60137361	Consultant	AECOM
Project Name	Metropolitan MGP	Collector	Jesse Lloyd

Sample ID	SV1	Vacuum gauge "zero" ("Hg)	yes
Start Date/Time	3-30-10 / 2253	Start Pressure ("Hg)	-31
End Date/Time	3-31-10 / 0701	End Pressure ("Hg)	-5
Canister ID	406	End pressure > "zero"?	yes
Flow controller ID	NA	Sampling duration (intended)	8 hr
Associated indoor air sample ID	IA1	Associated ambient air sample ID	Amb1

Tubing type used thick walled polyethylene Length of tubing 137 cm Tubing volume 9.7 cc

Volume purged 200 cc @ .17 ~~min~~ 10 sec 1 to 3 volumes purged @ < 200cc/min? yes

Weather Conditions at Start of Sampling:

Air temperature (°F) 43-46 Rainfall very light Wind direction From NW

Barometric pressure start 29.50 End 29.65 Wind speed (mph) 5-10

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Barometric pressure steadily rose from 29.50 to 29.65 over the sampling duration

Indoor air temp (°F)	70	Indoor relative humidity (%)	NA
Building Survey and Chemical Inventory Form Completed?	Yes	Photograph IDs	

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways

Comments: VINOLEUM TILE ON OFFICE FLOOR. SV-1 POINT INSTALLED ON 3/30/2010. CONCRETE SLAB BENEATH TILE.

nationalgrid

Indoor Air (Canister) Sample Collection Field Form

Project #	60137361	Consultant	AECOM
Project Name	Metropolitan MGP	Collector	Jesse Lloyd

Sample ID	IA2 | IA2 Dup	Vacuum gauge "zero" ("Hg)	yes
Start Date/Time	3-30-10/2257 | 3-30-10/2257	Start Pressure ("Hg)	-31 | -31
End Date/Time	3-31-10/0706 | 3-31-10/0708	End Pressure ("Hg)	-31 | -5.5
Canister ID	34345 | 94600	End pressure > "zero"?	yes
Flow controller ID	NA	Sampling duration (intended)	8 hr
Associated ambient air sample ID	Amb1	Associated sub-slab vapor sample ID	SV2

Tubing type used	NA	Length of tubing	NA cm	Tubing volume	NA cc
Volume purged	NA cc @	NA min	1 to 3 volumes purged @ < 200cc/min?	NA	

Weather Conditions at Start of Sampling:

Air temperature (°F)	43-46	Rainfall	light, intermittent	Wind direction	NW
Barometric pressure	29.50-29.65	Relative humidity	89%-93%	Wind speed (mph)	5-10

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:
Barometric Pressure steadily rose from 29.50 in Hg to 29.65 in Hg from 1200 to 0700. Rain was light and intermittent.

Indoor air temp (°F)	62	Indoor relative humidity (%)	NA
Building Survey and Chemical Inventory Form Completed?	yes	Photograph IDs	

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways

Comments: IA2 Dup is a duplicate sample of IA2.

nationalgrid **Sub-slab Vapor (Canister) Sample Collection Field Form**

Project #	60137361	Consultant	AECOM
Project Name	Metropolitan MGP	Collector	Jesse Lloyd

Sample ID	SV2	Vacuum gauge "zero" ("Hg)	yes
Start Date/Time	3-30-10 / 2256	Start Pressure ("Hg)	-32
End Date/Time	3-31-10 / 0706	End Pressure ("Hg)	76
Canister ID	1586	End pressure > "zero"?	yes
Flow controller ID	NA	Sampling duration (intended)	8 hr
Associated Indoor air sample ID	IA2	Associated ambient air sample ID	Amb1

Tubing type used: Thick walled polyethylene Length of tubing: 137 cm Tubing volume: 9.7 cc

Volume purged: 200 cc @ 0.17 min (l/sec) 1 to 3 volumes purged @ < 200cc/min? yes

Weather Conditions at Start of Sampling:

Air temperature (°F): 43-46 Rainfall: light/intermittent Wind direction: NW

Barometric pressure: 29.50 to 29.65 Relative humidity: 89% - 93% Wind speed (mph): 5-10

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Barometric pressure steadily rose from 29.50 inHg to 29.65 inHg from 1200 to 0700. Rain was light and intermittent.

Indoor air temp (°F): 62 Indoor relative humidity (%): NA

Building Survey and Chemical Inventory Form Completed? yes Photograph IDs:

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways

Comments: CONCRETE SLAB FLOOR. SV-2 POINT INSTALLATION ON 3/30/2010. SV-2 POINT 5'4" EAST FROM WEST WALL. No observed cracks in CONCRETE SLAB.

Site Photograph Log SV-1 and SV-2

SV-1 point installation (March 30, 2010) facing southwest
Location: Managers office near entrance to 137 12th Street, along inside wall

SV-2 point installation (March 30, 2010) facing northwest
Location: Warehouse/loading dock area of 137 12th Street, along western wall

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name: Jesse Lloyd/Jennifer Pfeiffer **Date/Time Prepared:** March 31, 2010

Preparer's Affiliation: AECOM Environmental **Phone No:** (978) 589-3012

Purpose of Investigation: Investigate the potential for MGP residuals to adversely affect indoor air.

1. OCCUPANT:

Interviewed: Y / N

Last Name: Pathmark First Name:

Address: 1-37 12th Street, New York, NY 11215

County: Kings

Home Phone: (718) 788-5100 Office Phone:

Number of Occupants/persons at this location: Age of Occupants:

2. OWNER OR LANDLORD: (Check if same as occupant)

Interviewed: Y / N

Last Name: HPA Associates First Name:

Address: 1-37 12th Street, New York, NY 11215

County: Kings

Home Phone: Office Phone:

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	Other:

Note: The building is occupied by a Path Mart grocery store.

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	~~Townhouses~~/Condos
Modular	Log Home	**Other:** Large grocery store

If multiple units, how many? NA

If the property is commercial, type? Yes

Business Type(s): Path Mart Grocery Store

Does it include residences (i.e., multi-use)? Y / N If yes, how many? NA

Other characteristics:

Number of floors: 1 Building age:

Is the building insulated? Y / N How air tight? Tight / Average / Not Tight

Note: The warehouse/storage area where IA2 and SV2 were taken was not insulated.

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow pattern and qualitatively describe:

Airflow between floors: There is only one floor. The smoke tracer gently drifted upwards at both sampling locations.

Airflow near source: There is no known source material.

Outdoor air infiltration: A moderate amount of outdoor air infiltares the building through the main entrance/exit at the front of the store. These doors have a sensor that opens them automatically when someone gets near the door. The SVI sampling was conducted when the store was closed, so these doors were shut for the majority of the sampling time.

There is a large door the warehouse/storage area to the outside. The are large gaps in this door way allowing for outside infiltration.

Infiltration into air ducts: No air ducts were observed near the sampling areas.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick	Cinder block
b. Basement type:	full	crawlspace	slab	other:	No basement
c. Basement floor:	concrete	dirt	stone	other:	No basement
d. Basement floor:	uncovered	covered	covered with:		No basement
e. Concrete floor:	unsealed	sealed	sealed with: 1'x 1' tiles at IA1/SV1 and painted at IA2/SV2		
f. Foundation walls:	poured	block	stone	other:	Foundation could not be observed
g. Foundation walls:	unsealed	sealed	sealed with: NA		
h. The basement is:	wet	damp	dry	moldy:	No basement
i. The basement is:	finished	unfinished	partly finished:		No basement
j. Sump present?	Y / N				
k. Water in sump?	Y / N / not applicable				

Basement/Lowest level depth below grade: Not known

Identify potential soil vapor entry points and approximate size. (e.g., cracks, utility ports, drains)
There were no cracks, drains or utility ports observed near the sampling areas.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood Stove	Outdoor wood boiler	Other:

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: N/A

Boiler/furnace located in:	Basement	Outdoor	Main Floor	Other:
Air conditioning:	Central Air	Window units	Open Windows	None

Are there air distribution ducts present? Y / N

Describe the supply and air return ductwork, and its condition where visible, including whether There is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram,

7. OCCUPANCY

Is basement /lowest level occupied? Full-time Occasionally Seldom Almost Never

Level **General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**

Basement: NA

1st Floor: The first floor is occupied by shoppers and workers during business hours, 6 am to 11 pm, and occupied by workers during off hours.

2nd Floor: NA

3rd Floor: NA

4th Floor: NA

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / N

b. Does the garage have a separate heating unit? Y / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage? (e.g., lawnmower, atv, car) Y / N / NA Please specify

Note: A propane powered fork lift is used in the warehouse/storage area.

d. Has the building ever had a fire? Y / N When?

e. Is a kerosene or unvented gas space heater present? Y / N Where?

f. Is there a workshop or hobby/craft area? Y / N Where & Type?

g. Is there smoking in the building? Y / N How frequently?

h. Have cleaning products been used recently? Y / N When & Type?

i. Have cosmetic products been used recently? Y / N When & Type?

j. Has painting/staining been done in the last 6 months? Y / N Where & When? Unknown

k. Is there new carpet, drapes or other textiles? Y / N Where & When?

l. Have air fresheners been used recently? Y / N When & Type? Unknown

m. Is there a kitchen exhaust fan? Y / N If yes, where vented?

n. Is there a bathroom exhaust fan? Y / N If yes, where vented?

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type? Unknown

Are there odors in the building? Y / N
If yes, please describe:

Do any of the building occupants use solvents at work? Y / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? NA

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) No
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation:
Is the system active or passive? Active / Passive

9. WATER AND SEWAGE

Water Supply: Public Water Drilled Well Driven Well Dug Well Other:

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other:

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: NA

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel**:** NA

c. Responsibility for costs associated with reimbursement explained? Y / N / NA

d. Relocation package provided and explained to residents? Y / N / NA

11. FLOOR PLANS
Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources, and PID meter readings. If the building does not have a basement, please note.

Basement: NA

First Floor: Refer to sample form for floor plan.

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being samples. If applicable, provide information on spill locations, potential air contamination sources (industrial, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s), and PID meter readings.

Also indicate compass direction, wind direction, and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

Refer to Sample form for Outdoor Plot

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: Mini Rea 2000, PPB Rae

List specific products found in the residence that have the potential to affect indoor air quality

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Readings (units)	Photo** Y/N
No products found to have potential to affect indoor air quality						

*Describe the conditions of the product containers as **Unopened (UO),** or **Deteriorated (D)**

Photographs of the **front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredients labels must be legible.

nationalgrid **Sub-slab Vapor (Canister) Sample Collection Field Form**

Project # 60137361 Consultant AECOM

Project Name metro Collector R. Papagian, S. Bi[illegible]baum

Sample ID SV-3

Vacuum gauge "zero" ("Hg) yes

Start Date/Time 0910 4-2-11 Start Pressure ("Hg) -29.5

End Date/Time 4-2-11 1540 End Pressure ("Hg) -5

Canister ID 3404 End pressure > "zero"? yes

Flow controller ID 01023 Sampling duration (intended) 8

Associated indoor air sample ID IA-3 Associated ambient air sample ID AMB-3

Tubing type used Teflon Length of tubing 4' cm Tubing volume _____ cc

Volume purged 1 L cc @ 5 min 1 to 3 volumes purged @ < 200cc/min? _____

Weather Conditions at Start of Sampling:

Air temperature (°F) 45°F Rainfall _____ Wind direction _____

Barometric pressure _____ Wind speed (mph) _____

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Indoor air temp (°F) 70°F Indoor relative humidity (%) Unknown

Building Survey and Chemical Inventory Form Completed? yes Photograph IDs See Attached

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways

See DOH forms for floor plan

Comments: Sample point passed He test

nationalgrid

Ambient Air (Canister) Sample Collection Field Form

Project #	60137361	Consultant	AECOM
Project Name	Melio	Collector	R. Papagian S. Birnbaum

Sample ID	AMB-3	Vacuum gauge "zero" ("Hg)	
Start Date/Time	0910 4-2-11	Start Pressure ("Hg)	7-30
End Date/Time	4-2-11	End Pressure ("Hg)	-17
Canister ID	1622	End pressure > "zero"?	
Flow controller ID		Sampling duration (intended)	8hr

Tubing type used ~~Teflon tubing~~ Length of tubing 3.5 cm Tubing volume _____ cc

Volume purged 1L cc @ 5 min 1 to 3 volumes purged @ < 200cc/min? _____

NA

Weather Conditions at Start of Sampling:

Air temperature (°F)	45 °F	Rainfall	NA	Wind direction	W-E
Barometric pressure	30.2	Relative humidity	40	Wind speed (mph)	~ 5-10 mph

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Site Plan showing sample location, building(s) being sampled, building HVAC inlet, outdoor air sources, wind direction

See DOH Forms

Comments:

nationalgrid

Indoor Air (Canister) Sample Collection Field Form

Project # 60137361 Consultant AECOM

Project Name Metro Collector R Papagian S. Birnbaum

Sample ID IA-3

Vacuum gauge "zero" ("Hg) yes

Start Date/Time 4-2-11 0911 Start Pressure ("Hg) -30

End Date/Time 4-2-11 355 (1555) End Pressure ("Hg) -4.5

Canister ID 1616 End pressure > "zero"? yes

Flow controller ID 00911 Sampling duration (intended) 8 hr.

Associated ambient air sample ID AMB-3 Associated sub-slab vapor sample ID SV-3

NA

Tubing type used _____ Length of tubing _____ cm Tubing volume _____ cc

Volume purged _____ cc @ _____ min 1 to 3 volumes purged @ < 200cc/min? _____

Weather Conditions at Start of Sampling:

Air temperature (°F) 45°F Rainfall NA Wind direction _____

Barometric pressure _____ Relative humidity _____ Wind speed (mph) _____

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Indoor air temp (°F) 70°F Indoor relative humidity (%) _____

Building Survey and Chemical Inventory Form Completed? _____ Photograph IDs _____

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways

See DOH Forms

Comments: _____

Site Photographs SV-3, IA-3, and AMB-3

SV-3 and IA-3 Samples

AMB-3 Sample

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name: Rita Papagian **Date/Time Prepared:** April 2, 2011

Preparer's Affiliation: AECOM Environmental **Phone No:** (845) 425-4980

Purpose of Investigation: Investigate the potential for MGP residuals to adversely affect indoor air.

1. OCCUPANT:

Interviewed: Y / N

Last Name: NY Hardwood Lumber First Name:

Address: 60 12th Street, New York, NY 11215

County: Kings

Home Phone: (718)369-2668 Office Phone:

Number of Occupants/persons at this location: Age of Occupants:

2. OWNER OR LANDLORD: (Check if same as occupant)

Interviewed: Y / N

Last Name: First Name:

Address:

County:

Home Phone: Office Phone:

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	Other:

Note: The building is occupied by a Path Mart grocery store.

