P.O. Box 1839
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Donan Environmental Services, Inc.

SITE ASSESSMENT REPORT

Soil and Groundwater Investigation
Second Quarter 2016

UNAUTHORIZED RELEASE CASE NUMBER: H03089-001

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Golden State Gasoline
225 West Washington Ave.
Escondido, California

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Prepared By:
DONAN ENVIRONMENTAL SERVICES, INC.

June 30, 2016

Copy __ of 3

GOLDEN STATE GASOLINE, UR#H03089-001
225 WEST WASHINGTON AVENUE, ESCONDIDO, CA
SITE ASSESSMENT REPORT, SOIL AND GROUNDWATER INVESTIGATION
SECOND QUARTER 2016
June 30, 2016

EXECUTIVE SUMMARY

SITE ASSESSMENT ACTIVITIES	
SITE INFORMATION	
Location/Address:	Golden State Gasoline, Escondido
Owner/RP:	Golden State Gasoline, Inc.
Address:	181 North 2nd Street, El Cajon, CA, 92021
Consultant:	Donan Environmental Services, Inc. / Greg Delson, P.G.
Consultant Phone/Fax/email:	(760) 639-3600 / (760) 639-3603 / gd@desxyz.com
PROJECT INFORMATION	
GW Monitoring Start Date:	2005
Nature of GW Impact:	UST release of gasoline and diesel to soil and groundwater
Number of **onsite wells**:	7 GW Monitoring (MW1, MW2, MW3, MW4, MW5, MW6, and DW14) 4 DPE Extraction Wells (DE1, DE2, DE3, and DE4)
Number of **offsite wells**:	17 GW Monitoring (DW7, DW8, DW9, DW10, DW11, DW12, DW13, DW15, DW16, DW17, DW18, DW19, DW20, DW21, DW22, DW23, and DW24) 2 DPE extraction wells (DE5 and DE6)
Site Well Identification:	MW1, MW2, MW3, MW4, MW5, MW6, DW7, DW8, DW9, DW10, DW11, DW12, DW13, DW14, DW15, DW16, DW17, DW18, DW19, DW20, DW21, DW22, DW23, DW24, DE1, DE2, DE3, DE4, DE5, and DE6
Previous Remediation Activities:	5-Day High Vacuum Dual-Phase Extraction (HVDPE) pilot test August-September 2013, 30-Day HVDPE Event March 2014, 15-Day HVDPE Event, April 2015
Current Remedial Phase:	Groundwater assessment, IRAP implementation
Site Access Information:	Operating filling station
SOIL ASSESSMENT ACTIVITY 4Q15 AND 2Q16	
Date of Drilling:	DW24, October 6, 2015 DE1, DE2, DE3, and DE4, April 7-8, 2016 DE5 and DE6, May 20, 2016
Number of Wells Installed:	7 (DW24, DE1, DE2, DE3, DE4, DE5, and DE6)
Soil Samples Collected:	28
Chemical Analysis:	U.S. EPA 8015-modified: TPHg and TPHd, U.S. EPA 8260B: BTEX, MTBE, DIPE, ETBE, TAME, TBA
Laboratory Used:	Chemtek Environmental Laboratories
SOIL CHEMICALS OF CONCERN AND CONCENTRATIONS, 4Q15 and 2Q16	
TPHg No. of samples detected:	16/28 up to 1,770 parts per million (ppm) (DE3-15)
Benzene No. of samples detected:	9/16 up to 11,700 parts per billion (ppb) (DE3-15)
MTBE: No. of samples detected:	2/16 up to 14,200 ppb (DE1-15)
GROUNDWATER ASSESSMENT ACTIVITY, 2Q16	
Well Development:	DW24, October 13, 2015 DE1, DE2, DE3, and DE4, April 11, 2016 DE5 and DE6, June 3, 2016
Date of 2Q16 Monitoring Activities:	April 25-May 3, 2016
Number of Wells Gauged Q2:	28, MW1, MW2, MW3, MW4, MW5, MW6, DW7, DW8, DW9, DW10, DW11, DW12, DW14, DW15, DW17, DW18, DW19, DW20, DW21, DW22, DW23, DW24, DE1, DE2, DE3, DE4, DE5, and DE6
Number of Wells With Free Product Q2:	9 with sheen (MW1, MW2, MW3, MW4, MW5, MW6, DW11, DW17, and DE1)
Wells Sampled Q2:	26, MW1, MW2, MW3, MW4, MW5, MW6, DW7, DW8, DW9, DW10, DW11, DW12, DW14, DW15, DW17, DW18, DW19, DW20, DW21, DW22, DW23, DW24, DE1, DE2, DE3, and DE4

GOLDEN STATE GASOLINE, UR#H03089-001
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SITE ASSESSMENT REPORT, SOIL AND GROUNDWATER INVESTIGATION
SECOND QUARTER 2016
June 30, 2016

EXECUTIVE SUMMARY

SITE ASSESSMENT ACTIVITIES	
Chemical Analyses :	U.S. EPA 8015-modified: TPHg and U.S. EPA 8260B: BTEX, MTBE, DIPE, ETBE, TAME, TBA
Laboratory Used:	Chemtek Environmental Laboratories
Purge Method:	Bailer
Sample Method:	Disposable polyethylene bailer
Storage/Disposal Method:	55-Gallon DOT Drums/pending laboratory analysis results
HYDROGEOLOGIC CONDITIONS, 2Q16	
GW Depth Range (feet TOC):	10.29 (DW23) -15.43 (DW15)
GW Elevation Range (feet amsl):	636.22 (DW24) - 637.85 (DW20)
Product thickness (feet):	N/A
Groundwater Gradient/Direction:	Groundwater flows away from the Site to the southwest at a gradient of 0.003 feet/feet. Bifurcated groundwater flow directions are east of the Site as indicated on Figure 3.
CHEMICALS OF CONCERN AND CONCENTRATIONS, 2Q16	
TPHg: No. of wells detected/Range:	18/26 489,000 ppb (MW2) - 540 ppb (DW8)
Benzene: No. of wells detected/Range:	18/26 22,300 ppb (DE1) - 2 ppb (DW14)
MTBE: No. of wells detected/Range:	13/26, 108,000 ppb (DE1) - 16 ppb (DW14)

LOW-THREAT CLOSURE POLICY (LTCP) STATUS

Is this site suitable for closure based on the LTCP checklist?

NO (refer to enclosed LTCP Checklist (May 27, 2015) from GeoTracker)

PROPOSED FUTURE WORK/RECOMMENDATIONS

1) The TPHg and benzene impacts in groundwater at DW24, and product sheen observed in DW24 in March 2016 (Table 3), indicate probable plume migration under the Classical Academy High School property (Figures 7, 9 and 10). Install proposed wells DW25 and DW26 (Figure 11) to investigate possible migration pathways outward from the school property to determine whether well installation on the Classical Academy High School property should be recommended.

2) To investigate the downgradient lateral extent of the dissolved-phase plume, outward from DW24, install and sample proposed well DW27 (Figure 11).

3) In response to the enclosed DEH Letter (February 17, 2016) implement the HVDPE removal action in the DES Remediation Work Plan (October 21, 2015) using the a mobile HVDPE System.

4) In response to the enclosed DEH Letter (July 6, 2015) continue quarterly groundwater monitoring of DW21, DW22, DW23, and newly-installed well DW24 to build a cumulative data record without data gaps to support a future basis for Case Closure. Should the proposed wells DW25, DW26, and DW27 in this Report be approved, monitor them quarterly with the wells listed above. In response to the enclosed DEH Letter (July 6, 2015), monitor the rest of the Case well network semi-annually.