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	~~Townhouses/Condos~~
Modular	Log Home	**Other:** hardwood flooring and supplies storage

If multiple units, how many? NA

If the property is commercial, type? Yes

Business Type(s): Path Mart Grocery Store

Does it include residences (i.e., multi-use)? Y / N If yes, how many? NA

Other characteristics:

Number of floors: 1 Building age:

Is the building insulated? Y / N How air tight? Tight / Average / Not Tight

Note:

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow pattern and qualitatively describe:

Airflow between floors: There is only one floor.

Airflow near source: air blowing downward from ceiling.

Outdoor air infiltration: N/A

Infiltration into air ducts: N/A, ceilings too high to check.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick	Cinder block
b. Basement type:	full	crawlspace	slab	other: No basement	
c. Basement floor:	concrete	dirt	stone	other: No basement	
d. Basement floor:	uncovered	covered	covered with:	No basement	
e. Concrete floor:	unsealed	sealed	sealed with:		
f. Foundation walls:	poured	block	stone	other:	
g. Foundation walls:	unsealed	sealed	sealed with: NA		
h. The basement is:	wet	damp	dry	moldy: No basement	
i. The basement is:	finished	unfinished	partly finished: No basement		

j. Sump present? Y / N

k. Water in sump? Y / N / not applicable

Basement/Lowest level depth below grade: Not known

Identify potential soil vapor entry points and approximate size. (e.g., cracks, utility ports, drains)
There were no cracks, drains or utility ports observed near the sampling areas.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

~~Hot air circulation~~	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood Stove	Outdoor wood boiler	Other:

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: N/A

Boiler/furnace located in: Basement Outdoor Main Floor Other:

Air conditioning: Central Air Window units Open Windows None

Are there air distribution ducts present? Y / N

Describe the supply and air return ductwork, and its condition where visible, including whether There is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram,

7. OCCUPANCY

Is basement /lowest level occupied? Full-time Occasionally Seldom Almost Never

Level **General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**

Basement: NA

1st Floor: The first floor is occupied by customers and workers during business hours (warehouse, showroom).

2nd Floor: offices

3rd Floor: NA

4th Floor: NA

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / N

b. Does the garage have a separate heating unit? Y / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage? (e.g., lawnmower, atv, car) Y / N / NA Please specify

Note: A propane powered fork lift is used in the warehouse/storage area.

d. Has the building ever had a fire? Y / N When? unknown

e. Is a kerosene or unvented gas space heater present? Y / N Where?

f. Is there a workshop or hobby/craft area? Y / N Where & Type?

g. Is there smoking in the building? Y / N How frequently?

h. Have cleaning products been used recently? Y / N When & Type?

i. Have cosmetic products been used recently? Y / N When & Type?

j. Has painting/staining been done in the last 6 months? Y / N Where & When? 2 weeks prior on sprinkler line

k. Is there new carpet, drapes or other textiles? Y / N Where & When?

l. Have air fresheners been used recently? Y / N When & Type? Unknown

m. Is there a kitchen exhaust fan? Y / N If yes, where vented?

n. Is there a bathroom exhaust fan? Y / N If yes, where vented?

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type? Unknown

Are there odors in the building? Y / N

If yes, please describe:

Do any of the building occupants use solvents at work? Y / N

(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? NA

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service

No
Unknown

Is there a radon mitigation system for the building/structure? Y / N Date of Installation:
Is the system active or passive? Active / Passive

9. WATER AND SEWAGE

Water Supply: Public Water Drilled Well Driven Well Dug Well Other:

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other:

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: NA

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel**:** NA

c. Responsibility for costs associated with reimbursement explained? Y / N/NA

d. Relocation package provided and explained to residents? Y / N / NA

11. FLOOR PLANS
Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources, and PID meter readings. If the building does not have a basement, please note.

Basement: NA

First Floor: Refer to sample form for floor plan.

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being samples. If applicable, provide information on spill locations, potential air contamination sources (industrial, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s), and PID meter readings.

Also indicate compass direction, wind direction, and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

Refer to Sample form for Outdoor Plot

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: Mini Rea 2000, PPB Rae

List specific products found in the residence that have the potential to affect indoor air quality

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Readings (units)	Photo** Y/N

*Describe the conditions of the product containers as **Unopened (UO),** or **Deteriorated (D)**

Photographs of the **front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredients labels must be legible.

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:

First Floor:

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
	murexin Proof Plesque Adhesive	23-4 gal	new buckets	NL (or no access as they were wrapped)	Ø PPB	Y
	Bostik's Best flooring urethane Adhesive	4	new 5 gal buckets		Ø PPB	Y
	Stauf one step SMP960 wood flooring Adhesive	4 gal Buckets			Ø PPB	
	20 + small paint cans to high to see them	C				
	Omni Au Base coat		See	Photos	Ø PPB	
	EZ mix					

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product name	**BST Urethanes**
MSDS name	BST Urethane Series
Product name(s) covered	See Section 16 for Product Names Covered.
CAS #	Mixture
Generic description	Polyurethane Sealant
Manufacturer	Bostik, Inc. 211 Boston Street Middleton, MA 01949 USA
24 hour emergency assistance	Telephone: 1-800-227-0332 (Outside U.S.) 1-703-527-3887
General assistance	Telephone: 1-978-777-0100
MSDS assistance	Telephone: 1-414-607-1347

2. Hazards Identification

Emergency overview

Contact with this material can cause irritation to the skin, eyes and mucous membranes. Thermal decomposition/burning may produce toxic gases and fumes. Closed containers may rupture when exposed to high temperatures, or when the product has been contaminated with water. Avoid breathing hot mists and vapors. This product contains a respiratory and skin sensitizer. Causes respiratory tract irritation and may cause allergic respiratory reaction. May cause permanent respiratory damage. Product vapors are potentially irritating to skin. May cause allergic skin reaction and dermatitis.

Potential health effects

Eyes

This product may cause irritation to the eyes. May cause temporary corneal injury.

Skin

This product may cause irritation to the skin. Isocyanates may react with skin protein and moisture to cause itching, reddening, swelling, scaling or blistering. Individuals previously sensitized to this material may experience these symptoms from exposure to very small amounts of liquid or vapor.

Inhalation

This product may cause irritation to the respiratory system. Single large does, and/or repeated exposures, may lead to sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms), causing an individual to experience adverse effects at exposure levels well below exposure limits or guidelines. Symptoms may include chest tightness, wheezing, shortness of breath, coughing or asthmatic attack, and may be delayed up to several hours. Extreme asthmatic reactions can be life threatening. Once sensitized, an individual may experience adverse symptoms upon exposure to dust, cold air or other irritants. Sensitization can last several months, years or be permanent in some cases.

Ingestion

Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product may produce corrosive damage to the gastrointestinal tract if it is swallowed.

Target organs

The lungs and skin may be targeted and damaged by components of this product.

Signs and symptoms

Signs and symptoms of overexposure to this product include headache, irritation of upper respiratory tract, asthmatic symptoms, chest tightness, breathing difficulty, coughing, sore throat, eye irritation, skin irritation and/or diarrhea.

Hazard statements

This product contains Methylene Diphenyl Isocyanate (MDI) which is a potential skin sensitizer and has been shown to alter cells in certain experiments. Although inconclusive, these cellular changes are thought to indicate potential carcinogenicity. Risk to your health depends on duration and concentration of exposure.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Stoddard solvent	8052-41-3	3 - 7
Methylene Diphenyl Isocyanate (MDI)	101-68-8	0.1 - 1

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention or advice.
Skin contact	For skin contact flush with large amounts of water while removing contaminated clothing. If skin irritation persists, call a physician. For severe exposure, immediately get under a safety shower and begin rinsing.
Inhalation	If inhaled, immediately remove the affected person to fresh air. Call a physician if symptoms develop or persist. Administer oxygen or artificial respiration as needed.
Ingestion	If the material is swallowed, get immediate medical attention or advice. Do not induce vomiting without medical advice. Never give anything by mouth to a victim who is unconscious or is having convulsions.
Notes to physician	Provide general supportive measures and treat symptomatically. Contact Bostik to determine whether any additional information is available. Eyes: Stain for evidence of corneal injury. If cornea is burned, apply antibiotic/steroid preparation as needed. Skin: This product contains a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically. Inhalation: This material contains a known pulmonary sensitizer. Any individual experiencing dermal or pulmonary sensitization should be removed from exposure to any diisocyanate. May aggravate existing heart conditions, particularly those with abnormal heart rhythms. If overexposure to the solvents in this product is suspected, testing should include nervous system and brain effects including recent memory, mood, concentration, headaches and altered sleep patterns. Liver and kidney function should be evaluated. This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately.

5. Fire Fighting Measures

Hazardous combustion products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Additional decomposition products include oxides of nitrogen, amines, hydrogen cyanide and isocyanate-containing compounds.
Extinguishing media	
Suitable extinguishing media	Dry chemical, foam, carbon dioxide, water fog.
Fire fighting equipment/instructions	Firefighters should wear full protective clothing including self contained breathing apparatus. Avoid contact with isocyanates. During a fire, isocyanate vapors and other irritating and highly toxic gases may be produced.
Flash point	142 °F (61.1 °C)

6. Accidental Release Measures

Emergency action	Wear appropriate personal protective equipment. Do not allow product to enter sewer or waterways. Follow all Local, State, Federal and Provencial regulations for disposal. Regulations vary. Consult local authorities before disposal.
Spill or leak procedure	Scrape up material and place in steel drums that are in good condition. Thoroughly clean area where spill occurred. Remove sources of ignition. Ventilate area of spill.
Containment procedures	Isolate spill area. Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams. Liquid spills: Cover spills with absorbent clay or sawdust and collect material in open container and neutralize with a solution containing 2% liquid detergent, 3% concentrated ammonium hydroxide and 95% water. Wash spill area clean with the neutralization solution. Remove container to a safe place, cover loosely and allow to stand for 24 to 48 hours letting evolved carbon dioxide escape. Collect and contain for disposal. Pellet or chip spill: Collect and contain for salvage or disposal. Molten adhesive spill: Placard hot material, allow to cool and remove. If material is not cured once cooled, follow neutralization directions for liquids listed above. Collect and contain for disposal.

Reporting	See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7. Handling and Storage

Handling	Do not get this material in your eyes, on your skin, or on your clothing. Wash hands after handling and before eating. Do not breathe gas/fumes/vapor/spray. Wear respiratory protection if the material is heated, sprayed, used in a confined space or if exposure limit is exceeded. This product can produce asthmatic sensitization. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must avoid fumes from this product. Wear appropriate protective equipment to avoid contact with skin and eyes.
Storage	Keep in a dry, cool and well-ventilated place. Keep away from heat. Keep away from direct sunlight. Do not handle or store near an open flame, heat or other sources of ignition.
Empty container precaution	Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8. Exposure Controls / Personal Protection

Engineering controls	Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product. Explosion proof exhaust ventilation should be used.
Personal protective equipment	
Eye protection	Wear safety glasses with side shields.
Skin and body protection	Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves.
Respiratory protection	Avoid breathing vapor and/or mists. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator.
General	Eyewash fountains and emergency showers should be readily available.

Additional exposure data

US ACGIH Threshold Limit Values: Time Weighted Average (TWA): mg/m3 & ppm

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENE BISPHENYL ISOCYANATE (MDI) 0.005 PPM
Stoddard solvent	8052-41-3	STODDARD SOLVENT 100 PPM

US NIOSH Pocket Guide to Chemical Hazards: Ceiling Limit Value and Time Period (if specified)

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENE BISPHENYL ISOCYANATE 0.2 MGM3 - 0.020 PPM 10-min
Stoddard solvent	8052-41-3	STODDARD SOLVENT 1800 MGM3 15-min

US OSHA Table Z-1-A: Time Weighted Average (TWA): mg/m3 & ppm

Stoddard solvent	8052-41-3	STODDARD SOLVENT 525 MGM3 - 100 PPM

9. Physical & Chemical Properties

Target solids	95.4 %
Density	1.508 g/cc
Odor	Solvent
Color	Amber
Physical state	Paste
Freeze protect	No
VOC (Volatile Organic Compounds)	72 g/l

10. Chemical Stability & Reactivity Information

Hazardous reactions/decomposition products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Additional decomposition products include oxides of nitrogen, amines, hydrogen cyanide and isocyanate-containing compounds.
Hazardous polymerization	Hazardous polymerization can occur with elevated temperatures or contact with water.
Conditions to avoid	Avoid Strong Acids. Avoid amines, strong bases, alcohols and metallic hydrides. Keep away from sources of ignition.

Stability This product is stable under normal conditions but will react slightly with water to release some heat and carbon dioxide. The reaction is not violent. Carbon dioxide, carbon monoxide and in high temperature (800° F) low oxygen atmospheres such as in fire situations, hydrogen cyanide may be released.

11. Toxicological Information

Carcinogenicity If this product contains any carcinogens, they will be noted below: This product contains Methylene Diphenyl Isocyanate (MDI). MDI is not listed by the NTP, IARC or regulated by OSHA as a carcinogen. However, it has been shown to alter cells in certain experiments. Although inconclusive, these cellular changes are thought to indicate potential carcinogenicity.

Local effects Single large does, and/or repeated exposures, may lead to sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms), causing an individual to experience adverse effects at exposure levels well below exposure limits or guidelines. Symptoms may include chest tightness, wheezing, shortness of breath, coughing or asthmatic attack, and may be delayed up to several hours. Extreme asthmatic reactions can be life threatening. Once sensitized, an individual may experience adverse symptoms upon exposure to dust, cold air or other irritants. Sensitization can last several months, years or be permanent in some cases. Chronic exposure may cause lung damage, including fibrosis and decreased lung function, which may be permanent.

12. Ecological Information

Ecotoxicological information Organic solvents produce slight to moderate toxicity to aquatic life.

13. Disposal Considerations

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes. Empty containers must be handled with care due to product residue. Do not heat or cut empty container with electric or gas torch.

14. Transport Information

DOT

Not regulated as hazardous goods.

IATA

Not regulated as hazardous goods.

IMDG

Not regulated as hazardous goods.

15. Regulatory Information

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200

The product(s) covered by this M(SDS) do not include any of the substances above a concentration of 0.1% weight by weight (w/w) in the Candidate List of Substances of Very High Concern (SVHC) for authorization published or proposed by ECHA as follows: the list of 15 substances for authorization published on October 28, 2008, the list of 15 substances proposed on August 31, 2009, the list of 14 substances proposed on January 13, 2010, the list of 8 substances proposed on March 8, 2010, the list of 8 substances proposed on June 18, 2010, the list of 11 substances proposed on October 14, 2010 and the list of 8 substances proposed on December 15, 2010.

Federal regulations All components are on the U.S. EPA TSCA Inventory List.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENEBIS(PHENYLISOCYANATE) (MDI) US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

State regulations	If this product contains any California Proposition 65 chemicals at reportable levels they will be listed below: Butyl Benzyl Phthalate (BBP) Di-Isodecyl Phthalate (DIDP) Naphthalene
International regulations	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.
HMIS Ratings	Health: 2* Flammability: 2 Physical hazard: 0 Personal protection: X
SARA 311/312 HAZARD CATEGORIES	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
WHMIS status	Controlled
WHMIS labeling	

WHMIS classification	D2A - Other Toxic Effects-VERY TOXIC D2B - Other Toxic Effects-TOXIC

16. Other Information

Product name(s) covered	G62130 - BST URETHANE G62140 - BST URETHANE
Disclaimer	The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.
Further information	If there are any characters following an individual item number, they are just designations for the various types of packaging that are available for this product. For example, a product "G12345-XX" is item number "G12345" with a packaging designation of "XX". These characters do not indicate a different product nor a different regulatory, health, safety and/or environmental status. This document covers the item numbers listed above for all of their packaging types.
Issue date	03/07/2011
Prepared by	Bostik, Inc. Regulatory Affairs
Supercedes	03/03/2011

Professional Parquet Adhesive LE 555

(Profiparkettklebstoff LE 555)

> not containing water

> large application spectrum

> solvent resistant

Product Properties

Solvent-based, water-free, fast setting resin adhesive.

Application

For interior use only to glue short stick, right side up, finished and mosaic parquet. Suitable for radiant floor heating.

Product Data

Supplied form:
20 kg bucket 27 buck./540 kg per pal.
8 kg bucket 70 buck./560 kg per pal.

Storage: Do not store below +5°C in closed dunnage, may be stored for 6 months

Technical Data

Consumption:	0.7-1.1 kg/m² dep. on type of par. and substrate
Specific weight:	1.37 g/cm³
Installation time after:	approx. 10-15 min
Set after:	approx. 72 h
Ideal processing temp.:	+16°C to +22°C

Processing

Recommended tools: Notched trowel B3, PK

Substrate: The substrate must be dry, free of frost, firm, load-bearing, form stable and free of dirt, dust, oil, grease, separators and lose parts and be in accordance with ÖNORM B 2236/1 and B 2218.

Suitable for: Cement floors, wooden particle boards, anhydrite cement floors and poured asphalt.

Not suitable: For plastic, metal, water-repellant substrates.

Pre-treatment: The substrate must be treated according to applicable ÖNORM standards if required primer or putty. We recommend pre-treatment with Murexin products. The parquet must be of the same temperature as the substrate. (Ideal: +16°C to +22°C). Priming of substrate for radiant floor heating: Murexin Deep Penetration Primer L 3 or with deep penetration primer D7. Otherwise apply primers according to surface characteristics (e.g. heavy absorbing). Filled substrates must be sanded thoroughly with rough grit to achieve a well-absorbing surface.

Preparation: Apply adhesive with suitable, rough toothed trowel over the entire surface. Setting time is approx 10 – 15 minutes, therefore do not prepare a surface too large for the installation time. Place the parquet with slight pushing force und tap it – the back must be covered completely with adhesive. After 72 hours at the earliest the parquet flooring may be sanded for the first time.

Important notes

Adhere to the norms, guidelines and data sheets regarding subsurface. Do not process at temperatures below +5°C. High levels of humidity and low temperatures delay and high temperatures accelerate the setting and hardening. Do not add external materials.

Health and safety

Health and safety: Product-specific information regarding the composition, handling, cleaning, relevant measures and disposal can be found in the safety data sheet.

This data sheet is based on comprehensive experiences, intends to inform to the best knowledge, is not legally binding and does not constitute a contractual legal relationship or a side obligation from the purchase agreement. We guarantee for the quality of our products under our terms and conditions of sale and purchase. In to reduce the risk of error, limiting information is also stated. Naturally, not all possible current and future application cases and peculiarities can be included in full. Information, which can be considered to be known amongst specialists, has not been included. The user cannot be released from a query in the event of confusion, testing on site under his own responsibility as well as specialist processing. On issuing a new version of the print shall become invalid.

Murexin AG: A-2700 Wiener Neustadt, Franz von Furtenbach Straße 1
Tel.: +43(0)2622/27 401-0, Fax: +43(0)2622/27 401 DW 187
e-mail: info@murexin.com, Internet: www.murexin.com

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2009 Revision: 21.07.2009

* 1 Identification of substance

· **Trade name** **PROFESSIONAL PARQUET ADHESIVE LE 555**

· **Article number:** 7377/10

· **Application of the substance / the preparation** Adhesives

· **Manufacturer/Supplier:**
MUREXIN AG
Franz v. Furtenbachstr. 1
A-2700 Wiener Neustadt Tel.: +43 (0)2622/27401

· **Informing department:** r.wachlhofer@murexin.com
· **Emergency information:** Tel.: +43 (0)1/406 43 43 (Vergiftungsinformationszentrale)

* 2 Hazards identification

· **Hazard designation:**
F Highly flammable
· **Information pertaining to particular dangers for man and environment**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
R 11 Highly flammable.
· **Classification system**
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

* 3 Composition/information on ingredients

· **Chemical characterization**
· **Description:** Mixture consisting of the following components.

· **Dangerous components:**

CAS: 79-20-9 EINECS: 201-185-2	methyl acetate	Xi, F; R 11-36-66-67	5-10%
CAS: 67-64-1 EINECS: 200-662-2	acetone	Xi, F; R 11-36-66-67	5-10%
CAS: 64-17-5 EINECS: 200-578-6	ethanol	F; R 11	2.5-5%

· **Additional information**
For the wording of the listed risk phrases refer to section 16 "List of relevant R phrases:".

* 4 First aid measures

· **After inhalation**
Supply fresh air and call for doctor for safety reasons.
In case of unconsciousness bring patient into stable side position for transport.
· **After skin contact** Instantly wash with water and soap and rinse thoroughly.
· **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.
· **After swallowing** In case of persistent symptoms consult doctor.

* 5 Fire fighting measures

· **Suitable extinguishing agents**
CO_2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

(Contd. on page 2)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2009 Revision: 21.07.2009

Trade name PROFESSIONAL PARQUET ADHESIVE LE 555

(Contd. of page 1)

· **Protective equipment:** No special measures required.

*

6 Accidental release measures

· **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
· **Measures for environmental protection:**
Do not allow product to reach sewage system or water bodies.
Prevent material from reaching sewage system, holes and cellars.
Inform respective authorities in case product reaches water or sewage system.
· **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

*

7 Handling and storage

· **Handling**
· **Information for safe handling:**
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **Storage**
· **Requirements to be met by storerooms and containers:**
Store in cool location.
Store only in the original container.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

*

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with critical values that require monitoring at the workplace:**	
79-20-9 methyl acetate	
OEL	Short-term value: 770 mg/m³, 250 ppm Long-term value: 616 mg/m³, 200 ppm
64-17-5 ethanol	
OEL	1920 mg/m³, 1000 ppm

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **Personal protective equipment**
· **General protective and hygienic measures**
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
· **Breathing equipment:** Not necessary if room is well-ventilated.
· **Protection of hands:** Protective gloves.
· **Material of gloves**

(Contd. on page 3)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2009 Revision: 21.07.2009

Trade name PROFESSIONAL PARQUET ADHESIVE LE 555

(Contd. of page 2)

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** *Tightly sealed safety glasses.*

· **Body protection:** *Protective work clothing.*

*

9 Physical and chemical properties:

· **General Information**	
Form:	Pasty
Colour:	Beige
Smell:	Solvent-like
· **Change in condition**	
Melting point/Melting range:	n.b. °C
Boiling point/Boiling range:	n.b. °C
· **Flash point:**	10°C
· **Ignition temperature:**	425°C
· **Self-inflammability:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/steam mixtures is possible.
· **Critical values for explosion:**	
Lower:	3.1 Vol %
Upper:	16.0 Vol %
· **Steam pressure at 20°C:**	220 hPa
· **Density at 20°C**	1.37 g/cm³
· **Solubility in / Miscibility with**	
Water:	Fully miscible
· **Viscosity:**	
dynamic at 20°C:	40000 mPas

10 Stability and reactivity

· **Conditions to be avoided:** *No decomposition if used according to specifications.*

· **Dangerous reactions** *No dangerous reactions known*

· **Dangerous products of composition:** *None*

*

11 Toxicological information

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** *No irritant effect.*

· **on the eye:** *No irritant effect.*

(Contd. on page 4)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2009 Revision: 21.07.2009

Trade name PROFESSIONAL PARQUET ADHESIVE LE 555

(Contd. of page 3)

· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Irritant

12 Ecological information:

· **General notes:**
Water hazard class (Germany) 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

*
13 Disposal considerations

· **Product:**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**	
08 01 11	waste paint and varnish containing organic solvents or other dangerous substances

· **Uncleaned packagings:**
· **Recommendation:**
Disposal must be made according to official regulations.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

*
14 Transport information

· **Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

· **ADR/RID-GGVS/E Class:** 3 Flammable liquids.
· **Kemler Number:** 33
· **UN-Number:** 1133
· **Packaging group:** II
· **Label** 3
· **Designation of goods:** 1133 ADHESIVES
· **Limited quantities (LQ)** LQ6
· **Transport category** 2
· **Tunnel restriction code** D/E

· **Maritime transport IMDG/GGVSea:**

· **IMDG/GGVSea Class:** 3
· **UN Number:** 1133
· **Label** 3
· **Packaging group:** II
· **EMS Number:** F-E,S-D
· **Marine pollutant:** No

(Contd. on page 5)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2009 Revision: 21.07.2009

Trade name PROFESSIONAL PARQUET ADHESIVE LE 555

(Contd. of page 4)

· **Correct technical name:** ADHESIVES

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** 3
· **UN/ID Number:** 1133
· **Label** 3
· **Packaging group:** II
· **Correct technical name:** ADHESIVES

*
15 Regulatory information

· **Designation according to EC guidelines:**
The product has been classified and labelled in accordance with EC Directives.

· **Code letter and hazard designation of product:**

F Highly flammable

· **Risk phrases:**
11 Highly flammable.

· **Safety phrases:**
2 Keep out of the reach of children.
7/9 Keep container tightly closed and in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
29 Do not empty into drains.
33 Take precautionary measures against static discharges.
60 This material and its container must be disposed of as hazardous waste.

*
16 Other information:

· **List of relevant R phrases:**
11 Highly flammable.
36 Irritating to eyes.
66 Repeated exposure may cause skin dryness or cracking.
67 Vapours may cause drowsiness and dizziness.

· **Contact:** Hr. Ing. Wachlhofer

· *** Data compared to the previous version altered.**

TECHNCAL DATA SHEET

SMP-960 One-Step®

Polymer Based Wood Flooring Adhesive

Special features

- provides sound barrier up to STC & IIC of 72 and 74 dB
- provides moisture barrier up to 12#/24 hrs/1000 SF (90% RH)
- certified "Green" class EC1 "very low emission"

Product Description

STAUF SMP-960 One-Step is an advanced formula, unique polymer 3-in-1 adhesive designed for professional wood flooring installation. It replaces isocyanate-containing urethane adhesives which can etch flooring surfaces. It is ozone and environmentally safe since it has no solvents or other hazardous materials. It is certified 'green'. And it meets ASTM standards for sound and impact noise control. Long open time allows for easy installations. No rolling is required. Since there is no water or solvent present, it will not cause dimensional changes to wood flooring. SMP-960 offers superior flexibility and moisture-retarding capability.
The adhesive spreads easily and has a non-slump formula that will help insure contact and adhesive transfer because the ridges will bridge normal gaps between the flooring and sub floor. It allows fast installation even with complicated patterns due to its strong green grab. There is no flash time required, so installation can commence immediately. Rolling is neither required nor recommended. It offers superior flexibility and is designed to keep the flooring in place, yet allow for normal movement during seasonal changes to the flooring.

Pre-Installation Checklist

A successful installation requires proper preparation of the sub floor. Read and understand all applicable guidelines and technical data sheets before beginning installation. Follow industry standards and flooring manufacturer's recommendations for sub floor moisture content, design, layout and application of flooring materials. All slab constructions must meet the specific requirements of the floor covering to be installed.

Sub Floor Examination

Prior to starting, the sub floor must be checked according to NWFA installation guidelines. It must be solid and sound, flat, permanently dry, clean, free of chaps, indentations and anti-adherents, as well as resistant to pressure and tension. Moisture content of all floors must be measured before installation.
Moisture content in concrete sub floors must be below 12#/24h/1,000 sq. ft. using the Calcium Chloride Test or less than 95% using the relative humidity test.
All wood floors should have 6-9% moisture content at installation. There should be no more than a 4-5% variance in moisture content between the wood flooring and any wood sub floor. See NWFA guidelines and the wood flooring manufacturer's recommendations for details.

Sub Floor Preparation

Depending on type and condition of sub floor, a mechanical treatment (e.g. mechanical brushing, grinding or sanding) is required. Intensity of such work must be determined at the site by the installer. Dust, paint, residual adhesives or other surface pollution must be removed by suitable means. We recommend cleaning the surface with an industrial vacuum cleaner. Cracks and gaps must be filled with concrete crack filler unless they are expansion joints. Level when necessary to 3/16 inches within 10 feet. Heated sub floors must be primed.

Installation Procedure

Spread the adhesive with the appropriate notched trowel. Avoid excessive adhesive thickness by passing the trowel evenly through the adhesive at a 45 degree angle. There is no flash time, so installation should begin immediately. Lay the flooring into the adhesive, correctly position it and press down firmly. Rolling is neither required nor recommended. Be sure to check the boards at regular intervals to make certain good adhesive transfer from floor to flooring is accomplished.

Limitations

When using other than Stauf products in combination with Stauf sealers, we deny any and all responsibility for any ensuing problems and/or damages without prior written permission from Stauf.
Do not install solid wood below grade. Do not use on concrete with curing agents or sealers except approved Sealers listed below. Do not use on damp sub floors. Do not install wood flooring with a moisture reading above 9%. Do not use adhesive as a leveling material.
This adhesive will not prevent moisture-related damages to wood flooring where moisture conditions are in excess of limitations outlined in Installation Procedure.
In case of accident, injury, spill or exposure, see MSDS sheet for information. Consult technical data sheet at www.staufusa.com for updated information.