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

GOLDEN STATE GASOLINE (T0607302617) - (MAP)

SIGN UP FOR EMAIL ALERTS

225 W WASHINGTON AV
ESCONDIDO, CA 920252631
SAN DIEGO COUNTY
LUST CLEANUP SITE
PRINTABLE CASE SUMMARY / CSM REPORT

CLEANUP OVERSIGHT AGENCIES
SAN DIEGO COUNTY LOP *(LEAD) - CASE #: H03089-001*
CASEWORKER: *LAURIE APECECHEA*
SAN DIEGO RWQCB (REGION 9) - *CASE #: 9UT3858*

CUF Claim #:	16295
CUF Priority Assigned:	C
CUF Amount Paid:	$828,468

LTCP CHECKLIST AS OF 5/27/2015

VIEW PATH TO CLOSURE PLAN BACK TO CASE SUMMARY

General Criteria - *The site satisfies the policy general criteria*	**NO**
a. Is the unauthorized release located within the service area of a public water system?	YES
b. The unauthorized release consists only of petroleum (info).	YES
c. The unauthorized ("primary") release from the UST system has been stopped.	YES
d. Free product has been removed to the maximum extent practicable (info).	NO
e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed (info).	NO
f. Secondary source has been removed to the extent practicable (info).	NO
g. Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15.	YES
h. Does a nuisance exist, as defined by Water Code section 13050.	NO

1. **Media-Specific Criteria: Groundwater** - *The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent, and meets all of the additional characteristics of one of the five classes of sites listed below.*	**NO**
EXEMPTION - Soil Only Case (Release has not Affected Groundwater - Info)	NO

ADDITIONAL QUESTIONS - The following conditions exist that do not meet the policy criteria:

Plume Length (That Exceeds Water Quality Objectives) :
- Unknown

Plume is Stable or Decreasing in AREAL Extent :
- Unknown

Free Product in Groundwater :
- Yes

Free Product Has Been Removed to the Maximum Extent Practicable :
- No

For sites with free product, the Plume Has Been Stable or Decreasing for 5-Years (info) :
- No

For sites with free product, owner Willing to Accept a Land Use Restriction (if required) :
- Unknown

Free Product Extends Offsite :
- Unknown

Benzene Concentration :
- ≥ 3,000 µg/l

MTBE Concentration :
- ≥ 1,000 µg/l

Nearest Surface Water Body (From Plume Boundary) :

- > 250 Feet and ≤ 1,000 Feet

2. Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air - *The site is considered low-threat for the vapor-intrusion-to-air pathway if site-specific conditions satisfy items 2a, 2b, or 2c*

3. Media Specific Criteria: Direct Contact and Outdoor Air Exposure - *The site is considered low-threat for direct contact and outdoor air exposure if it meets 1, 2, or 3 below.*

Additional Information

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STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

GOLDEN STATE GASOLINE (T0607302617) - (MAP)

SIGN UP FOR EMAIL ALERTS

225 W WASHINGTON AV
ESCONDIDO, CA 920252631
SAN DIEGO COUNTY
LUST CLEANUP SITE
PRINTABLE CASE SUMMARY / CSM REPORT

CLEANUP OVERSIGHT AGENCIES
SAN DIEGO COUNTY LOP *(LEAD)* - *CASE #: H03089-001*
CASEWORKER: LAURIE APECECHEA
SAN DIEGO RWQCB (REGION 9) - *CASE #: 9UT3858*

CUF Claim #:	16295
CUF Priority Assigned:	C
CUF Amount Paid:	$828,468

PATH TO CLOSURE PLAN FY 12/13 AS OF 5/27/2015

BACK TO LTCP CHECKLIST

IMPEDIMENT 1:

General Criteria D: Free product has NOT been removed to the maximum extent practicable

Step to Resolve Impediment 1 - Step 1:
Free product mitigation will be addressed in Corrective Action Plan.

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
6/30/2016	

IMPEDIMENT 2:

General Criteria E: A conceptual site model that assesses the nature, extent, and mobility of the release has NOT been developed

Step to Resolve Impediment 2 - Step 1:
Complete soil and groundwater assessment. Currently one off-site groundwater monitoring well is to be installed to continue soil and groundwater assessment.

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
2/1/2016	

IMPEDIMENT 3:

General Criteria F: Secondary source has NOT been removed to the extent practicable

Step to Resolve Impediment 3 - Step 1:
Secondary source mitigation will be addressed in Corrective Action Plan.

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
6/30/2016	

IMPEDIMENT 4:

Media-Specific Criteria: Groundwater: The contaminant plume that exceeds water quality objectives is NOT stable or decreasing in areal extent, and does NOT meet all of the additional characteristics of one of the five classes of sites.

Conditions that do not meet the policy criteria:
- Plume Length (That Exceeds Water Quality Objectives): Unknown
- Plume is Stable or Decreasing in **AREAL** Extent: Unknown
- Free Product in Groundwater: Yes
- Free Product Has Been Removed to the Maximum Extent Practicable: No
- For sites with free product, the Plume Has Been Stable or Decreasing for 5-Years (info): No
- For sites with free product, owner Willing to Accept a Land Use Restriction (if required): Unknown
- Free Product Extends Offsite: Unknown

- Benzene Concentration: ≥ 3,000 µg/l
- MTBE Concentration: ≥ 1,000 µg/l
- Nearest Surface Water Body (From Plume Boundary): > 250 Feet and ≤ 1,000 Feet

Step to Resolve Impediment 4 - Step 1:
Complete groundwater assessment. Currently one off-site groundwater monitoring well is to be installed to continue groundwater assessment.

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
2/1/2016	

IMPEDIMENT 5:

Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air: The site is NOT considered low-threat for the vapor-intrusion-to-air pathway and site-specific conditions do NOT satisfy items 2a, 2b, or 2c .

Conditions that do not meet the policy criteria:

- Soil Gas Samples: Taken Incorrectly
- Exposure Type: Commercial
- Free Product: In Groundwater
- Bioattenuation Zone Thickness: ≥ 5 Feet and < 10 Feet
- O2 Data in Bioattenuation Zone: No O_2 Data
- Benzene in Groundwater: ≥ 1,000 µg/l
- Soil Gas Benzene: ≥ 85,000 µg/m^3 and < 280,000 µg/m^3
- Soil Gas EthylBenzene: ≥ 3,600 µg/m^3 and < 1,100,000 µg/m^3
- Soil Gas Naphthalene: ≥ 310 µg/m^3 and < 93,000 µg/m^3

Step to Resolve Impediment 5 - Step 1:

Complete interim remedial action (dual-phase extraction) to mitigate the health risk from benzene and MTBE vapors into the E&L Supply Building on the adjacent property to the east of the site. Soil vapor sampling and a health risk assessment may be required for the Classical Academy High School building(s) located to the south, depending upon groundwater analytical results.

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
10/1/2017	

REQUIREMENTS ALONG PATH TO CLOSURE

DATE IDENTIFIED FOR CLOSURE	CLOSURE INITIATED BY	RP NOTIFICATION DATE	PUBLIC PARTICIPATION COMPLETION DATE	WELL DESTRUCTION LETTER DATE	WELL DESTRUCTION DATE	WASTE DISPOSAL DATE	LAND USE RESTRICTION DATE	SITE CLOSURE DATE
	SAN DIEGO COUNTY LOP							

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SIGNATORY PAGE

Designation:
DES Project Number 09E3857
Site Assessment Report - Soil and Groundwater Investigation
Second Quarter 2016

Report Prepared For:
Golden State Gasoline, Inc.
225 West Washington Ave.
Escondido, CA 92025

Submitted By:
DONAN ENVIRONMENTAL SERVICES, INC.

Greg Delson, PG#6983
Senior Vice President/
Technical Operations

REGISTERED GEOLOGIST
GREGORY W. DELSON
Exp 5-31-18
No. 6983
STATE OF CALIFORNIA

Anderson M. Donan
General Manager

cc: Ms. Laurie Apecechea, County of San Diego DEH

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DE5 Borehole/Well Log
DE6 Borehole/Well Log

SUPPORT DOCUMENTS

DEH Letter (July 6, 2015) - Approval to Install DW24
DEH Letter (February 17, 2016) - Remediation Work Plan Approval
Monitoring Well Construction Permit # LMWP-001913 (September 25, 2015)
Monitoring Well Construction Permit # LMWP-002207 (March 28, 2016)
Monitoring Well Construction Permit # LMWP-002281 (May 5, 2016)
Well Development log (October 13, 2015)
Well Development logs (April 11, 2016)
Well Development logs (June 3, 2016)
Monitoring Well Gauging Log (April 25, 2016)
Well Purging/Sampling Logs (April 25-29, 2016)
Soil Safe Manifest, dated May 5, 2016
Non-Hazardous Waste Manifest No. 725002
DEH Letter (May 11, 2015)
Geotracker Upload Confirmations

LABORATORY REPORTS

Chemtek Environmental Laboratories Report of October 15, 2015
Chemtek Environmental Laboratories Report of April 18, 2016
Chemtek Environmental Laboratories Report of June 2, 2016
Chemtek Environmental Laboratories Report of May 20, 2016

P.O. Box 1839
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(760) 639-3600
Fax (760) 639-3603

Donan Environmental Services, Inc.

June 30, 2016
Project Number: 09E3857

Report Delivered To:
Mr. Samuel Boyd
Golden State Gasoline, Inc.
225 West Washington Ave.
Escondido, CA 92025

RE: SITE ASSESSMENT REPORT
Soil and Groundwater Investigation
Second Quarter 2016
Unauthorized Release Case Number: H03089-001
Golden State Gasoline at 225 West Washington Ave., Escondido, California (Site)

Donan Environmental Services, Inc. (DES) has prepared this Site Assessment Report (SAR) for the above-referenced Site in response to the County of San Diego Department of Environmental Health (DEH) letters dated July 6, 2016 and February 17, 2016. In order to determine the Site's progress towards closure, the groundwater data is also evaluated relative to the State Water Resources Control Board (SWRCB) Low-Threat Underground Storage Tank Case Closure Policy (LTCP) groundwater cleanup levels of "product removed to the extent practicable", benzene concentrations less than 3,000 ppb, and MTBE concentrations less than 1,000 ppb.