General Features

- contains no isocyanates to etch floors's finish
- contains no water
- contains no chlorinated solvents
- contains no solvents
- contains no VOC
- certified "green"
- certified "very low emission"
- nonflammable
- high solids content
- ozone friendly
- special polymer will not etch floor's finish
- moisture and sound barrier in one step process
- moisture cured for a strong bond
- Freeze/thaw stable

Installation Features

- wet lay - no flash time required
- strong green grab
- non-slump formula
- bridges normal sub floor variations
- eliminates hollow spots
- very low odor
- cleans with acetone or mineral spirits
- no rolling required
- does not cause cupping of wood flooring
- long open time
- spreads easily
- higher temp & RH will shorten drying time

Long Term Features

- resistant against aging
- remains elastic
- sound reduction: STC & IIC @ 72/74 dB
- reduces moisture pressure from 12# to 3#
- suitable for radiant heat systems with primer
- allows normal dimensional changes in wood flooring

Approved Flooring

- Engineered Flooring, 1/4"-3/4", any width
- Strip Flooring, Solid, 5/16"-3/4", up to 3" wide
- Solid Shorts, 1/2" - 3/4", any width
- Solid Planks, 1/2" - 3/4", any width
- Parquet, Engineered, 5/16"
- Parquet, Solid, 5/16"
- Solid Wood Flooring must be straight and flat.
- Bamboo Flooring (except Stranded Bamboo)

Approved Sub Floors

- Concrete
- OSB (underlayment grade)
- Plywood (underlayment grade)
- Particle or Chipboard (underlayment grade)
- Old Floors with adhesive residues, sanded
- Ceramic Tiles
- Stone, Terrazzo
- Cured Leveling Compounds
- Radiant Heated Sub Floors
- Wet Concrete Slab up to 8#/24hrs/1,000SF (85% RH)
- Wet Concrete Slab up to 12#/24hrs/1,000SF (90% RH)

Approved Primers

- Primer is normally not required
- STAUF AQP-200 Eco-Prime

Approved Sealers

- Sealer is normally not required
- STAUF ACS-210 True-Seal
- STAUF ERP-270 Epoxy-Prime

Approved Leveling Compounds

- STAUF FLC-500 Leveling Compound
- STAUF QFP-520 Quick Floor Patch

Approved Underlayments

- STAUF SCU-600 Sound Comfort Underlay
- STAUF SCU-610 Sound Control Underlay

Approved Trowels and Spread Rate

- Trowel #12: up to 35 SF/gal. (Must use 1 trowel per pail)

Cure Time until Normal Traffic

- approx. 48 hours

Clean-Up

- Use acetone or mineral spirits

Temperature Range during Installation

- 50°-90°F

Relative Humidity Range during Installation

- 30% - 80%

Packaging Size

- 3 gal. Plastic Pail
- 3/4 gal. Plastic Pail

111Weight [lbs./gal.]

- 13.7

Color

- Brown

Shelf Life

- 12 Months in original, unopened container

Open Time	30% R/H	50% R/H	80% R/H
50F/10C	2 1/2 hours	2 hours	1 1/2 hours
70F/21C	1 3/4 hours	1 1/4 hours	1 hour
90F/32C	1 hour	50 mins	40 mins

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Ambient Air (Canister) Sample Collection Field Form

Project #	60137361	Consultant	AECOM
Project Name	METROPOLITAN FORMER MGP	Collector	R. PAPAGIAN / J. PFEIFFER

Sample ID	AMB-2	Vacuum gauge "zero" ("Hg)	ZERO
Start Date/Time	3/19/2011 – 1650	Start Pressure ("Hg)	+/-30
End Date/Time	3/20/2011 – ~~0050~~ 0105	End Pressure ("Hg)	-13
Canister ID	#3428	End pressure > "zero"?	
Flow controller ID	#00908	Sampling duration (intended)	8 HOURS.

Tubing type used N/A Length of tubing N/A cm Tubing volume N/A cc

Volume purged N/A cc @ N/A min 1 to 3 volumes purged @ < 200cc/min? N/A.

Weather Conditions at Start of Sampling:

Air temperature (°F)	~40°F	Rainfall	NONE	Wind direction	N to E
Barometric pressure	30.23"	Relative humidity	40 (AVERAGE)	Wind speed (mph)	~5mph.

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

TEMPERATURE POSSIBLY DECREASED BETWEEN START AND STOP TIMES.

Site Plan showing sample location, building(s) being sampled, building HVAC inlet, outdoor air sources, wind direction

SEE POH QUESTIONAIRE FLOOR PLAN.

Comments:

nationalgrid

Indoor Air (Canister) Sample Collection Field Form

Project # 60137361 Consultant AECOM

Project Name METROPOLITAN Collector R. PARAGIAN | J. PEIFFER

Sample ID 1A-4

Vacuum gauge "zero" ("Hg) ZERO

Start Date/Time 3/19/2011 – 1650 Start Pressure ("Hg) +/-30

End Date/Time 3/20/2011 – 0050 End Pressure ("Hg) -3

Canister ID 613 End pressure > "zero"?

Flow controller ID 01165 Sampling duration (intended) 8 HOURS

Associated ambient air sample ID AMB-2 Associated sub-slab vapor sample ID SV-4

Tubing type used N/A Length of tubing N/A cm Tubing volume N/A cc

Volume purged N/A cc @ N/A min 1 to 3 volumes purged @ < 200cc/min? N/A.

Weather Conditions at Start of Sampling:

Air temperature (°F) ~40°F Rainfall NONE Wind direction N TO E

Barometric pressure 30.23" Relative humidity 40 (AVERAGE) Wind speed (mph) ~5 MPH.

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

TEMPERATE POSSIBLY DECREASED BETWEEN START AND STOP TIMES (OUTSIDE).

Indoor air temp (°F) 70°F – 75°F Indoor relative humidity (%) UNKNOWN

Building Survey and Chemical Inventory Form Completed? YES Photograph IDs SEE ATTACHED.

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways

SEE DOH QUESTIONAIRE FLOOR PLAN.

Comments: AIR TEMPERATURE INSIDE WAREHOUSE AT SAMPLING LOCATION BETWEEN 70°F – 75°F.

nationalgrid **Sub-slab Vapor (Canister) Sample Collection Field Form**

Project # 60137361 Consultant AECOM

Project Name METROPOLITAN. Collector R. PAPAGIANI / J. PFEIFFER.

Sample ID SV-4

Vacuum gauge "zero" ("Hg) ZERO

Start Date/Time 3/19/2011 - 1650 Start Pressure ("Hg) +/-30

End Date/Time 3/19/2011 - 1100 End Pressure ("Hg) -3

Canister ID 1624 End pressure > "zero"?

Flow controller ID 00917 Sampling duration (intended) 8 HOURS

Associated indoor air sample ID IA-4 Associated ambient air sample ID AMB-2

Tubing type used 1/4" OD Length of tubing 3' ~~cm~~ Tubing volume _____ cc

Volume purged 2 L ~~cc~~ @ 10 min 1 to 3 volumes purged @ < 200cc/min? YES

Weather Conditions at Start of Sampling:

Air temperature (°F) 40°F Rainfall NONE Wind direction N to E

Barometric pressure 30.23" Wind speed (mph) ~5mph.

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Indoor air temp (°F) 70°F - 75°F Indoor relative humidity (%) UNKNOWN

Building Survey and Chemical Inventory Form Completed? YES Photograph IDs SEE ATTACHED.

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways

SEE DOH QUESTIONAIRE FLOOR PLAN.

Comments: Helium tracer gas 90% in shroud, 5% in tube (PASS). Use Non voc plumbers' putty to affix shroud to floor.

Site Photographs SV-4, IA-4, and AMB-2

SV-4 and IA-4 Samples

AMB-2 Sample

Site Photographs SV-4, IA-4, and AMB-2 (continued)

Eastern area of warehouse – note the metal plates on floor and ceiling height heaters that are not functional (facing northeast)

Eastern area of warehouse – note the recently painted (red) sprinkler lines at ceiling height (facing southwest)

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name: Rita Papagian/Jennifer Pfeiffer **Date/Time Prepared:** March 19, 2011

Preparer's Affiliation: AECOM Environmental **Phone No:** (845)425-4980/(212)798-8500

Purpose of Investigation: Investigate the potential for MGP residuals to adversely affect indoor air.

1. OCCUPANT: (BUSINESS – Lumber Liquidators)

Interviewed: Y / N

Last Name: Bartley First Name: Dwayne

Address: 64 12th Street, Brooklyn, New York

County: Kings

Home Phone: N/A Office Phone: (347)756-4215

Number of Occupants/persons at this location: 1 Age of Occupants: N/A

2. OWNER OR LANDLORD: (Check if same as occupant) Owner : Milea

Interviewed: Y / N

Last Name: Milea First Name: Robert

Address: 64 12th Street, Brooklyn, New York

County: Kings

Home Phone: N/A Office Phone: not available

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	Other:

Note: The building is occupied by a Path Mart grocery store.

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	~~Townhouses~~/Condos
Modular	Log Home	**Other:** Office/warehouse, partial second story offices.

If multiple units, how many? NA

If the property is commercial, type? Yes

Business Type(s): Lumber Liquidators – Lumber Warehouse

Does it include residences (i.e., multi-use)? Y / N If yes, how many? N/A

Other characteristics:

Number of floors: 2 Building age: Unknown

Is the building insulated? Y / N How air tight? Tight / Average / Not Tight

Note: The warehouse/storage area where IA2 and SV2 were taken was not insulated.

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow pattern and qualitatively describe:

Airflow between floors: There is metal construction between the warehouse and the partial second floor office space.

Airflow near source: The air is from the west side of the warehouse to the east due to only one ceiling height heater unit blowing to the east side of the warehouse. The ceiling height heaters on the eastern side of the warehouse are not functional and haven't been in use for some time. There is no known source material.

Outdoor air infiltration: The SV/IA sampling was conducted when the store was closed, so the bay doors were closed during the sampling event. An office door to the warehouse remained closed during the sampling, except when exiting the warehouse to the office space. There was a door from the office to the outside that remained closed during the sampling, except when exiting the store.

There are two large ceiling height bay doors to the warehouse/storage area from the outside. The are large gaps in the door ways allowing for outside infiltration.

Infiltration into air ducts: Air ducts observed were from the heating units to the ceiling (exhaust).

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick	Cinder block
b. Basement type:	full	crawlspace	slab	other: First floor at grade.	
c. Basement floor:	concrete	dirt	stone	other: First floor at grade.	
d. Basement floor:	uncovered	covered	covered with: First floor at grade.		
e. Concrete floor:	unsealed	sealed	sealed with:		
f. Foundation walls:	poured	block	stone	other:	
g. Foundation walls:	unsealed	sealed	sealed with: paint		
h. The basement is:	wet	damp	dry	moldy: First floor at grade.	
i. The basement is:	finished	unfinished	partly finished: First floor at grade.		
j. Sump present?	Y / N				
k. Water in sump?	Y / N / not applicable				

Basement/Lowest level depth below grade: Not known

Identify potential soil vapor entry points and approximate size. (e.g., cracks, utility ports, drains)
There was a small crack near the SV-4/IA-4 location. There were not any drains or utility ports observed near the sampling areas. There were multiple metal plates covering the floor area in the main warehouse area (eastern half of building). It was unknown what they were for and only one was identified as covering a depression in the concrete created from the previous occupant and was covered up for the current occupant. All but one of these plates was observed in front of the ramp/loading dock area and the one was observed just west of the ramp/loading dock area.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood Stove	Outdoor wood boiler	Other:

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by:

Boiler/furnace located in: Basement Outdoor Main Floor Other: Not observed.

Air conditioning: Central Air Window units Open Windows None

Comment: A window unit observed in the office area. There was no air conditioning units observed in the warehouse space.

Are there air distribution ducts present? Y / N

Describe the supply and air return ductwork, and its condition where visible, including whether There is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram,

7. OCCUPANCY

Is basement /lowest level occupied? Full-time Occasionally Seldom Almost Never

Level **General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**

Basement: The lowest level is occupied by shoppers and workers during business hours (varies by day of the week), and occupied by workers during off hours.

1st Floor: (see above)

2nd Floor: Offices are occupied by workers during business hours. Hours of operation are unknown. Public or shoppers are unknown.

3rd Floor: Not present.

4th Floor: Not present.

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / N

b. Does the garage have a separate heating unit? Y / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage? (e.g., lawnmower, atv, car) Y / N / NA Please specify

Note: A propane powered fork lift is used in the warehouse/storage area.

d. Has the building ever had a fire? Y / N When?

e. Is a kerosene or unvented gas space heater present? Y / N Where?

f. Is there a workshop or hobby/craft area? Y / N Where & Type?

g. Is there smoking in the building? Y / N How frequently?

h. Have cleaning products been used recently? Y / N When & Type?

i. Have cosmetic products been used recently? Y / N When & Type?

j. Has painting/staining been done in the last 6 months? Y / N Where & When?
Sprinker water lines painted in the warehouse area approximately 2-3 weeks prior to sampling event.

k. Is there new carpet, drapes or other textiles? Y / N Where & When?

l. Have air fresheners been used recently? Y / N When & Type? Unknown.

m. Is there a kitchen exhaust fan? Y / N If yes, where vented?

n. Is there a bathroom exhaust fan? Y / N If yes, where vented?

o. Is there a clothes dryer? Y / N If yes, is it vented outside?

p. Has there been a pesticide application? Y / N When & Type? Unknown.

Are there odors in the building? Y / N
If yes, please describe:

Do any of the building occupants use solvents at work? Y / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? N/A

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) No
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation:
Is the system active or passive? Active / Passive

9. WATER AND SEWAGE

Water Supply: Public Water Drilled Well Driven Well Dug Well Other:

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other:

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: Not recommended

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel**:** NA

c. Responsibility for costs associated with reimbursement explained? Y / N / NA

d. Relocation package provided and explained to residents? Y / N / NA

11. FLOOR PLANS
Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources, and PID meter readings. If the building does not have a basement, please note.

Basement: Lowest Level

First Floor: Not applicable

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being samples. If applicable, provide information on spill locations, potential air contamination sources (industrial, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s), and PID meter readings.

Also indicate compass direction, wind direction, and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

- Former MGP structures and spill previously to the west and northeast
- Spill previously at NYC Sanitation department to the east-northeast
- Spill previously at 60 12th Street to the west.