The work performed in this investigation was conducted in general accordance with the current DEH Site Assessment and Mitigation Guidelines.

1.0 INTRODUCTION

1.1 Site Use, Location, and Description

The Site is located in a commercially-developed neighborhood of Escondido, east of Interstate 15, close to the intersection of Highway 78 and Interstate 15. Refer to the enclosed site location map (Figure 1).

The Site is a commercial establishment, in use as a filling station. The Site improvements include one building housing a store, a cluster of three gasoline underground storage tanks (USTs), three fuel pump islands, a paved parking lot, new dual phase extraction wells DE1, DE2, DE3, and DE4 and the pre-existing onsite monitoring wells, MW1, MW2, MW3, MW4, MW5, MW6, and DW14. The onsite wells are augmented by an offsite groundwater monitoring well network consisting of DW7, DW8, DW9, DW10, DW11, DW12, DW13, DW15, DW16, DW17, DW18, DW19, DW20, DW21, DW22, and DW23. Recently-installed groundwater

monitoring well DW24 and DPE extraction wells DE5 and DE6 are also part of the offsite well network. Refer to the enclosed site plan (Figure 2).

1.2 Water Use Basin

The Site's groundwater quality objectives are subject to the beneficial water uses designated by the San Diego Regional Water Quality Control Board (RWQCB) Basin Plan (1994, as amended April 25, 2007) for the Escondido Hydrologic Subarea (4.62).

1.3 General Chronology

The activities leading up to this Report are as follows:

September 28, 2010	On September 28, 2010, DES submitted a SAR that presented the results of soil and groundwater investigation conducted in August 2010. The investigation found groundwater contamination in offsite wells. For a depiction of the offsite contamination migration concern, refer to enclosed Figure 4. The DES SAR (September 28, 2011) recommended that additional wells be installed to assess the lateral extent of groundwater impacts.
November 2010	In a DEH email (November 4, 2010), the DEH directed that a historical records review be conducted to evaluate potential offsite sources of petroleum hydrocarbon impacts.
August 2011	The results of the offsite records review and an offsite conceptual impact model were presented in DES Report (September 22, 2011). Three potential sources of offsite impacts were identified in the DES Report (September 22, 2011) (refer to enclosed DES Report (January 8, 2014) - Figure 4). Based on the findings, the DES Report (September 22, 2011) recommended installation of wells east of the Site to evaluate potential co-mingling of offsite upgradient releases with the Site release. On September 22, 2011, DES submitted a Work Plan to investigate the downgradient impacts from the site and the impacts from the identified offsite sources.
Aug.-Sept. 2013	On August 23 to September 3, 2013, DES conducted a high-vacuum dual-phase extraction (HVDPE) pilot test at the Site in accordance with the DES Interim Remedial Action Plan (IRAP) (September 22, 2011). The pilot test consisted of a 5-day test that included HVDPE in wells MW1, MW2, MW3, MW4, and MW5. The results of the pilot test were presented in a DES Report (January 9, 2014). The DES Report (January 9, 2014) indicated that after conducting HVDPE in wells MW2 and MW5, measurable thicknesses of free product were measured for the first time at the Site in Wells MW2 and MW5. Upon completing the recovery monitoring on September 3, 2013, free product thicknesses of 0.48 feet in MW5 and 0.33 feet in MW2 were measured (Table 3). The appearance of product in MW2 and MW5 during the pilot test confirmed the conceptual concern in the DES SAR (September 28, 2010) that free product impacts are submerged below the water table at the Site. Further details on the results of the

	HVDPE pilot test and the appearance of product during the pilot test are discussed in DES Report (January 9, 2014).
October 2013	DES drilled 6 boreholes and collected soil samples, installed, and constructed groundwater monitoring wells (DW15, DW16, DW17, DW18, DW19, and DW20). DES had the soil samples analytically tested by a State-certified laboratory. Well development and groundwater sampling then followed. The results of the October 2013 soil and groundwater investigation and September 2013 groundwater monitoring were presented in the DES SAR (January 8, 2014). The DES SAR (January 8, 2014) found that the soil and groundwater data indicated a 3rd-Party offsite source of contamination to the east of the Site. To investigate this concern, DES proposed soil and groundwater investigation at the former Nelson Trust Case site.
December 2013	DES conducted the Fourth Quarter 2013 Groundwater monitoring event. The results of the groundwater monitoring were presented in the DES Report (April 3, 2014). The DES Report (April 3, 2014) confirmed the findings of the DES SAR (January 8, 2014) and provided further evaluation of how the City of Escondido Storm drain system likely causes a southward component of groundwater flow and contamination migration at the former E&L Supply property (refer to Figure 4 of this Report).
February 2014	The DEH reviewed the DES SAR (January 8, 2014) and provided comments in the enclosed DEH Letter (February 21, 2014). The DEH Letter (February 21, 2014) indicated installation of proposed groundwater monitoring wells DW26 and DW27 was not required. The directive to not install DW26 and DW27 suggests that the impact of the upgradient offsite sources is sufficiently assessed in terms of the investigation of GSG Site UR# H03089-001. The DEH Letter (February 21, 2014) provides detailed directives on the investigation of the downgradient portions of the GSG Site release.
March 2014	DES conducted a 30-Day HVDPE remediation event from March 4, 2014 to April 3, 2014. The results of the 30-Day HVDPE Event were presented in the DES Report (May 7, 2014). The DES Report (May 7, 2014) recommended further remediation. The findings from the 30-Day HVDPE event were used to develop the contamination mass estimates discussed in Section 5.1.4 of this Report.
April 2014	DES submitted a Work Plan, dated April 7, 2014, in response to the DEH Letter (February 21, 2014).
May 2014	The DEH issued a Work Plan Approval Letter (May 20, 2014) for the DES Work Plan (April 7, 2014).
August 2014	DES worked with offsite property owners to obtain access for drilling.
September 2014	DES drilled two boreholes and collected soil samples, and installed groundwater monitoring wells DW21 and DW22 (Figure 22). DES had the soil samples analytically

	tested by a State-certified laboratory. DES re-drilled and redeveloped DW9. DES also inventoried, labeled, and stored drummed soil waste pending proper disposal.
September 2014	DES developed, gauged, purged, and sampled the two new wells (DW21 and DW22).
September 2014	DES conducted the Third Quarter 2014 groundwater monitoring event at the site. The monitoring results were presented in DES Report (March 19, 2015).
December 2014	DES conducted the Fourth Quarter 2014 groundwater monitoring event at the site. The monitoring results were presented in DES Report (March 24, 2015).
January 2015	In a Letter dated January 23, 2015, the DEH directed that a design be prepared for an onsite HVDPE remediation system.
March 2015	Upon obtaining access to drill, DES installed and sampled well DW23.
May 2015	Soil and groundwater results for DW21, DW22 and DW23 were presented in the DES Site Assessment Report (May 22, 2016). The Report recommended to install downgradient well DW24 to determine if there are sufficient hydrogeologic conditions for the dissolved-phase plume to migrate under the Classical Academy High School property.
July 2015	The enclosed DEH Letter (July 6, 2015) approved the installation of DW24.
October 2015	DES submitted a Remediation Work Plan (October 21, 2015) in response to the DEH Letter (January 23, 2015). The DES Remediation Work Plan presented the design for an onsite fixed-base remediation system, including the installation of the six new HVDPE Extraction Wells DE1, DE2, DE3, DE4, DE5, and DE6.
October 2015	DES installed and sampled well DW24. DES had the soil samples analytically tested by a State-certified laboratory. Well development and groundwater sampling then followed.
February 2016	The enclosed DEH Letter (February 17, 2016) approved the DES Remediation Work Plan (October 21, 2015) with a clarification that a mobile HVDPE system be used rather than installation of a fixed-base system. With the DEH approval of the DES Remediation Work Plan (October 21, 2015), installation of HVDPE extraction wells DE1, DE2, DE3, DE4, DE5, and DE6 was authorized.
April 2016	DES drilled four onsite boreholes, collected soil samples, and constructed DPE extraction wells DE1, DE2, DE3, and DE4. DES had the soil samples analytically tested by a State-certified laboratory. Well development and groundwater sampling then followed.

May 2016	DES drilled two offsite boreholes, collected soil samples, and constructed DPE extraction wells DE5 and DE6. DES had the soil samples analytically tested by a State-certified laboratory. Well development then followed. Groundwater samples have not yet been collected from DE5 and DE6.
June 2016	DES prepared this Report.

1.4 Offsite Contamination Source Concerns

The DES Report (September 22, 2011) evaluated the offsite sources of contamination that may be in the vicinity of the GSG Site. Real estate records indicate that the GSG Site was first developed in 1970 and a 1974 aerial photograph in the DES Report (September 22, 2011) shows dispenser islands that match the current configuration at the Site. Therefore, the records support a conclusion that USTs were operated at the GSG Site from 1970 to present-day. Operation of the USTs in the 1970 to present-day time frame indicates sufficient conditions for both degraded older gasoline and MTBE-containing newer gasoline to be components of the GSG release.

Review of offsite 3rd-Party releases provided information on other sources of degraded gasoline that may have co-mingled with the degraded gasoline in the older portion of the GSG Site release. The DES Report (September 22, 2011) presented a conceptual impact model for regional impacts that may affect the former E&L Supply property and the GSG Site (refer to enclosed Figure 4). The following sources of hydrocarbon releases and contamination migration mechanisms were considered for the offsite conceptual impact model (Figure 4):

1) Former UST location at E&L Supply. The DEH Report (May 4, 1990) indicates possibly un-assessed impacts west of the dispenser on the west end of the UST tank pit.

2) Former USTs at Brake Depot (600 N. Broadway). Reported USTs with large volumes of 3,000 to 6,000 gallons may have been removed from the Brake Depot property in 1988, prior to regulation of UST removals by the DEH.

3) Nelson Trust Case (Closed) (551 N. Broadway). The DEH Report for this case indicates soil contamination was closed in-place. Furthermore, little groundwater data was collected and the groundwater data from 20 feet bgs likely did not represent impacts at the water table.

4) Storm drain and sewer maps show pathways for contamination migration from Broadway to the former E&L Supply property and the GSG Site. Storm water leaks from the storm drain system provide increased hydraulic head to mobilize upgradient groundwater impacts into the former E&L Supply property and the GSG Site. The hydrodynamics around the storm drain at the former E&L Supply property may also provide a barrier for eastward migration of MTBE-containing newer gasoline. This barrier to eastward contamination may have been introduced when the storm drains were constructed after 1983.

   In the City of Escondido documents presented in the DES Report (September 22, 2011), the storm drain design plans were approved in 1983. The City of Escondido also has contract records on file that excavation of the storm drains started in 1983. The City of Escondido also opined that their typical storm drain construction projects are completed within 6 months to a

year. In later design plans from 2000, the storm drain system on the former E&L Supply property is depicted as "existing." Therefore, the storm drain system was installed between 1983 and 2000, and it is probable that the storm drain was installed in the mid 1980s. After this time frame, MTBE was mandated into the California gasoline supply after 1990. Therefore, the hydrodynamics of the storm drain recharge east of the Site may have blocked later MTBE-containing releases from migrating eastward.

Whereas, eastward migration of non-MTBE containing older gasoline from the GSG Site (in the 1970 to 1983 time frame) was not subject to that boundary condition. Therefore, it is probable that benzene impacts east of the Site and east of the stormdrains on the former E&L Supply property are a result of co-mingling of the older gasoline plume from the GSG Site and the older gasoline from the 3rd-Party releases to the east.

The DES Report (September 22, 2011) presented the following key conclusions:

1) The premature closure of contamination in-place at the Nelson Trust Case is a likely source of co-mingled impacts at the former E&L Supply property and the GSG Site. Re-mobilization of contaminants at the Nelson Trust Case into the groundwater is a high-risk contamination concern because of the shallower water table that has been exhibited in the area during recent monitoring (refer to Table 3). During the investigation of the Nelson Trust Case release, the water table was presumed to be 20 feet bgs based on the private well that was located on the property. The construction of this well was not documented and it is not known if the screen interval crossed the water table. The recent groundwater monitoring events at the GSG Site show that groundwater DTW ranges from about 10 to 12 feet bgs (refer to enclosed Table 3). If rising groundwater table has occurred at the Nelson Trust Case property since 1998, then residual contamination, which was closed in-place at 12-14 feet bgs, has likely re-mobilized into the shallow groundwater (likely at 12 feet bgs). This new source of contamination in groundwater is a concern for the adjacent properties and the GSG Site.

2) Lack of documentation at the DEH for the six USTs presumably removed at the Brake Depot site is a data gap that indicates a high-risk contamination concern.

3) The lack of MTBE in Wells DW11 and DW12 on the E&L Supply property, suggest impacts from old gasoline. The three high risk sites (Figure 4) are sources of degraded gasoline that may co-mingle with degraded gasoline from the GSG Site plume.

2.0 OBJECTIVES

The objective is to further assess the petroleum-hydrocarbon impact from unauthorized release H03089-001 to soil and groundwater outward from the existing Site well array.

3.0 WORK DESCRIPTION

The soil and groundwater investigation scope of services was performed in general accordance with the current County of San Diego DEH Site Assessment and Mitigation Guidelines.

The completed scope of services, which was used to meet the project objectives, is presented in the description of the following tasks:

3.1 Project Set-Up

3.1.1 Work Plan Approval

The work was conducted in accordance with the procedures in the DES Work Plan (April 7, 2014) with new wells locations authorized in follow-up letters from the DEH. The DES Work Plan (April 7, 2014) was approved by the enclosed DEH letter (May 20, 2014). The assessment activities were conducted in accordance with the Work Plan and the enclosed DEH Letters (July 6, 2015 and February 17, 2016).

3.1.2 Permit

The multiple well installation events were conducted under the authorization of the enclosed DEH-approved drilling permits LMWP-001913, LMWP-002207, and LMWP-002281.

3.1.3 Utility Clearance

The proposed drilling locations were marked out at the site. Underground public utilities at the Site drilling locations were cleared by Underground Service Alert. Prior to drilling, the upper 5 feet of DW24, DE1, DE2, DE3, and DE4 was extracted with the use of an air knife -vacuum unit. The nearby active product lines and dispensers at DE1 through DE4 justified the use of the air knife method to fully clear the new well drilling locations. Well DW24 is located in the City of Escondido right of way and various active sewer, water and electrical lines are near DW24, which warranted the use of air knife digging at that location. The upper 5 feet in offsite wells DE5 and DE6 was extracted via hand auger methods.

3.2 Drilling Activities

3.2.1 Drilling Operations

In 2015 and 2016, the following well installation activities were conducted:

1) On October 6, 2015, California Pacific Drilling installed well DW24 using 8-inch diameter hollow-stem augers advanced by a B-61 drill rig.

2) On April 7-8, 2016, Tri-County Drilling installed onsite HVDPE extraction wells DE1, DE2, DE3, and DE4 using 10-inch hollow-stem augers advanced by a CME-75 drill rig.

3) On May 20, 2016, Tri-County Drilling installed offsite HVDPE extraction wells DE5 and DE6 using 10-inch hollow-stem augers advanced by a CME-75 drill rig.

For each of the well installation events, A DES PG oversaw the onsite drilling activities. DES logged the soil borings in accordance with the Unified Soil Classification System (USCS) protocols (enclosed in Appendix - Logs).

3.2.2 Soil Sampling

During the well installation activities, the collection of soil samples was attempted at intervals of five feet in the native soil at depths from 5 fbg to the total depth of each boring. A split spoon soil sampler was advanced by

the driller to collect the soil samples. Three 6-inch-long metal rings were placed inside the split-spoon sampler, per sampling interval. Upon breaking open the collected sample, the lower ring was capped, labeled, and placed into an ice-chilled cooler for analytical testing. The soil in the upper two rings was typically extruded into a re-sealable plastic bag and inspected for lithologic characteristics and contaminant indicators. The bagged soil sample was later tested with a photo-ionization detector (PID) for petroleum hydro carbon soil vapor concentrations. Blow counts were recorded by the driller per soil sample and are listed on the applicable Borehole/Well Logs (enclosed).

During the 2015 to 2016 drilling activities, a total of 28 soil samples were collected with the split-spoon sampler and were prepared for transmittal to the analytical laboratory. The selected soil sample locations and depths are presented in the enclosed Table 1.

3.2.3 Well Construction Phase

Each monitoring well was constructed immediately following the boring termination. Groundwater monitoring well DW24 consisted of a 2-inch diameter blank casing (grade to 5 feet below ground surface (bgs)), 2-inch diameter 0.02-inch slotted casing (5 to 20 feet bgs), a traffic box, concrete seal (grade to 3 feet bgs), bentonite chip seal (3 to 4 feet bgs), and a number 3 sand pack (4 to 21 feet bgs). The HVDPE extraction wells DE1 through DE6 were installed with the same configuration as DW24 but with 4-inch diameter casing and screen (Table 2).