Wind: West to East at ~5 mph

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: Mini Rea 2000, PPB Rea

List specific products found in the residence that have the potential to affect indoor air quality

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Readings (units)	Photo** Y/N
Warehouse	Moisture Control wood flooring adhesive	5-gal (77)	Good	See photo and MSDS	0.0 ppb	Y
Warehouse	Plantsea WFM	5-gal (56)	Good	See photo and MSDS	0.0 ppb	Y
Warehouse	Wood flooring adhesive – urethane	5-gal (8)	Good	See photo and MSDS	0.0 ppb	Y
Warehouse	Urethane engineered wood flooring adhesive	5-gal (13)	Good	See photo and MSDS	0.0 ppb	Y
Warehouse	Bellawood – floor cleaner	1 qt (84)	Good	See photo and MSDS	0.0 ppb	Y
Warehouse	Adhesive remover – urethane cleaner	1 qt (8)	Good	See photo and MSDS	0.0 ppb	Y
Back office space (warehouse)	Floating Floor tongue and grove adhesive	1 pt (1)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	ECO 980 – adhesive urethane	5 gal (4)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Ultrabond urethane cleaner	1 qt (9)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Ultabond urethane wipes	1 qt (28)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Parabond adhesive vinyl back floor covering	1 gal (1)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Floating floor tongue and grove adhesive	1 qt (9)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Bostik's best – wood flooring urethane adhesive	10.1 oz (13)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Cal floor scratch away – spray	12 oz (11)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Bostik's adhesive remover	32 oz (10)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Bella wood – hardwood floor adhesive spray	32 oz (50)	Good	See photo and MSDS	0.0 ppb	Y

*Describe the conditions of the product containers as **Unopened (UO),** or **Deteriorated (D)**

Photographs of the **front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredients labels must be legible.

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product name	**G65639**
MSDS name	ULTIMATE TOWELS 6 TUB/CS
CAS number	Mixture
Manufacturer	Bostik, Inc. 211 Boston Street Middleton, MA 01949 USA
24 hour emergency assistance	Telephone: 1-800-227-0332
General assistance	Telephone: 1-978-777-0100
MSDS assistance	Telephone: 1-414-607-1347

2. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous component(s)	CAS #	Percent
Dimethyl adipate	627-93-0	9 - 18
Dimethyl glutarate	1119-40-0	28 - 35
D-Limonene	5989-27-5	1 - 3

3. HAZARDS IDENTIFICATION

Emergency overview	This product is irritating to the eyes and skin. Will cause redness and/or swelling. Will bond skin rapidly and strongly.
Potential health effects	
Skin	This product may cause irritation, redness and/or swelling to the skin. Product will immediately bond skin to skin.
Eyes	This product may cause irritation to the eyes. Product can bond to eyelids, sealing eyes shut.
Inhalation	Vapor overexposure may cause irritation.
Ingestion	No hazard known at this time.
Target organs	None known for product as a whole.

4. FIRST AID MEASURES

First aid

Skin	For skin contact, wash immediately with soap and water. Immerse bonded area in warm soapy water. Carefully peel or roll surface apart with the aid of a blunt edge. DO NOT pull apart with direct opposing action. If irritation persists, get medical attention.
Eye	Immediately flush with plenty of water for at least 15 minutes, holding eyelids open at all times. Get medical attention immediately. See Notes to Physician.
Inhalation	Remove to fresh air. Call a physician if symptoms develop or persist.
Ingestion	If ingested, the adhesive will solidify and adhere to the mouth almost instantly. Saliva will lift the adhesive in 1-2 days. The cured adhesive should not be swallowed.
Notes to physician	Treat symptomatically and supportively. If the eye is bonded shut, flush with warm water, and apply patch. Eye will open in 1-4 days.

5. FIRE FIGHTING MEASURES

Hazardous combustion products	Irritating and toxic gases or fumes may be released during a fire.
Extinguishing media	Use dry chemical, carbon dioxide, or foam. Water spray (fog).
Dust explosion hazard	None Known
Sensitivity to mechanical impact	None Known
Sensitivity to static discharge	None Known

Fire fighting equipment/instructions	Firefighters should wear full protective clothing including self contained breathing apparatus.
Flash point	> 200 °F (> 93.3 °C)

6. ACCIDENTAL RELEASE MEASURES

Emergency action	Appropriate safety measures and protective equipment should be used. See Section 8. Do not discharge to lakes, streams, ponds, or sewers. Dispose of in compliance with local, state, and federal regulations.
Spill or leak procedure	Flood with water to polymerize. Soak up with absorbent material. Thoroughly clean area where spill occurred.
Reporting	See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7. HANDLING & STORAGE

Handling	Use this product with adequate ventilation. Avoid getting this material into contact with your skin and eyes.
Storage	Store this product in air-tight containers away from sources of heat and light. Cool location should be 60-80 degrees F or 15-30 degrees C.
Empty container precaution	Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls	Use local exhaust or general ventilation where the potential exists to exceed the PEL or TLV exposure limits.
Eye protection	Wear goggles or safety glasses with side shields.
Skin and body protection	Impervious gloves should be used at all times when handling this product. Recommended gloves include rubber, neoprene, nitrile or viton.
Respiratory protection	If ventilation is not sufficient to effectively prevent buildup of vapors, appropriate NIOSH/MSHA respiratory protection must be provided

9. PHYSICAL & CHEMICAL PROPERTIES

Target solids	50 - 60 %
Density	1 g/cc
Odor	Sweet
Physical state	Paper Coating
Freeze protect	No

10. STABILITY & REACTIVITY

Hazardous reactions/decomposition products	None known.
Hazardous polymerization	Will not occur.
Conditions to avoid	Polymerized by contact with water, alcohols, amines, alkalies.
Stability	This is a stable material.

11. TOXICOLOGICAL INFORMATION

Toxicological data If any toxicological data is available, it will be listed below:

LD50

Toxicology Data - Selected LD50s and LC50s

D-Limonene	5989-27-5	Oral LD50 Rat: 4400 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

Carcinogenicity If this product contains any carcinogens, they will be noted below:

12. ECOLOGICAL INFORMATION

Ecotoxicological information No data available for this product.

13. DISPOSAL CONSIDERATIONS

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. When intending to dispose of this material, the user is advised that this product would not be classified as a Hazardous Waste under U.S. Federal Regulations in effect at the time this MSDS was created.

14. TRANSPORT INFORMATION

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. REGULATORY INFORMATION

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200.

Federal regulations All components are on the U.S. EPA TSCA Inventory List.

State regulations If this product contains any ingredients listed under California Proposition 65, they will be noted below:

International regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.

This product is considered to be an article and as such is exempt from the requirements of the Canadian Domestic Substance List (DSL).

HMIS Ratings
Health: 1
Flammability: 1
Physical hazard: 0
Personal protection: X

SARA 311/312 HAZARD CATEGORIES
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

WHMIS status Controlled

WHMIS labeling

WHMIS classification D2B - Other Toxic Effects-TOXIC

16. OTHER INFORMATION

Disclaimer The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Issue date 09-FEB-07

Prepared by Richard Sontag

Supercedes 09-FEB-07

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product name	**BST Urethanes**
MSDS name	BST Urethane Series
Product name(s) covered	See Section 16 for Product Names Covered.
CAS #	Mixture
Generic description	Polyurethane Sealant
Manufacturer	Bostik, Inc. 211 Boston Street Middleton, MA 01949 USA
24 hour emergency assistance	Telephone: 1-800-227-0332 (Outside U.S.) 1-703-527-3887
General assistance	Telephone: 1-978-777-0100
MSDS assistance	Telephone: 1-414-607-1347

2. Hazards Identification

Emergency overview

Contact with this material can cause irritation to the skin, eyes and mucous membranes. Thermal decomposition/burning may produce toxic gases and fumes. Closed containers may rupture when exposed to high temperatures, or when the product has been contaminated with water. Avoid breathing hot mists and vapors. This product contains a respiratory and skin sensitizer. Causes respiratory tract irritation and may cause allergic respiratory reaction. May cause permanent respiratory damage. Product vapors are potentially irritating to skin. May cause allergic skin reaction and dermatitis.

Potential health effects

Eyes

This product may cause irritation to the eyes. May cause temporary corneal injury.

Skin

This product may cause irritation to the skin. Isocyanates may react with skin protein and moisture to cause itching, reddening, swelling, scaling or blistering. Individuals previously sensitized to this material may experience these symptoms from exposure to very small amounts of liquid or vapor.

Inhalation

This product may cause irritation to the respiratory system. Single large does, and/or repeated exposures, may lead to sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms), causing an individual to experience adverse effects at exposure levels well below exposure limits or guidelines. Symptoms may include chest tightness, wheezing, shortness of breath, coughing or asthmatic attack, and may be delayed up to several hours. Extreme asthmatic reactions can be life threatening. Once sensitized, an individual may experience adverse symptoms upon exposure to dust, cold air or other irritants. Sensitization can last several months, years or be permanent in some cases.

Ingestion

Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product may produce corrosive damage to the gastrointestinal tract if it is swallowed.

Target organs

The lungs and skin may be targeted and damaged by components of this product.

Signs and symptoms

Signs and symptoms of overexposure to this product include headache, irritation of upper respiratory tract, asthmatic symptoms, chest tightness, breathing difficulty, coughing, sore throat, eye irritation, skin irritation and/or diarrhea.

Hazard statements

This product contains Methylene Diphenyl Isocyanate (MDI) which is a potential skin sensitizer and has been shown to alter cells in certain experiments. Although inconclusive, these cellular changes are thought to indicate potential carcinogenicity. Risk to your health depends on duration and concentration of exposure.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Stoddard solvent	8052-41-3	3 - 7
Methylene Diphenyl Isocyanate (MDI)	101-68-8	0.1 - 1

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention or advice.
Skin contact	For skin contact flush with large amounts of water while removing contaminated clothing. If skin irritation persists, call a physician. For severe exposure, immediately get under a safety shower and begin rinsing.
Inhalation	If inhaled, immediately remove the affected person to fresh air. Call a physician if symptoms develop or persist. Administer oxygen or artificial respiration as needed.
Ingestion	If the material is swallowed, get immediate medical attention or advice. Do not induce vomiting without medical advice. Never give anything by mouth to a victim who is unconscious or is having convulsions.
Notes to physician	Provide general supportive measures and treat symptomatically. Contact Bostik to determine whether any additional information is available. Eyes: Stain for evidence of corneal injury. If cornea is burned, apply antibiotic/steroid preparation as needed. Skin: This product contains a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically. Inhalation: This material contains a known pulmonary sensitizer. Any individual experiencing dermal or pulmonary sensitization should be removed from exposure to any diisocyanate. May aggravate existing heart conditions, particularly those with abnormal heart rhythms. If overexposure to the solvents in this product is suspected, testing should include nervous system and brain effects including recent memory, mood, concentration, headaches and altered sleep patterns. Liver and kidney function should be evaluated. This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately.

5. Fire Fighting Measures

Hazardous combustion products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Additional decomposition products include oxides of nitrogen, amines, hydrogen cyanide and isocyanate-containing compounds.
Extinguishing media	
Suitable extinguishing media	Dry chemical, foam, carbon dioxide, water fog.
Fire fighting equipment/instructions	Firefighters should wear full protective clothing including self contained breathing apparatus. Avoid contact with isocyanates. During a fire, isocyanate vapors and other irritating and highly toxic gases may be produced.
Flash point	142 °F (61.1 °C)

6. Accidental Release Measures

Emergency action	Wear appropriate personal protective equipment. Do not allow product to enter sewer or waterways. Follow all Local, State, Federal and Provencial regulations for disposal. Regulations vary. Consult local authorities before disposal.
Spill or leak procedure	Scrape up material and place in steel drums that are in good condition. Thoroughly clean area where spill occurred. Remove sources of ignition. Ventilate area of spill.
Containment procedures	Isolate spill area. Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams. Liquid spills: Cover spills with absorbent clay or sawdust and collect material in open container and neutralize with a solution containing 2% liquid detergent, 3% concentrated ammonium hydroxide and 95% water. Wash spill area clean with the neutralization solution. Remove container to a safe place, cover loosely and allow to stand for 24 to 48 hours letting evolved carbon dioxide escape. Collect and contain for disposal. Pellet or chip spill: Collect and contain for salvage or disposal. Molten adhesive spill: Placard hot material, allow to cool and remove. If material is not cured once cooled, follow neutralization directions for liquids listed above. Collect and contain for disposal.

Reporting	See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7. Handling and Storage

Handling	Do not get this material in your eyes, on your skin, or on your clothing. Wash hands after handling and before eating. Do not breathe gas/fumes/vapor/spray. Wear respiratory protection if the material is heated, sprayed, used in a confined space or if exposure limit is exceeded. This product can produce asthmatic sensitization. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must avoid fumes from this product. Wear appropriate protective equipment to avoid contact with skin and eyes.
Storage	Keep in a dry, cool and well-ventilated place. Keep away from heat. Keep away from direct sunlight. Do not handle or store near an open flame, heat or other sources of ignition.
Empty container precaution	Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8. Exposure Controls / Personal Protection

Engineering controls	Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product. Explosion proof exhaust ventilation should be used.
Personal protective equipment	
Eye protection	Wear safety glasses with side shields.
Skin and body protection	Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves.
Respiratory protection	Avoid breathing vapor and/or mists. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator.
General	Eyewash fountains and emergency showers should be readily available.

Additional exposure data

US ACGIH Threshold Limit Values: Time Weighted Average (TWA): mg/m3 & ppm

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENE BISPHENYL ISOCYANATE (MDI) 0.005 PPM
Stoddard solvent	8052-41-3	STODDARD SOLVENT 100 PPM

US NIOSH Pocket Guide to Chemical Hazards: Ceiling Limit Value and Time Period (if specified)

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENE BISPHENYL ISOCYANATE 0.2 MGM3 - 0.020 PPM 10-min
Stoddard solvent	8052-41-3	STODDARD SOLVENT 1800 MGM3 15-min

US OSHA Table Z-1-A: Time Weighted Average (TWA): mg/m3 & ppm

Stoddard solvent	8052-41-3	STODDARD SOLVENT 525 MGM3 - 100 PPM

9. Physical & Chemical Properties

Target solids	95.4 %
Density	1.508 g/cc
Odor	Solvent
Color	Amber
Physical state	Paste
Freeze protect	No
VOC (Volatile Organic Compounds)	72 g/l

10. Chemical Stability & Reactivity Information

Hazardous reactions/decomposition products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Additional decomposition products include oxides of nitrogen, amines, hydrogen cyanide and isocyanate-containing compounds.
Hazardous polymerization	Hazardous polymerization can occur with elevated temperatures or contact with water.
Conditions to avoid	Avoid Strong Acids. Avoid amines, strong bases, alcohols and metallic hydrides. Keep away from sources of ignition.