After the well casing and sand pack were installed, the wells were surged with a surge block, to develop the sand pack. As the sand settled, additional sand was added. After the development was completed, dehydrated bentonite pellets were placed in the outer well annulus and hydrated with water. Upon completion of construction, the wells were capped with screw-on lids and padlocked. Each well's construction detail was rendered on the enclosed Borehole/Well Logs and summarized on Table 2.

3.2.4 Well Development

After constructing the wellhead, the wells were developed by purging (refer to the enclosed Well Development Logs (October 13, 2015, April 11, 2016, and June 3, 2016) in Appendix - Support Documents). Purging was conducted until measured groundwater parameters of temperature, electrical conductivity, and pH values stabilized.

3.2.5 Drilling Waste Management

The soil cuttings and waste generated by the drilling activities were placed into labeled drums. Fourteen drums of soil were transported offsite for proper disposal on May 5, 2016 (refer to the enclosed Soil Safe Manifest, dated May 5, 2016). Soil disposal documentation for wells DE5 and DE6, which were installed in June 2016, will be presented in future reports.

3.3 Groundwater Activities

3.3.1 Groundwater Monitoring, Purging, and Sampling

A groundwater sampling event was conducted after development of newly-installed wells DE1 through DE4. The existing wells MW1, MW2, MW3, MW4, MW5, MW6, DW7, DW8, DW10, DW11, DW12, DW13, DW14, DW15, DW16, DW17, DW18, DW19, DW20, DW21, DW22, DW23, and the newly–installed wells

DW24, DE1, DE2, DE3, and DE4 were gauged, purged, and sampled on April 25 to May 3, 2016) (refer to the enclosed Well Purging/Sampling Logs).

Each well was gauged for free product and water levels with an interface meter. The groundwater in the wells suitable for sampling was purged until the measured groundwater parameters of temperature, electrical conductivity, and pH values stabilized. Refer to the enclosed Well Purging/Sampling Logs.

Upon completion of the purging, the groundwater in the purged wells was sampled with a single-use disposable bailer. The extracted water, per sample, was decanted into multiple 40 ml glass vials preserved with hydrochloric acid. The water-filled sample containers were capped, labeled, and placed into an ice-chilled cooler. Single-use disposable gloves were used throughout the water sampling activities. The groundwater samples were delivered to a State-certified laboratory for analytical testing.

3.3.2 Groundwater Waste Management

The water wastes generated by the groundwater activities were placed into labeled drums. The 11 drums of groundwater waste were transported offsite for proper disposal on May 5, 2016 (refer to enclosed Non-Hazardous Waste Manifest No. 725002).

3.4 Survey Activities

On October 30, 2015 a state-certified land surveyor, Alta Land Surveying, surveyed DW24 per the state-mandated GeoTracker compliance standards. In June 2016, Wells DE1, DE2, DE3, DE4, DE5, and DE6 were also surveyed by Alta Land Surveying. Wells were surveyed to horizontal coordinates based on the NAD83 datum and to vertical elevations based on the NGVD 29 datum consistent with the existing well network. The GEO_XY and GEO_Z survey data will be uploaded to Geotracker once it becomes available.

4.0 FINDINGS

4.1 Soil Sample Analytical Results

The 2015 to 2016 drilling activities resulted in the collection of a total of 28 soil samples, which were submitted to State-certified laboratory Chemtek Environmental Laboratories (Chemtek) for analytical testing. The soil sample analytical results are listed in Table 1 and in the Chemtek Reports (October 15, 2015, April 18, 2016, and June 2, 2016) (enclosed).

The soil samples were tested by EPA Method 8015-modified for total petroleum hydrocarbons to a gasoline standard (TPHg). These analytical results were reported in the Chemtek Reports (October 15, 2015, April 18, 2016, and June 2, 2016) in parts per million (ppm) or in milligrams per kilogram (mg/kg). The concentration unit of ppm was used in this Report for TPHg in soils.

In the onsite soil borings DE1, DE2, DE3, and DE4, the one soil sample from each onsite soil boring that exhibited the highest TPHg impact or that was collected in the capillary fringe was also analyzed for benzene (B), toluene (T), ethylbenzene (E), xylenes (X), methyl-tertiary-butyl ether (MTBE), ethyl-tertiary-butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary-amyl-methyl ether (TAME), and tertiary-butyl alcohol (TBA), and naphthalene by EPA Method 8260B. In the offsite soil borings, DW24, DE5, and DE6, each soil sample was analyzed for the EPA 8260B analytes listed above.

The EPA Method 8260B analytical results were reported in the Chemtek Reports (October 15, 2015, April 18, 2016, and June 2, 2016) in parts per billion (ppb) or in micrograms per kilogram (ug/kg). The concentration unit of ppb was used in this Report for the BTEX, MTBE, oxygenates, and naphthalene impact to the soil.

4.1.1 TPH-Gasoline Analytical Results

From the 4 soil samples collected in downgradient well DW24, the laboratory reported a TPHg concentration of 0.89 ppm in the soil sample collected at 10 fbg. The laboratory reported ND results for TPHg in the soil samples from 5, 15, and 20 fbg in DW24 (Table 1).

From the 24 soil samples collected from HVDPE extraction wells DE1 through DE6, the laboratory reported TPHg concentrations ranging from a high of 1,770 ppm (DE3-15) to a low of 0.22 ppm (DE3-20) (Table 1).

4.1.2 Benzene Analytical Results

The laboratory reported ND results for benzene in the four soil samples collected from downgradient offsite well DW24 (Table 1).

In the onsite extraction well borings DE1, DE2, DE3, and DE4, the one soil sample from each soil boring that exhibited the highest TPHg impact or that was collected in the capillary fringe was also analyzed for benzene. In the onsite extraction well soil samples, the laboratory reported benzene highs of 11,700 ppb (DE3-15), 4,760 ppb (DE4-15), 4,420 ppb (DE1-15), and 2,300 ppb (DE2-15) (Table 1).

In the 8 soil samples collected from offsite extraction well borings DE5 and DE6, the laboratory reported benzene highs of 2,040 ppb (DE5-15) and 453 ppb (DE6-15) (Table 1).

4.1.3 MTBE Analytical Results

The laboratory reported ND results for MTBE in the four soil samples collected from downgradient offsite well DW24 (Table 1).

In the onsite extraction well borings DE1, DE2, DE3, and DE4, the one soil sample from each soil boring that exhibited the highest TPHg impact or that was collected in the capillary fringe was also analyzed for MTBE. In the onsite extraction well soil samples, the laboratory reported MTBE concentrations of 14,200 ppb (DE1-15) and 365 ppb (DE3-15) (Table 1). The laboratory reported ND results MTBE in DE2-15 and DE4-15 (Table 1).

In the 8 soil samples collected from offsite extraction well borings DE5 and DE6, the laboratory reported ND results for MTBE (Table 1).

4.1.4 VOC Analytical Results

Other VOCs were reported in the soil samples (Table 1). Toluene, ethylbenzene, xylenes, and naphthalene were reported in soil samples with benzene impacts (Table 1).

4.2 Updated Groundwater Levels

To evaluate the groundwater flow direction the April 2016 well gauging is discussed below. April 25, 2016, the twenty-seven well in the Case well network were gauged with an oil-water interface probe. Product sheen was observed in MW1, MW2, MW3, MW4, MW5, MW6, DW11, DW17, and DE1 (Table 3).

The stable groundwater level data was used to determine groundwater elevations (GWEs). In April 2016, GWEs ranged between a high of 637.85 feet GWE in DW20 to a low of 636.22 feet GWE in DW24. The deepest depth to groundwater (DTW) level was 15.43 feet below the top of the well casing (toc) in DW15. The shallowest DTW level was 10.29 feet below toc in DW23. Refer to the enclosed Table 3.

4.3 Groundwater Gradient and Flow Direction

The site wells' DTW measurements were compared to the surveyed toc measurements to calculate the respective GWEs relative to the NGVD29 datum. There was no measurable product thickness in any of the wells, therefore, no product thickness correction was required on Table 3.

In April 2016, two groundwater flow pathways were indicated by the GWE data (Figure 3). Figure 3 shows that a southwestward gradient was exhibited in the Site wells and in outward wells to the west. West of the Site tank pit, the groundwater flows to the southwest at a gradient of 0.003 feet per feet (as calculated based on GWE in DW12 and DW7).

East of the Site, the groundwater appears to flow south-southwestward from DW18 to DW24 at a gradient of 0.003 feet per feet (Figure 3). The southward bending groundwater flow path is consistent with the contamination migration pathways discussed in Section 5.2 of this Report. The bending groundwater flow path may also be due to influences from the sewer and storm drain networks in the area (refer to Figure 2 and Figure 4).

There is a storm drain that runs roughly parallel to the building on the E&L Supply property on the east side of the building (Figure 2). Figure 3 shows a GWE high in DW17, which is close to the storm drain. Previous DES reports have found that this storm drain alters groundwater flow conditions seasonally.

4.4 Groundwater Sample Analytical Results

This SAR evaluates the results from the most recent April 2016 groundwater monitoring event in order to incorporate data from newly-installed wells DW24, DE1, DE2, DE3, and DE4. Wells DE5 and DE6 were installed after the April 2016 monitoring event, and dissolved-phase data from those wells is not included in this Assessment DW21, DW22, and DW23 into the assessment.

The existing wells MW1, MW2, MW3, MW4, MW5, MW6, DW7, DW8, DW10, DW11, DW12, DW13, DW14, DW15, DW16, DW17, DW18, DW19, DW20, MW21, MW22, and MW23 were gauged, purged, and sampled on April 25-29, 2016, as indicated on the enclosed purging/sampling logs (Appendices - Support Documents). After development of the new well DW24 on October 13, 2015 and of DE1, DE2, DE3, and DE4 on April 11, 2016, the newly constructed wells were gauged, purged, and sampled, as indicated on the enclosed purging and sampling logs (Appendices - Support Documents). Well DW16 obstructed by roots and suitable for sampling, therefore, 26 groundwater samples were collected from the 27 Site wells available to sample in April 2016. Nine of the twenty-seven Wells (MW1, MW2, MW3, MW4, MW5, MW6, DW11, DW17, and DE1) had evidence of free product in the form of a sheen.

The groundwater samples collected in April 2016 were tested by EPA Method 8015-modified for TPHg. The groundwater samples were also tested by EPA Method 8260B for BTEX, MTBE, ETBE, DIPE, TAME, and TBA, and naphthalene. The laboratory-reported analytical concentrations were converted into equivalent parts per billion (ppb) units for this Report.

4.4.1 TPH-Gasoline Analytical Results

In the April 2016 groundwater samples, the laboratory reported TPHg in 18 of the 26 samples at concentrations ranging from a high of 489,000 ppb (MW2) to a low of 540 ppb (DW8) (Table 4). The laboratory reported a TPHg concentration of 12,700 ppb in the farthest downgradient well DW24 (Table 4). The laboratory reported ND results for TPHg results for DW9, DW10, DW14, DW15, DW17, DW20, DW22, and DW23 (Table 4).

4.4.2 Benzene Analytical Results

In the April 2016 groundwater samples, the laboratory reported benzene in 18 of the 26 samples at concentrations ranging from high of 22,300 ppb (DE1) to a low of 2 ppb (DW14). All concentrations of benzene exceeded the California Drinking Water Maximum Contaminant Level (MCL) of 1 ppb. Benzene concentrations in DE1 (22,300 ppb), MW2 (19,200 ppb), MW3 (16,000 ppb), DW11 (10,900 ppb), DW12 (7,380 ppb), MW1 (6,070 ppb), and MW4 (3,020 ppb) exceeded the LTCP cleanup criteria of 3,000 ppb for benzene. The laboratory reported a benzene concentration of 44 ppb in the farthest downgradient well DW24 (Table 4).

In the April 2016 groundwater samples, the laboratory reported ND results for benzene in DW7, DW8, DW9, DW10, DW13, DW14, DW15, DW16, DW17, DW20, DW22, and DW23 (Table 4).

4.4.3 MTBE Analytical Results

In the April 2016 groundwater samples, the laboratory reported MTBE in 13 of the 26 samples at concentrations ranging from high of 108,000 ppb (DE1) to a low of 16 ppb (DW14). All the reported concentrations of MTBE exceeded the Secondary California Drinking Water (MCL) for MTBE of 5 ppb and the Primary MCL of 13 ppb. The MTBE concentrations in DE1 (108,000 ppb), MW2 (102,000 ppb), MW5 (28,400 ppb), MW1 (2,400 ppb), and MW3 (1,130 ppb) exceeded the LTCP cleanup criteria for MTBE of 1,000 ppb (Table 4).

In the April 2016 groundwater samples, the laboratory reported ND results for MTBE in DW7, DW10, DW11, DW12, DW15, DW17, DW18, DW19, DW20, DW21, DW22, DW23, and DW24 (Table 4).

4.4.4 Other Analytical Results

Table 4 shows that the Laboratory reported various components of BTEX in the same samples exhibiting elevated benzene or TPHg and therefore the other VOC's do not indicate other releases at the Site. The following other VOCs were reported in the water samples DIPE, TAME, TBA, and naphthalene (Table 4).

5.0 UPDATED ASSESSMENT

5.1 Updated Assessment of the Petroleum Hydrocarbon Impacts to the Soil

Soil data was generated during the historical investigations and during the 2015-2016 well installation activities. The 2015-2016 soil data and the historical soil data are summarized on Table 1.Soil data are shown on Plan view on enclosed Figure 5. The locations of geologic cross-sections that show soil data are presented on Figure 5. West-to-east trending Cross-Section A-A' is shown on Figure 6. North-to-south trending Cross-Section B-B' is shown on Figure 7. Based on the historical and current findings, the petroleum hydrocarbon impact to the soil was assessed as follows:

5.1.1 TPH-Gasoline-Impacted Soil

5.1.1.1 Vertical Extent of TPH-Gasoline-Impacted Soil

Analytical results at MW2 delineate the vertical extent of TPHg impacts at the source area. Figure 6 shows two consecutive ND TPHg results in soil samples from 25 and 30 feet bgs in MW2. Reportable TPHg concentrations were detected in the 20-foot bgs samples from borings DW9 at 0.21 ppm (DW9-20'), DW10 at 0.24 ppm (DW10-20'), DW11 at 2.81 ppm (DW11-10'), and DW12 at 4.91 ppm (DW12-20'). However, Figure 5 shows that at all those locations, DW9, DW10, DW11, and DW12, the TPHg concentrations decreased in orders of magnitude vertically between the 15- and 20-foot bgs samples. The data from MW2 and the significant vertical decreases in TPHg impacts in DW9, DW10, DW11, and DW12 indicate that the vertical extent of soil contamination is assessed (Figure 5).

5.1.1.2 Onsite Lateral Extent of TPH-Gasoline-Impacted Soil

The lateral extent of TPHg-impacted soil has been partially assessed by the Site soil sampling efforts. Figure 5 shows that the highest TPHg concentrations, and the source of the TPHg release, are located at the USTs near wells MW1, MW2, and MW5. The release at the Site was discovered during soil sampling that was conducted in support of tank re-lining activities in 1998. The USTs currently remain in place and are active. Cross-Section A-A' on Figure 5 shows that during drilling of HerSchy Boring B-2 in 1998, and D.R Sorben boring B-7 (MW2) in 1999, free product was encountered on the groundwater table at approximately 17.5 feet bgs. Table 3 shows that, since 1999, the groundwater table increased in elevation to approximately 8 to 12 feet bgs at the Site. This increase was recorded in 2005 when the depth to groundwater at the Site was between 8 to 12 feet bgs. This finding suggests that free product at 17.5 feet bgs and its associated smear zone has been submerged by the rising water table.

During a soil investigation to support UST re-lining in 1998, angle borings B-1, B-3, B-4, B-5, and B-6 were advanced. A sample was collected at the base of the 20-foot angled length of auger which corresponded to a depth bgs of about 17.3 feet bgs. Based on this drilling approach, soil samples from 1998 named B-3@20' (etc) actually represent soil from about 17.3 feet bgs. Figure 6 shows that, with the exception of an 8,000 ppm (B-5@20') TPHg concentration at 17.3 feet bgs in B-5, most of the highest TPHg concentrations in soil have been reported in the soil samples collected at 12 or 15 feet bgs. The elevated impacts at 12 to 15 feet bgs are shown by TPHg concentrations of 4,100 ppm (MW2 (B-7) at 12 feet bgs), 1,390 ppm (DW10-15'), 1,840 ppm (DW11-15'), and 293 ppm (DW12-15'bgs) (Figure 5).

The newly-installed 2016 wells also show the 12-17.3 ft smear zone condition by the elevated TPHg concentrations at 15 feet bgs in DE1 (579 ppm at 15 feet bgs), DE2 (490 ppm at 15 feet bgs), DE3 (1,770 ppm at 15 feet bgs) and DE4 (929 ppm at 15 feet bgs) (Figures 5 and 7).