Stability This product is stable under normal conditions but will react slightly with water to release some heat and carbon dioxide. The reaction is not violent. Carbon dioxide, carbon monoxide and in high temperature (800° F) low oxygen atmospheres such as in fire situations, hydrogen cyanide may be released.

11. Toxicological Information

Carcinogenicity If this product contains any carcinogens, they will be noted below: This product contains Methylene Diphenyl Isocyanate (MDI). MDI is not listed by the NTP, IARC or regulated by OSHA as a carcinogen. However, it has been shown to alter cells in certain experiments. Although inconclusive, these cellular changes are thought to indicate potential carcinogenicity.

Local effects Single large does, and/or repeated exposures, may lead to sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms), causing an individual to experience adverse effects at exposure levels well below exposure limits or guidelines. Symptoms may include chest tightness, wheezing, shortness of breath, coughing or asthmatic attack, and may be delayed up to several hours. Extreme asthmatic reactions can be life threatening. Once sensitized, an individual may experience adverse symptoms upon exposure to dust, cold air or other irritants. Sensitization can last several months, years or be permanent in some cases. Chronic exposure may cause lung damage, including fibrosis and decreased lung function, which may be permanent.

12. Ecological Information

Ecotoxicological information Organic solvents produce slight to moderate toxicity to aquatic life.

13. Disposal Considerations

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes. Empty containers must be handled with care due to product residue. Do not heat or cut empty container with electric or gas torch.

14. Transport Information

DOT

Not regulated as hazardous goods.

IATA

Not regulated as hazardous goods.

IMDG

Not regulated as hazardous goods.

15. Regulatory Information

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200

The product(s) covered by this M(SDS) do not include any of the substances above a concentration of 0.1% weight by weight (w/w) in the Candidate List of Substances of Very High Concern (SVHC) for authorization published or proposed by ECHA as follows: the list of 15 substances for authorization published on October 28, 2008, the list of 15 substances proposed on August 31, 2009, the list of 14 substances proposed on January 13, 2010, the list of 8 substances proposed on March 8, 2010, the list of 8 substances proposed on June 18, 2010, the list of 11 substances proposed on October 14, 2010 and the list of 8 substances proposed on December 15, 2010.

Federal regulations All components are on the U.S. EPA TSCA Inventory List.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENEBIS(PHENYLISOCYANATE) (MDI) US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

State regulations	If this product contains any California Proposition 65 chemicals at reportable levels they will be listed below: Butyl Benzyl Phthalate (BBP) Di-Isodecyl Phthalate (DIDP) Naphthalene
International regulations	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.
HMIS Ratings	Health: 2* Flammability: 2 Physical hazard: 0 Personal protection: X
SARA 311/312 HAZARD CATEGORIES	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
WHMIS status	Controlled
WHMIS labeling	

WHMIS classification	D2A - Other Toxic Effects-VERY TOXIC D2B - Other Toxic Effects-TOXIC

16. Other Information

Product name(s) covered	G62130 - BST URETHANE G62140 - BST URETHANE
Disclaimer	The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.
Further information	If there are any characters following an individual item number, they are just designations for the various types of packaging that are available for this product. For example, a product "G12345-XX" is item number "G12345" with a packaging designation of "XX". These characters do not indicate a different product nor a different regulatory, health, safety and/or environmental status. This document covers the item numbers listed above for all of their packaging types.
Issue date	03/07/2011
Prepared by	Bostik, Inc. Regulatory Affairs
Supercedes	03/03/2011

ScratchAway Medical Safety Data Sheet (MSDS)

MSDS SC-92241

Material Safety Data Sheet
complies with OSHA's hazard communications Standard (20CFR 1910.1200)

Section 1. Product Identification

Name	ScratchAway	Type:	Aerosol
Container Size:	13oz Net Weight	Information Phone:	Cal-Flor A.S.
Stock Number:	SC-92241		(530) 534-3567
Supplier's Name:	Cal-Flor Accessory Systems		1-888-227-3567
Address:	1000 Cal Oak Road, Oroville CA, 95965		

DOT SHIPPING INFORMATION

DOT SHIPPING NAME:	Consumer Commodity
DOT HAZARD LEVEL CLASS:	ORM-D
DOT LABEL:	None
DOT PACKAGING GROUP:	None

HAZARDS RATING INFORMATION

	NFPA	NPAC(HMIS)	
Health:	1	1	0- Minimal
Flammability:	4	1	1- Slight
Reactivity:	0	0	2- Moderate
Personal Protection:	N/A	None	3- Serious
Code 30b Storage Rating:	Level 1		4- Extreme

Section 2. Ingredients

Chemical Name:	CAS NO.	% WT	313 Chemical	OSHA PEL	ACGIH/TLV
Isoparaffins	64742-47-8	<10.0	No	500 ppm, 2000 mg/m3, 8 hr TWA	N/E
Water	7732-18-5	<10.0	No	N/E	N/E
Petroleum Lubricating Oil	64742-65-0 or 64742-54-7	<10.0	No	5 mg/m3 (oil mist)	10mg/m3 (oil mist)
Isobutene/ Propane Blend	68476-86-8	<20.0	No	1000 ppm	N/D
Polyglyceryl-4-Oleate	9007-48-1	<5.0	No	Health Hazard	Eye irritant

All ingredients used in this mixture are listed on the TSCA Inventory List and none is listed as carcinogenic by OSHA, IARC, or NTP.

Section 3. Physical DATA

Boiling Point:	N/D
Vapor Pressure:	46-56 PGSI @ 70* F
Solubility in Water:	Slightly Soluble
pH:	7.2
Specific Gravity:	.939 g/ml
Evaporation Rate:	less than 1 (h20 =1)
Appearance/Odor:	Off-white emulsion with lemon fragrance, Pressurized
VOC Content:	8.0% - 10.0% VOC

Section 4. Fire and Explosion Data

Flash Point:	<-20*f By Tag Closed Cup
Explosive Hazard	Not an Explosive
Extinguishing Media:	Water Fog, Foam, Carbon Dioxide, Dry Chemical
Special Fire Fighting Procedures:	None Known
Unusual Fire and Explosion Hazards:	Prolonged Exposure to Temperature Above 130 *F May Cause Cans To Burst

Section 5. Reactivity Data

Stability:	Stable
Hazardous Polymerization:	Will Not Occur
Hazardous Decomposition Products:	CO, CO2, Ammonia, Nitrogen Oxides.
Incompatibility:	None Known

Section 6. Storage and Handling

KEEP OUT OF REACH OF CHILDREN

Store in a cool dry area away from heat and open flame.

Do not store at temperatures above 120*F or below 32*F

Section 7. Health Effects and First Aid

PRIMARY ROUTES OF ENTRY AND EFFECTS OF OVEREXPOSURE

Eyes: May cause mild irritation in some individuals

Skin: May cause mild irritation in some individuals

Inhalation: Breathing of vapor may produce feelings of euphoria and anesthetic effects. Over-exposure can cause rapid breathing, headache, dizziness, narcosis, unconsciousness, and death from asphyxiation, depending on time of exposure and concentration.

First Aid Procedures

Eyes: Flush eyes with plenty of water for at least 15 minutes. Contact a physician if irritation persists.

Skin: Wash with soap and large quantities of water. Contact a physician if irritation persists.

Inhalation: Remove person to fresh air. Contact physician if effects are persistent

Ingestion: DO NOT induce vomiting, contact a physician immediately

Section 8. Special Protection Information

RESPIRATORY PROTECTION: Not normally needed.

VENTILATION: Mechanical (general) ventilation not required under normal conditions

PROTECTIVE GLOVES: Not normally needed.

EYE PROTECTION: Not normally needed.

Section 9. Spill or Leak Precautions

STEPS TO BE TAKEN IN CASE OF SPILLAGE OR LEAKAGE:

Spilled material can be picked up with absorbent material.

Use caution where surfaces may become slippery from spilled material.

WASTE DISPOSAL METHOD:

Sweep up and place in and empty container and close.

Dispose of according to local, state and federal regulations.

WASTE DISPOSAL CAUTIONS:

Hazardous substances cleaned with this product may create hazardous waste that must be properly characterized and disposed of in accordance with RCRA, state and local regulations.

N/A = not applicable N/E = not established N/D = not determined < = less than > = more than

Disclaimer: This Safety Data Sheet was prepared to protect against any reasonable exposure to consumers or employees arising out of the intended use of the product and to provide them with information regarding potential hazards contained in the product. Under varied circumstances the hazardous ingredients may pose a lesser or greater hazard. Because of the scientific data contained in these sheets was obtained from test performed by agencies other than the Manufacturer. The company cannot guarantee its accuracy. The Manufacturer makes no warranty of any kind, expressed or implied. The user must assume all risk and liability resulting from reliance on the information contained on this Material Safety Sheet and the use of this product, whether used in combination with other products or singularly.

Date Prepared 5/13/2004

MAPEI®

Ultrabond® 980 Solvent-Free

Urethane wood flooring adhesive

DESCRIPTION

Ultrabond 980 is an innovative, solvent-free, one-part, moisture-curing urethane adhesive specifically designed for easy application and high performance.

- Nonslump/trowel-ridge-holding formulation
- Superior application properties
- Contains no solvents or water
- Low in VOCs
- Economical
- Elastomeric to allow the natural subtle movements of wood flooring

USES

- Use to install prefinished or unfinished engineered wood plank.
- Use to install solid hardwood planks (flat milled) or shorts.
- Use to install prefinished or unfinished parquet.
- Use to install acrylic impregnated wood and laminated plank.
- Use to install ceramic tile (residential and light commercial only).

RECOMMENDED SUBSTRATES

- Fully cured concrete

  Note: All concrete slabs should be tested for moisture. If moisture vapor emission exceeds 3 lbs. per 1,000 sq. ft. (1,36 kg per 92,9 m^2) per 24 hours, using the anhydrous calcium chloride test (ASTM F1869), this adhesive must not be used.
- Any wood underlayment such as exterior-grade plywood, Group 1, CC type, that is recommended or guaranteed by either the wood underlayment manufacturer or the wood flooring manufacturer
- Properly prepared cement terrazzo
- Properly prepared ceramic tile

TECHNICAL NOTES

- For interior installations only
- Do not use when the substrate temperature is below 50°F (10°C) or above 100°F (38°C).
- Follow wood manufacturer's instructions regarding proper conditioning of floor-covering materials. Do not use this adhesive to install any type of wood flooring that the wood manufacturer does not recommend to be "glued" down.
- Do not use adhesive as a leveling or patching material. If patching or leveling of a floor is required prior to the application of this adhesive, use the appropriate MAPEI leveling or patching material. Consult MAPEI's Technical Services Department for product recommendations.

- Do not leave unused adhesive in an open container. Cover with dense, nonporous plastic and close lid tightly.
- Immediately clean adhesive from the wood flooring surface with a clean white rag and mineral spirits. Ensure that the mineral spirits does not harm the wood flooring surface.
- *Ultrabond 980* may be used over radiant-heated flooring systems. Understand the effect of these types of systems on wood and ensure that the manufacturer recommends their product be installed over radiant-heated flooring systems.

Note: Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

INSTRUCTIONS

1. Surface Preparation

All substrates must be structurally sound, flat (within 3/16" in 10', or 1/8" in 6' [4,5 mm in 3,05 m, or 3 mm in 1,83 m]), dry, clean and free of dips, holes, voids, dust, oil, grease, tar, paint, wax, curing agents, primers, sealers and any substance that may prevent or reduce adhesion. See “Surface Preparation Requirements” document for additional details.

2. Mixing

Ultrabond 980 is ready to use. No mixing is required. Simply open the container and spread.

3. Application

3.1 Refer to wood flooring manufacturer's instructions and industry standards regarding job site, surface preparation, material conditioning and installation.

3.2 All wood flooring, adhesive and subfloor should be maintained at room temperature (73°F [23°C]) for a period of 48 hours before, during and after the installation.

3.3 Use the typical trowel (see “Technical Data”) to ensure that adhesive covers at least 95% of the flooring backing. Follow the wood flooring manufacturer's recommendation regarding proper trowel to use.

3.4 Spread adhesive may be installed into using a wet-lay or walk-on method.

Note: Secure starter row by wedging or face-nailing.

3.5 After placing, press the wood flooring firmly into the adhesive to ensure good contact with the adhesive.

3.6 Proper adhesive transfer to the backing should be confirmed periodically by lifting the material.

3.7 Leave an appropriate space around the perimeter of the room and stationary objects to allow for wood flooring expansion as recommended by the wood flooring manufacturer.

3.8 Carefully roll the wood flooring installation with a roller as specified by the flooring manufacturer. Apply weight to flooring as necessary to ensure proper contact while adhesive is curing.

3.9 Complete the installation per the flooring manufacturer's recommendations.

3.10 Promptly clean adhesive smudges with mineral spirits while still fresh. Ensure that the finished surface of flooring is not harmed. Adhesive is extremely difficult to remove once cured.

3.11 Clean all tools with mineral spirits before the adhesive sets.

4. Expansion and Control Joints

4.1 Provide for expansion and control joints where specified.

4.2 Do not cover any expansion joints with adhesive.

4.3 Cut wood flooring on both sides along the edges of expansion joints.

4.4 Insert the specified compressible bead and sealant for expansion and control joints, according to plans and specifications.

5. Protection

5.1 Protect containers from freezing in transit and storage.

5.2 Provide heated storage (at a temperature not lower than 73°F [23°C]) on site and deliver all materials at least 24 hours before work begins.

5.3 Light traffic is acceptable in 8 to 12 hours. Adhesive is fully cured in 24 hours.

5.4 To reseal container, fully cover adhesive with plastic and then tightly reseal the lid.

TECHNICAL DATA

Service temperature . . . . . -40°F (-40°C) to 150°F (66°C)

Application temperature . . . . . 50°F (10°C) to 100°F (38°C)

Temperature	Relative Humidity	Open Time
73°F (23°C)	50%	2 hours, 30 minutes
50°F (10°C)	80%	3 hours, 30 minutes
100°F (38°C)	20%	4 hours, 15 minutes

Flash point . . . . . > 200°F (> 93°C)

Maximum moisture vapor emission of the concrete (ASTM F1869) . . . . . 3 lbs. per 1,000 sq. ft. (1,36 kg per 92,9 m^2) per 24 hours

Setting time (cure) . . . . . Ready for light foot traffic in 8 to 12 hours, and heavier traffic once cured. Temperature and humidity will affect the cure rate; the higher the temperature and humidity, the faster the cure. Typically this adhesive cures in 24 hours at 73°F (23°C) and 40% relative humidity.

Cleanability . . . . . With mineral spirits when fresh; extremely difficult when cured

Color . . . . . Beige

Consistency . . . . . Creamy and easy to spread

VOC . . . . . 100 g/L

Weight . . . . . 13.9 lbs. per U.S. gal. (1,6 kg per L)

Shelf life . . . . . 12 months when stored in original unopened container at room temperature (73°F [23°C]) in a dry area

Health and safety . . . . . Consult the Material Safety Data Sheet (MSDS) for safe-handling instructions.

PACKAGING

Pails: 3.5 U.S. gals. (13,2 L); 5 U.S. gals. (18,9 L)

TYPICAL TROWELS AND APPROXIMATE COVERAGES*

3- or 5-ply engineered plank (< 1/2" [12 mm])

5/32" x 3/16" (4 x 4,5 mm) . . . . . 45 to 55 sq. ft./U.S. gal. (1,10 to 1,35 m^2/L)

Engineered plank (> 1/2" [12 mm])

1/8" x 1/4" x 1/4" (3 x 6 x 6 mm) . . . . . 35 to 45 sq. ft./U.S. gal. (0,85 to 1,10 m^2/L)

3- or 5-ply laminated plank

1/4" x 3/16" x 1/2" (6 x 4,5 x 12 mm) . . . . . 55 to 65 sq. ft./U.S. gal. (1,35 to 1,59 m^2/L)

Finger block parquet

1/8" x 1/8" x 1/8" (3 x 3 x 3 mm) . . . . . 70 to 80 sq. ft./U.S. gal. (1,71 to 1,96 m^2/L)

Solid plank (up to 3/8" [10 mm])

1/4" x 1/4" x 1/4" (6 x 6 x 6 mm) . . . . . 30 to 40 sq. ft./U.S. gal. (0,73 to 0,98 m^2/L)

* *Trowel dimensions are depth/width/space. Quantities shown are approximate and given for estimating purposes only. Actual job-site coverages may vary according to substrate conditions and size of trowel used.*

Ultrabond® 980

MAPEI®

Ultrabond® 980

NOTICE

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. Any claim shall be deemed waived unless made in writing to us within fifteen (15) days from date it was, or reasonably should have been, discovered.

MAPEI

Headquarters of the Americas

1144 East Newport Center Drive
Deerfield Beach, Florida 33442
Phone: (954) 246-8888
Fax: (954) 246-8800

Customer Service

1-800-42-MAPEI (1-800-426-2734)

Technical Services

1-800-992-6273 (U.S. and Puerto Rico)

1-800-361-9309 (Canada)

Additional Information

Website: www.mapei.com

MAPEI – USA

Ft. Lauderdale, Florida
Fredericksburg, Virginia
Garland, Texas
San Bernardino, California
South River, New Jersey
Tempe, Arizona
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MAPEI – Canada

Laval, Quebec
Delta, British Columbia
Brampton, Ontario

MAPEI – Argentina

Buenos Aires

MAPEI – Puerto Rico

Dorado

MAPEI – Venezuela

Caracas

For the most current product data, visit www.mapei.com.

MAPEI®

PR4860 980D_H05Evp

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MAPEI®

Planiseal WFM™

Premium One-Part, Urethane Wood-Flooring Membrane

GREEN INNOVATION

DESCRIPTION

Planiseal WFM is a one-component, ready-to-use moisture-curing urethane membrane designed to protect glue-down wood-flooring installations from subfloor moisture damage. *Planiseal WFM*'s special formula regulates dryness by controlling the release of moisture vapor transmissions coming through the subfloor. With its superior elasticity and tenacious bond, *Planiseal WFM* can accommodate nonstructural in-plane cracks up to 1/8" (3 mm). It also reduces sound transmissions in wood installations in multi-story construction. Plus, *Planiseal WFM* has been designed to work perfectly in conjunction with *Ultrabond 975*, *Ultrabond 980* and *Ultrabond 990* wood-flooring adhesives.

FEATURES AND BENEFITS

- One-component
- Protects glue-down wood-flooring installations from damage caused by moisture vapor emissions coming from the substrate
- Prevents cracks transferring from the substrate to the finished floor in glue-down wood-flooring installations
- Reduces airborne sounds and impact noise through the finished flooring

INDUSTRY STANDARDS AND APPROVALS

LEED Points Contribution	LEED Points
Low-emitting materials	1 point

Refer to MAPEI's Material Safety Data Sheet (MSDS) for specific data related to VOCs, health and safety, and handling of product.

WHERE TO USE

- Use as a moisture membrane, crack-reduction membrane and sound-reduction membrane.
- Interior residential (rental apartments, condominiums, homes)
- Interior light commercial (general office areas, small retail stores)
- Interior commercial (office buildings, hotel rooms and hallways, restaurant dining areas)

LIMITATIONS

- Do not install over any substrates containing asbestos.
- For interior installations only
- Not recommended for flooring designed for nail-down installations only
- Do not apply over any adhesive residues, including cutback adhesive.
- Do not use *Planiseal WFM* in buildings prone to hydrostatic head (pressure).
- Use only when the substrate temperature is between 50°F and 90°F (10°C and 32°C), and when the ambient relative humidity is between 20% and 80%.

SUITABLE SUBSTRATES

- Exterior-grade plywood, Group 1, CC type
- Other approved wood underlayments (per manufacturer recommendations)
- Concrete and properly prepared cement terrazzo
- Existing and properly prepared ceramic tile

- Cement-based *Mapecem® Quickpatch* and *Planipatch®* (mixed with water only)
- Cement-based self-leveling underlayments and patching compounds
- Properly prepared and primed gypsum underlayments that meet the ASTM F2419 requirements for compressive strength
- Radiant-heat systems that have been properly installed

Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

SURFACE PREPARATION

- All substrates must be structurally sound, dry, solid and stable.
- Substrate should be clean and free of dust, dirt, oil, grease, paint, curing agents, concrete sealers, loosely bonded toppings, loose particles, old adhesive residues, and any other substance or condition that may prevent or reduce adhesion.
- Substrates must be flat to 3/16" in a 10-ft. span (4,5 mm in a 3,05-meter span). Refer to wood-flooring manufacturer's guidelines. Use MAPEI's cement-based *Mapecem Quickpatch* to fill holes, level and smooth as needed over concrete.
- Use anhydrous calcium chloride tests to determine the MVER according to ASTM F1869.
- Use a moisture meter to check the relative humidity of the wood flooring, substrate surface and general jobsite area. Follow the flooring manufacturer's guidelines.
- Refer to MAPEI's Surface Preparation Requirements document for floor-covering installation systems at www.mapei.com.

MIXING

- Ready to use; no mixing necessary

Note: Choose all appropriate safety equipment before use. Refer to MSDS for more information.

PRODUCT APPLICATION

1. Read all installation instructions thoroughly before installation.
2. Select the appropriate notched trowel (see "Approximate Product Coverage" section)
3. Pour *Planiseal WFM* onto the subfloor surface.
4. Immediately spread material with the V-notched side of a 5/32" x 3/16" (4 x 4,5 mm) trowel for a thin, even coat of *Planiseal WFM*, creating a consistent voidless membrane.
5. Spread evenly over the subfloor, keeping the trowel at a 45° angle to the subfloor.

CLEANUP

Immediately clean tools with *Ultrabond® Urethane Cleaner* while the product is still fresh/wet. Note: *Planiseal WFM* is extremely difficult to remove when cured.

PROTECTION

Protect from light traffic for at least 12-16 hours or until dry.

FLOORING INSTALLATION

- Install flooring using *Ultrabond 975*, *Ultrabond 980* or *Ultrabond 990* after *Planiseal WFM* is dry, not waiting more than 7 days as the bond may be compromised.
- Refer to the Technical Data Sheet of the appropriate adhesive for more details.

Product Performance Properties

Laboratory Tests	Results
Polymer type	Polyurethane
Percent solids	100%
VOCs (Rule #1168, California's SCAQMD)	< 68 g/L
Trowelability	Easy
Density	11.2 lbs. per U.S. gal. (1,35 g per mL)
Consistency	Smooth paste
Color	Tan
Shelf life	1 year when stored in original packaging at 73°F (23°C)
Storage conditions	50°F to 90°F (10°C to 32°C)
Flash point (Tag)	> 200°F (93°C)

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Application Table

Application Characteristics as a Membrane over Porous Substrates	
	Working Time†
At 50°F (10°C) and 80% humidity	3 hours, 30 minutes
At 73°F (23°C) and 50% humidity	2 hours, 30 minutes
At 100°F (38°C) and 20% humidity	4 hours, 15 minutes

† *Working time is the window of time for the adhesive to accept flooring.*

Note: Working time may vary based on temperature, humidity, substrate porosity, trowel size and jobsite conditions.

Packaging

Product Code	Size
45368000	5 U.S. gals. (18,9 L)

Approximate Product Coverage

Typical Trowel	Coverage*
5/32" x 3/16" (4 x 4,5 mm)	40 – 45 sq. ft. per U.S. gal. (0,98 – 1,10 m^2 per L)

* *Trowel dimensions are depth/width/space. Coverages shown are for estimating purposes only. Actual jobsite coverages may vary according to substrate conditions, type of trowel used and setting practices.*

Classification Testing Details for Sound Reduction

Engineered Wood: 9/16" over a 6" (14 mm over a 15 cm) concrete slab		
	No Ceiling	**Suspended Gypsum Ceiling**
ASTM E492 / E989 (IIC)	48	69
ASTM E90 / E413 (IIC)	52	66
ASTM E2179 / E989 (Delta IIC)	19	N/A

Solid Hardwood: 5/16" over a 6" (8 mm over a 15 cm) concrete slab		
	No Ceiling	**Suspended Gypsum Ceiling**
ASTM E492 / E989 (STC)	51	N/A
ASTM E90 / E413 (IIC)	50	N/A

Planiseal WFM™

RELATED DOCUMENTS

Reference Guide: Surface Preparation Requirements for floor-covering installation systems	RGF0409*

* *At www.mapei.com.*

STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:

MAPEI Headquarters of the Americas
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(1-888-876-2734)

Technical Services
1-800-992-6273 (U.S. and Puerto Rico)
1-800-361-9309 (Canada)

Customer Service
1-800-42-MAPEI (1-800-426-2734)

For the most current product and warranty data, visit www.mapei.com.

Edition Date: August 4, 2009

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4600
VINYL BACK
FLOOR COVERING ADHESIVE

ENVIRONMENTAL/PERFORMANCE:
- **Solvent-Free – VOC Compliant**
- **Excellent Open Time**
- **CRI Green Label Plus Certified**
- **Low odor / odorless when dry**
- **Non-Staining**

DESCRIPTION:
Fusion Series 4600 Vinyl Back Floor Covering Adhesive is a premium (non-staining) latex adhesive, designed to permanently install dimensionally stable vinyl backed resilient sheet goods, homogenous commercial grade PVC sheet flooring, PVC backed carpet, PVC backed carpet tiles, PVC sheet vinyl (vinyl backed), vinyl tile, vinyl plank, linoleum, and linoleum tile. 4600 may be used on all grades of concrete on above or below grade in the absence of moisture, as well as suspended approved wood floors (APA). 4600 may also be used for installing over existing, non-cushioned resilient flooring.

This adhesive is non-flammable, water and alkali resistant and freeze-thaw stable. 4600 has excellent resistance to plasticizer migration and sets to a tough permanent bond.

SUB-FLOOR PREPARATION:
Follow all manufactures recommendations and industry standards regarding sub-floor preparation.

We require that moisture tests be performed on all concrete sub-floors regardless of grade level or whether or not the concrete is freshly poured or is classified as an older slab. Moisture testing should be performed by ASTM F1869 Calcium Chloride Tests with moisture levels not to exceed three (3) pounds per Twenty-Four (24) hours per one thousand (1000) square feet or ASTM F2170 In Situ Relative Humidity Test with readings, not to exceed seventy-five (75) percent. Additional information with regard to these tests and results can be obtained through Para-Chem's Technical Service Department.

Additional information with regard to sub-floor installation and requirements can be found in ASTM F-710 or CRI 104-105.

DIRECTIONS:
1. Store flooring and adhesive at 65-70°F for 24 hours prior to and during installation.
2. All sub-floors must be clean, dry, free of dust, dirt, wax, paint, grease or any other contaminants that might interfere with the adhesive bond.
3. Follow Manufacturer's recommendations as to seaming and sealing. Roll flooring with a 75-100 pound roller.
4. Cracks and uneven surfaces must be filled with a cement based patching compound such as Parabond Micro Finish or PP-Plus. Parabond M-600 may be used if there is no evidence of moisture.

PVC backed carpet and carpet tiles and PVC sheet vinyl (with vinyl backing).

1. Trowel recommendations for these products are listed on the 4600 trowel chart.
2. For PVC backed carpet, carpet tile, and homogeneous sheet vinyl (vinyl backed), the adhesive must be allowed to dry to the touch so that there is little or no transfer of adhesive to the finger.
3. Once the adhesive reaches the dry-to-the-touch state, it is ready to accept flooring.
4. Rolling with a three-section floor roller should take place immediately after the material has been placed into the adhesive.
5. For carpet and carpet tile, a 50-75 pound roller should be utilized.
6. For homogenous sheet vinyl, a 100-pound roller is recommended.
7. From the time the adhesive is allowed to dry to the touch, to the time it must be covered, is approximately 45 minutes.
8. If the adhesive is allowed to remain uncovered after initially drying to touch, for periods longer than the recommended 45 minutes, a loss in adhesion strength will result. Care must be taken by the installer not to spread more than can be worked appropriately within the 45 minute time frame.
9. Installation of this product on non-porous sub-floors utilizing a wet application of adhesive is **Not** recommended or warranted.

Vinyl tile, vinyl plank, linoleum and linoleum tiles.