The data show that the highest TPHg concentrations are to be expected in the product smear zone which has been reported at depths of 12 to 17.3 feet bgs at the Site. There are data gaps in determining the lateral extent of TPHg impacts to soil because previous investigations did not sample soil in that interval. Pilot borings for PIC Wells MW3 through MW6 were only sampled at 5 and 10 feet bgs and did not sample the 12 to 17.3-foot interval needed to laterally delineate the TPHg impact. This lack of soil data at 12 to 17.3 feet bgs creates a data gap at MW3, MW4, MW5, and MW6.

5.1.1.3 Offsite Source Contributions to Bifurcated Plume

The TPHg concentration soil iso-contours in Figure 5 depict the bifurcated plume findings presented in the previous DES SAR (January 8, 2014). The TPHg impacts of 293 ppm in DW12-15' and 3,020 ppm in DW18-16' indicate product migration on the water table from an offsite source east of the Site and the E&L Supply property (Figure 5).

Figure 5 shows that the Nelson Trust Case tank pit is located east of the TPHg impacts in DW18 and east of the Car Rental Lot. During investigation of the Nelson Trust Case, TPHg of 394 ppm was reported in Sample SB-3-12' at 12 feet bgs (Figure 5). It is likely that the 12-foot bgs sample under-represents the impact at the Nelson Trust Case because the sample was collected above the product smear zone that was anticipated to be at 20 feet bgs at the Nelson Trust Case. The lateral extent of TPHg impacts in the westward-trending migration pathway from the Nelson Trust Case tank pit to the impacts in DW18 has not been assessed.

In the previous DES SAR (January 8, 2014), DES proposed investigation of areas downgradient of the Nelson Trust Case to determine if the Nelson Trust Case is the source of the non-MTBE containing impacts in soils east of the E&L Supply property. In the associated DEH Review Letter (February 21, 2014), the DEH did not approve the wells proposed to investigate the link between the Nelson Trust Case and the TPHg impacts east of the E&L Supply building. Based on the investigation requirements in the DES Letter (February 21, 2014), DES understands that even though there are data gaps east of the former E&L Supply Building, no further investigation of those data gaps is required in terms of assessment of the Golden State Gasoline Case.

5.1.1.4 Offsite Assessment of Bifurcated Plume

The DES SAR (May 22, 2015) reported the following assessment findings for TPHg in soil:

1) In DW23, the ND TPHg results at 5, 10, 15, and 20 feet bgs assess the westward lateral extent of TPHg impacts in soil (Figure 5).

2) In DW22, the ND TPHg results at 10, 15, and 20 feet bgs assess the southeastward lateral extent of the east portion of the bifurcated plume that enters the E&L Supply property to the east.

3) In DW21, the TPHg concentration of 156 ppm at 15 feet bgs (Figure 5) indicates a data gap to the southwest of DW21. The data gap southwest of DW21 is a concern for the Classical Academy High School Property (Figure 5).

In the DES SAR (May 22, 2015) data gaps for the plume were identified south of well DW21. Well DW24 was proposed to investigate the data gap southwest of DW21 to determine if there are other concerns for the Classical Academy High School property. Figures 5 and 7 show that a TPHg impact in soil at 15 fbg in DW24 indicates plume migration south of the Classical Academy High School property. Figure 7 shows that a sand unit at 10-14 fbg may provide a contamination migration pathway from the GSG Site to soils below the Classical Academy High School property.

5.1.2 Benzene-Impacted Soil

The DES Report (January 8, 2014) provided a detailed discussion of the benzene concentrations in soil. The DES Report (January 8, 2014) found that the benzene concentrations in soil supported the bifurcated plume

model indicated by the available MTBE and TPHg data. In the soil samples collected from outward wells DW21, DW22, DW23, and DW24, the laboratory reported ND results for benzene in the soil samples (Table 1). Therefore, the ND benzene results in DW21, DW22, DW23, and DW24 further support the model that was developed in the previous DES Report (January 8, 2014).

5.1.3 MTBE-Impacted Soil

The DES Report (January 8, 2014) provided a detailed discussion of the MTBE concentrations in soil. The DES Report (January 8, 2014) found that the MTBE concentrations in soil supported the bifurcated plume model indicated by the available MTBE groundwater data. In the soil samples collected from outward wells DW21, DW22, DW23, and DW24, the laboratory reported ND results for MTBE in the soil samples (Table 1). Therefore, the ND MTBE results in DW21, DW22, DW23, and DW24 further support the model that was developed in the previous DES Report (January 8, 2014).

The conceptual model in the DES Report (January 6, 2014) was also supported by elevated MTBE impacts in the newly installed onsite borings DE1 and DE3. In the new onsite borings, MTBE was reported in soil samples at elevated concentrations of 14,200 ppb (DE1-15) and 385 ppb (DE3-15). Whereas in the offsite soil borings for DE5, DE6, and DW24, the laboratory reported ND results in all the soil samples collected (Table 1). The reporting of MTBE in the onsite borings only further supports the bifurcated plume model.

5.1.4 No Changes to Contamination Mass Estimate

The DES SAR (May 22, 2015) provided an estimate of the mass of contamination on the Site. The recent soil boring findings for DW24 and DE1 through DE6 support the Site conceptual model and doe not warrant a change to the mass estimate. Refer to the DES SAR (May 22, 2015) the DES Remediation Work Plan (October 21, 2015), and the enclosed DEH Letter (February 17, 2016) for the mass estimates, remediation needs, and approved remedial response.

5.2 Updated Assessment of the Petroleum Hydrocarbon Impacts to the Groundwater

The Site's groundwater quality objectives are subject to the beneficial water uses designated by the RWQCB Basin Plan (1994, as amended April 25, 2007) for the Escondido Hydrologic Subarea (4.62). The RWQCB Basin Plan (2007) uses Title 22 of the California Code of Regulations' (March 10, 2010) MCLs for organic chemicals, as a standard for evaluating groundwater impacts at a site having beneficial groundwater uses. The MCL for the assessed petroleum hydrocarbons include benzene at 1 ppb, ethylbenzene at 300 ppb, toluene at 150 ppb, total xylenes at 1,750 ppb, and MTBE at 13 ppb. A site-specific MCL has not been established for TPHg in the groundwater. Other criteria used in evaluating municipal supply beneficial uses include the secondary MCL for MTBE of 5 ppb, and the California Department of Public Health (CDPH) California Notification Level (December 14, 2007) for TBA of 12 ppb. Refer to Table 4.

In order to determine the Site's progress towards closure, the groundwater data is also evaluated relative to the LTCP groundwater cleanup levels of "product removed to the extent practicable", benzene concentrations less than 3,000 ppb, and MTBE concentrations less than 1,000 ppb.

Based on the current findings, the petroleum hydrocarbon impact to the groundwater was assessed as follows:

5.2.1 MTBE-Impacted Groundwater

The previous DES SAR (January 8, 2014) found that the MTBE data differentiates the western portion of the Site release from the older eastward portion of the release. The low and ND MTBE results in DW11, DW12, DW13, DW17, DW18, DW19, and DW20 indicated that the eastward portion of the plume does not contain MTBE. Whereas, the new gasoline portion of the Golden State Gasoline Site plume exhibits elevated MTBE concentrations.

The April 2016 groundwater data supports this previous finding. In the newly-installed onsite wells, MTBE was reported as follows: DE1 (108,000 ppb), DE2 (160 ppb), DE3 (268 ppb), and DE4 (88 ppb). Whereas, the laboratory reported ND results for MTBE in groundwater samples for the leading edge of the southward portion of the bifurcated plume in DW21 and DW24. The lack of MTBE in DW24 in December 2015, March 2016, and April 2016 (Table 4) is a line of evidence that the impacts in MW24 may be from the older non-MTBE containing portion of the plume. Although, it has not been determined if portions of the Classical Academy High School property serve as contamination migration pathways between the Golden State Gasoline Site and TPHg and benzene impacts in DW24.

The finding that MTBE is only reported in wells on the Golden State Gasoline Site and west and southwest of the Site (downgradient) is confirmed by the following April 2016 results:

1) Sheen observations in April 2016 in MW1, MW2, MW3, MW4, MW5, and MW6 correspond with MTBE impacts in MW1 (2,400 ppb), MW2 (102,000 ppb), MW3 (1,130 ppb), MW4 (354 ppb), MW5 (28,400 ppb), and MW6 (87 ppb) (Figure 8). As discussed in Section 4.4.3 of this Report, MTBE impacts in MW1, MW2, MW3, MW5, and DE1 exceed the LTCP cleanup criteria of 1,000 ppb for MTBE.

2) MTBE in DW8 (38 ppb) indicates westward plume migration outward from the Site (Figure 8). Westward migration of MTBE is assessed by an ND MTBE result in DW23 (Figure 8).