1. Follow trowel recommendations listed on 4600 trowel chart.
2. 4600 is recommended for porous and non-porous applications of vinyl tile, vinyl plank, linoleum, and linoleum tile.
3. For porous applications, once troweled the adhesive should be allowed to remain open (flash-off) for approximately 5-10 minutes before placement of the flooring material.
4. Once placed, the material should be rolled immediately utilizing a 100 pound three-section roller.
5. **Note:** It is the responsibility of the user to determine whether or not the sub-floor to be covered is porous. To determine if a sub-floor is porous, place two droplets of water in various areas. If the sub-floor is porous, the water will be absorbed within a few seconds.
6. For non-porous applications follow trowel recommendations as listed in 4600 trowel chart.
7. Non-porous installations require that the adhesive be allowed to dry to the touch, so that there is little or no transfer of adhesive to the finger.
8. Once the adhesive dries to the touch, it is ready to accept flooring material.
9. Rolling should take place immediately after the flooring material has been placed into the adhesive.
10. From the time the adhesive is allowed to dry to the touch, to the time it must be covered is approximately 45 minutes.
11. If the adhesive is allowed to remain uncovered, after initially drying to touch, for periods longer than the recommended 45 minutes a loss in adhesion strength will result. Care must be taken by the installer not to spread more adhesive than can be worked appropriately within the 45 minute time frame.

NOTE: If any question exists by the installer or floor covering dealer as to whether or not this product is appropriate, contact Para-Chem's Technical Service Department.

CLEAN-UP:
Soapy water followed by Mineral Spirits, or M-315 Cleaner.

DO NOT APPLY SOLVENT DIRECTLY TO FLOORING MATERIAL.

CAUTION: Mineral Spirits is flammable. Read and follow all precautions on container label.

COVERAGE AND TROWEL RECOMMENDATION:
Approx. 100 sq. ft./gal with 1/16" square notch
Approx 150 sq. ft./gal with 1/16"X1/16"x1/16" V-notch
Approx 250 sq. ft./gal with 1/16"x1/32"x1/32" U-notch

TROWEL RECOMMENDATIONS FOR 4600

Homogeneous Sheet Vinyl (Vinyl Backed) All Carpets	1/16" x 1/32" x 1/32" U-Notch
PVC Backed Carpet and Carpet Tiles All Products	1/16" x 1/16" x 1/16" V-Notch

Vinyl Tile and Vinyl Plank

Gauge	Porous	Non-Porous
Greater than .080"	1/16" x 1/16" x 1/16" Sq Notch	1/16" x 1/16" x 1/16" V-Notch
Greater than 0.050"-0.080"	1/16" x 1/16" x 1/16" V-Notch	1/16" x 1/32" x 1/32" U-Notch
0.050" or Less	1/16" x 1/32" x 1/32" U-Notch	1/16" x 1/32" x 1/32" U-Notch

Linoleum and Linoleum Tile

Gauge	Porous	Non -Porous
Greater than 0.080"	1/16" x 1/16" x 1/16" Sq Notch	1/16" x 1/16" x 1/16" Sq Notch
Less than or equal to 0.080"	1/16" x 1/16" x 1/16" V-Notch	1/16" x 1/16" x 1/16" V-Notch

Vinyl Skin Backed Resilient Sheet Goods

Porous	Non-Porous
1/16" x 1/16" x 1/16" V-Notch	1/16" x 1/32" x 1/32" U-Notch

PHYSICAL PROPERTIES:
Freeze Thaw 5 cycles @ 0°F
Shelf Life 1 yr @70°F in un-opened container
Open Time: Up to 45 minutes (Once dry to the touch) depending upon sub-floor porosity, temperature and humidity conditions and ventilation.

CALIFORNIA VOC (Volatile Organic Compound) COMPLIANCE:
Solvent Free Product.
SCAQMD Rule 1168: VOC compliant.
SCAQMD Rule 443.1: Grams of VOC per Liter of Material < 0 gram/liter.
Grams of VOC per Liter of Coating < 0 gram/liter.

FOR MORE INFORMATION READ MATERIAL SAFETY DATA SHEET

KEEP OUT OF REACH OF CHILDREN

WARNING!!
Various Federal, State and Local Government agencies have regulations governing the removal of in-place asbestos-containing material. If you contemplate the removal of a resilient floor covering structure that contains (or is presumed to contain) asbestos, you must review and comply with all applicable regulations. Follow the RFCI's Recommended Work Practices for Removal of Resilient Floor Coverings.
RFCI, 401 East Jefferson St., Suite 102, Rockville, MD 20850 – phone 301-340-8580

FIVE YEAR NO-NONSENSE WARRANTY, GOOD AS GOLD WARRANTY
4600 is warranted against cohesive failure (loss of bond) and formulated so as not to discolor or cause adhesive-induced staining in today's felt or vinyl backed sheet flooring and/or vinyl composition floor tile for

five years from the date of installation if flooring is professionally installed according to manufacturer's guidelines, CRI-104, 105 ASTM F-710 and RFCI suggested practices. This limited warranty covers materials and reasonable labor costs for five years (materials meaning same type and grade if available). If unavailable or discontinued, Para-Chem reserves the right to pay dollar amount of initial purchase.

CONSEQUENTIAL/INCIDENTAL DAMAGE EXCLUSION

Para-Chem excludes and will not pay consequential or incidental damages under this limited warranty. By this we mean any loss, expense or damage other than to flooring itself that may result from a defect in the adhesive itself. The warranty against cohesive failure, staining or discoloration are the exclusive warranties offered by Para-Chem. All other warranties, including the warranties of merchantability and fitness for a specific purpose, are specifically disclaimed and there are no other warranties regarding these products, express or implied.

MATERIAL SAFETY DATA SHEET

Para-Chem®, PO Box 127, Simpsonville, SC 29681
24-Hour Emergency Telephone: (864) 967-7691

SECTION 1. PRODUCT IDENTIFICATION

PRODUCT NAME: PARABOND® M-4600 SOLV-FREE VINYL FLOOR COVERING ADHESIVE
CHEMICAL FAMILY: Water Base Adhesive

SECTION 2. HAZARDOUS INGREDIENTS AND EXPOSURE LIMITS

Chemical Name	CAS Number	% by Weight	ACGIH TLV	OSHA PEL
None				

SECTION 3. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: Eyes, skin.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.
POTENTIAL HEALTH EFFECTS:
EYE CONTACT: May cause slight irritation, redness, tearing.
SKIN CONTACT: May cause slight irritation with prolonged contact.
INGESTION: May cause gastric distress.
INHALATION: May cause respiratory irritation.
CHRONIC: None known.
CARCINOGENICITY: This product contains no ingredient above the OSHA minimum reporting threshold listed as a carcinogen by IARC, NTP, or OSHA.

SECTION 4. FIRST AID MEASURES

EYE CONTACT: Flush with water for 15 minutes. Contact a physician if irritation occurs.
SKIN CONTACT: Wash with soap and water.
INGESTION: Do not induce vomiting. Contact a physician.
INHALATION: Remove to fresh air.

SECTION 5. FIRE-FIGHTING MEASURES

FLASH POINT (^{o})F: None.
LOWER FLAMMABLE LIMIT: None.
UPPER FLAMMABLE LIMIT: None.
FIRE-FIGHTING INSTRUCTIONS: Use protective clothing and self-contained breathing apparatus.
EXTINGUISHING MEDIA: Water fog, CO_2, dry chemical, and chemical foam.
DECOMPOSITION PRODUCTS: Dried material may produce CO, CO_2.

SECTION 6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spill. Scoop or shovel into secure container(s) for recovery or disposal. Dispense sand, sawdust, or vermiculite and absorb residue. Collect and place in waste container. Wash area thoroughly with water.

SECTION 7. HANDLING AND STORAGE

HANDLING: Use good hygienic practices. Wash hands before eating, using washroom or smoking. Keep out of the reach of children.
STORAGE: Store above 40° F. Freeze-thaw stable up to five cycles at 0° F.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT:
EYE/FACE PROTECTION: Safety glasses or chemical splash goggles.
SKIN PROTECTION: Leather or rubber gloves
RESPIRATORY PROTECTION: Not normally required with good ventilation.
ENGINEERING CONTROLS: Normal room ventilation. Use floor and ceiling fans, open doors and windows during application to ventilate work area.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (^{o}F): 212
SPECIFIC GRAVITY (WATER = 1): 1.12
VAPOR PRESSURE: Same as water.
VAPOR DENSITY(air=1): Same as water.
% VOLATILE BY WEIGHT: 35
pH: 8.8
APPEARANCE AND ODOR: White colored paste with little or no odor.

SECTION 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.
POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: None known.
HAZARDOUS DECOMPOSITION PRODUCTS: None.

SECTION 11. TOXICOLOGICAL INFORMATION

No information available

SECTION 12. ECOLOGICAL INFORMATION

No information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Federal, State and Local regulations.

SECTION 14. TRANSPORT INFORMATION

For domestic transportation purposes, this product is not designated as a hazardous material by the U.S. Department Of Transportation.

SECTION 15. REGULATORY INFORMATION

TSCA: The components of this product are listed on the TSCA inventory.
SARA TITLE III:
Section 311 and 312 Health and Physical Hazards:

Immediate	Delayed	Fire	Pressure	Reactivity
[ ]	[ ]	[ ]	[ ]	[ ]

Section 313: Contains no components at or above EPA reporting thresholds.
CALIFORNIA VOC (Volatile Organic Compound) COMPLIANCE:
Solvent Free Product.
SCAQMD Rule 1168: VOC compliant.
SCAQMD Rule 443.1: Grams of VOC per Liter of Material - 0 grams/liter.
Grams of VOC per Liter of Coating - 0 grams/liter.

SECTION 16. OTHER INFORMATION

HMIS RATINGS: Health = 1 Flammability = 0
Reactivity = 0 Personal Protective Equipment = B
Hazard rating scale: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe

Para-Chem, Inc. believes the statements, technical information and recommendations contained herein are reliable. They are given without warranty or guarantee of any kind, expressed or implied.

DATE ISSUED: April 30, 2009 [Rev. 2] PREPARED BY: R. W. Smith, Jr.

Version: April 13th, 2010

MAPEI®

Ultrabond® Urethane Cleaner

Professional Adhesive Remover

DESCRIPTION

Ultrabond Urethane Cleaner is a ready-to-use urethane adhesive cleaner designed to effectively remove wet urethane adhesive residues, such as *Ultrabond ECO® 975*, *Ultrabond ECO 980*, *Ultrabond ECO 990* and *Planiseal™ WFM*, from the surface of prefinished wood flooring. It is low-odor, nonflammable, pH-neutral and biodegradable. Safe for use on most types of prefinished wood flooring including parquet, engineered, solid and bamboo, *Ultrabond Urethane Cleaner* also removes urethane adhesive from trowels and tools. Simple to use, it is conveniently packaged in both quarts and pre-moistened towelettes.

FEATURES AND BENEFITS

- Removes wet urethane adhesives from wood-flooring surface
- Won't leave a residue on the surface
- Cleans tools and is nonflammable

WHERE TO USE

- Interior residential wood-flooring installations
- Interior commercial wood-flooring installations

LIMITATIONS

- Do not use as a hand-cleaner. Use gloves to protect skin.
- Protect carpeting, wood cabinets, painted surfaces and other finished surfaces.
- Avoid spilling excess amounts of *Ultrabond Urethane Cleaner*, which may seep in between wood flooring and weaken the bond of the urethane adhesive. Keep an absorbent product handy (paper towels, sawdust, kitty litter, etc.) to absorb spills.
- Do not leave *Ultrabond Urethane Cleaner* on the surface of the wood flooring for longer than 60 minutes.
- Thoroughly rinse and dry the area of application after use.

MIXING

- Ready to use; no mixing necessary

Note: Choose all appropriate safety equipment before use. Refer to MSDS for more information.

PRODUCT APPLICATION

Urethane adhesives are very difficult to remove once dry and cured. During the installation of glue-down wood flooring, make every effort to prevent adhesive from getting on the flooring surface. For best results, remove adhesive smudges and drops immediately during installation.

Read all installation instructions thoroughly before installation.

Test for compatibility with flooring in a small inconspicuous area before using.

Avoid using metal blades or other sharp objects when removing the adhesive, as this can permanently damage the surface of the finished floor.

- For removing fresh, wet urethane adhesives or membranes from prefinished wood flooring during the installation of glue-down wood flooring:
  1. Dampen a nonabrasive, clean white towel or cloth with *Ultrabond Urethane Cleaner*, or use a pre-moistened *Ultrabond Urethane Cleaner* towelette.
  2. Place the towel/cloth or towelette on fresh, wet adhesive and allow to remain for about 5 to 10 minutes.
  3. Remove adhesive with the soft, clean white towel or pre-moistened towelette.

Product Performance Properties

Laboratory Tests	Results
VOCs (Rule # 1168 of California's SCAQMD)	< 575 g/L
Odor	Slight sweet
Density	8.2 to 8.3 lbs. per U.S. gal. (0,9 to 1,0 g per mL)
Consistency	Liquid
Color	Clear
Shelf life	2 years when stored in original packaging at 73°F (23°C)
Storage conditions	50°F to 90°F (10°C to 32°C)
Flash point (Tag)	> 200°F (93°C)

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Packaging

Product Code	Size
03432000	1 U.S. qt. (946 mL)
03430000	Pop-up dispenser (30 wipes)
03460000	Pop-up dispenser (60 wipes)

4. Rinse the area completely with clean soapy water.
5. Dry the area with another soft, clean white towel.

- For removing semi-dry urethane adhesives or membranes from prefinished wood flooring after the installation is complete (up to 6 hours after installation):
  1. Place a soft, clean white towel soaked with *Ultrabond Urethane Cleaner* or a pre-moistened towelette directly on the affected area.
  2. Allow the cleaner to remain on the dried adhesive for about 30 minutes.
  3. Gently scrape the softened adhesive, using a plastic tool such as an automotive ice scraper or putty knife. Do not use metal blades or scrapers.
  4. Remove loose adhesive with the soft, clean white towel or pre-moistened towelette.
  5. Rinse the area completely with clean soapy water.
  6. Dry the area with another soft, clean white towel.
  7. Repeat if necessary.
- For removing urethane residues from trowels and tools:
  1. Soak trowels and tools in *Ultrabond Urethane Cleaner*.
  2. Scrape and/or wipe off softened adhesive.
  3. Rinse tools with clean soapy water and allow to dry.

STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:

MAPEI Headquarters of the Americas
1144 East Newport Center Drive
Deerfield Beach, Florida 33442
Phone: 1-888-US-MAPEI
(1-888-876-2734)

Technical Services
1-800-992-6273 (U.S. and Puerto Rico)
1-800-361-9309 (Canada)

Customer Service
1-800-42-MAPEI (1-800-426-2734)

For the most current BEST-BACKED™ product data and warranty information, visit www.mapei.com.

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Appendix I

NYSDEC Analytical Services Protocol (ASP) Category B Deliverable Data (CD-ROM)

Submitted as a Separate File

Appendix J

Data Usability Summary Reports (CD-ROM)

Submitted as a Separate File