3) MTBE in DW9 (18 ppb) indicates southwestward plume migration outward from the Site (Figure 8). The decreasing lateral MTBE concentration trend from DW9 (18 ppb) to DW15 (ND ppb) indicates that MTBE is sufficiently assessed to the southwest.

4) ND MTBE results in DW10, DW21, DW13, DW20, and DW22 indicate MTBE is not a component of the eastward older gasoline plume. The ND MTBE results indicate that MTBE is assessed to the east.

5) MTBE lows of 87 ppb (MW6) and 16 ppb (DW14) assess MTBE impacts to the north of the Site.

6) The ND MTBE result in DW10 assesses the MTBE impacts directly south of the active UST system at the Site.

The presence of sheen and historical highly-elevated MTBE impacts in wells MW1, MW2, MW3, and MW5 indicate submerged product at the Site. The presence of submerged product is further indicated by product thicknesses of 0.48 feet measured in MW5 and 0.33 feet measured in MW2 after the HVDPE pilot test in

September 2013 (Table 3). Upon lowering the water table in MW2 and MW5 during HVDPE, product from the formation was allowed to enter the wells. The presence of submerged product at the Site indicates that the Case does not meet the LTCP cleanup criteria of "product removed to the extent practicable."

The data indicate the gasoline release at the Site contains MTBE. Thus, part of the release likely occurred after 1990. Low and ND MTBE results in offsite wells DW10 (ND) and DW18 (ND) indicate that TPHg and benzene impacts in those wells are from an older part of the release, and from possible co-mingling with upgradient 3rd-Party releases.

The plume migration also appears to bifurcate due to influence from the hydrodynamics of the storm drain system. The newer, MTBE-containing portion of the Golden State Gasoline Site plume predominantly migrates westward, west of MW3 and DW7 and north of DW16 (Figure 8). The bifurcated portion of the older gasoline plume (which does not contain MTBE) appears to have the conditions to migrate southwest of DW17 toward and DW21 and DW23 and the Classical Academy High School property. The corresponding TPHg and benzene data gaps southwest of DW23 are discussed in Sections 5.2.2 and 5.2.3 of this Report.

The findings that MTBE is not in the eastward portion of the release and that the plume bifurcates east of the Site indicate that the hydrodynamics of the storm drain on the former E&L Supply property influence migration of new portions of the GSG Site plume that were released after installation of the storm drain on the former E&L Supply property. As discussed in Section 1.4 of this Report, the timing of installation of the storm drain was before inclusion of MTBE in the California gasoline supply.

As discussed in Section 1.4 of this Report, it is probable that the storm drain system was installed in the mid 1980s. After this time frame, MTBE was mandated into the California gasoline supply after 1990. Therefore, the hydrodynamics of the storm drain recharge east of the Site may have blocked MTBE from migrating eastward. Whereas, eastward migration of non-MTBE containing older gasoline from the Golden State Gasoline Site was not subject to that boundary condition. Therefore, it is probable that benzene impacts east of the Site and east of the stormdrains on the E&L Supply property are a result of co-mingling of the older gasoline plume from the Golden State Gasoline Site and the older gasoline from the 3rd-Party releases offsite to the east.

Based on the probable hydrologic barrier created by probable storm drain recharge effects on the water table (shown on Figure 3), the newer MTBE-containing portion of the Golden State Gasoline Site plume could not migrate in the same way that the benzene-containing older gasoline plume migrated before the storm drain was installed. The influence of the storm drain on the former E&L Supply property provides an explanation for why the westward-migrating MTBE plume on Figure 8 does not match the eastward contamination migration components of the TPHg plume (Figure 9) and the benzene plume (Figure 10).

5.2.2 TPH-Gasoline-Impacted Groundwater

The data from recently-installed well DW24 indicate a data gap southwest DW24 where TPHg was reported at 12,700 ppb in April 2016. The TPHg impact in DW24 indicates that the contamination migration pathways from the Site to the Classical Academy High School property have not been fully characterized. Table 3 shows that in March 2016, a sheen was observed in DW24, therefore, product may be migrating from the Site to Classical Academy High School property. It has not been determined if impacts in DW24 are from plume migration from the co-mingled plume east of the Site or from the southward plume migration directly from the Golden State Gasoline Site. It has not been determined which portions of the Site plume have impacted DW24.

The TPHg concentration iso-contours in Figure 9 also confirm the bifurcated plume findings indicated in previous reports. Sheen in DW11 and DW12 and a TPHg high of 12,700 ppb in DW19 indicate older gasoline impacts east of the Site and the E&L Supply property (Figure 9). The data indicate it is probable that the 3rd-Party offsite plume and the Site plume co-mingle on the E&L Supply property (Figure 9).

The April 2016 sheen observation in DW11 and TPHg impacts in DW18 (2,510 ppb) and DW19 (10,900 ppb) indicate a source of TPHg impacts east of DW18 and DW19. Figure 9 shows that the Nelson Trust Case tank pit is located east of the TPHg impacts in DW18 and DW19 and east of the Car Rental Lot. Groundwater data from the upgradient Nelson Trust Case indicate that a gasoline and diesel release occurred at that site. There is a data gap for TPHg impacts east of the Car Rental Lot. Although the enclosed DEH Letter (February 21, 2014) indicates that further investigation of that data gap is not required.

The ND TPHg result in DW20 assesses the northward extent of the data gap east of the Car Rental Lot. The lateral extent of TPHg impacts in the westward-trending migration pathway from the Nelson Trust Case tank pit to the impacts in DW18 has not been assessed.

The April 2016 sheen and historically highly-elevated TPHg impacts in eastward wells DW11 (sheen and TPHg of 50,300 ppb in April 2016) (Table 4) and DW17 (sheen in April 2016 and 10,100 ppb TPHg in December 2014 (Table 4)) indicate likely submerged product at those locations. The probable operation of the gasoline UST System at the Golden State Gasoline Site in the period from 1970 to installation of the storm drain on the former E&L Supply property in the 1980s (as discussed in Section 1.4 of this Report) provides the conditions for eastward migration of the older gasoline release from the Golden State Gasoline Site. It is probable that submerged product impacts at the DW11 and DW17 locations are from the older gasoline release from the Golden State Gasoline Site (Figure 9). Well DW17 may have co-mingled impacts from the 3rd-Party release that appears to be a source of impacts in farther eastward wells DW18 and DW19 (Figure 9).

The April 2016 sheen observations and historical highly-elevated TPHg impacts (Table 4) in wells MW1, MW2, MW3, and MW5 indicate submerged product at the Site. The presence of submerged product is further indicated by product that was measured in MW2 and MW5 after the HVDPE pilot test in September 2013 and after the HVDPE operation in April 2015 (Table 3). Upon lowering the water table in MW2 and MW5 during HVDPE, product from the adjacent formation was allowed to enter the wells.

5.2.3 Benzene-Impacted Groundwater

The data from recently-installed well DW24 indicate a data gap southwest DW24 where benzene was reported at 44 ppb in April 2016. The benzene impact in DW24 indicates that the contamination migration pathways from the Site to the Classical Academy High School property have not been fully characterized. Table 3 shows that in March 2016, a sheen was observed in DW24, therefore, product may be migrating from the Site to the Classical Academy High School property.

The benzene concentration iso-contours in Figure 10 also confirm the bifurcated plume findings from previous reports. The April 2016 benzene impact in DW19 (1,920 ppb), April 2016 sheen observations, and historical benzene data (Table 3) in DW12 and DW18 indicate older gasoline impacts east of the Site and the former E&L Supply property (Figure 10). The data indicate it is probable that the 3rd-Party offsite plume and the Site plume co-mingle on the former E&L Supply property.

In addition to concerns about migration of dissolved benzene onto the Classical Academy High School property, the April 2016 data indicate the following assessment findings for benzene:

1) West of the Site, the onsite benzene impacts are assessed by ND benzene in DW23, DW15, and DW8 (Figure 10).

2) Northeast of MW6 (benzene of 532 ppb) is a benzene data gap, although the DEH has not previously directed investigation of this data gap in the City of Escondido right-of-way in West Washington Avenue (Figure 10).

In the April 2016 groundwater samples, the following benzene impacts exceeded the LTCP cleanup level of 3,000 ppb for benzene (Table 3 and Figure 10):

1) 22,300 ppb benzene in DE1 at the onsite tank pit (Table 3 and Figure 10).
2) 19,200 ppb benzene in MW2 at the onsite tank pit (Table 3 and Figure 10).
3) 16,000 ppb benzene in MW3 downgradient westward of the onsite tank pit release source area (Table 3 and Figure 10).
4) 6,070 ppb benzene in MW1 at the onsite tank pit (Table 3 and Figure 10).
5) 3,020 ppb benzene in MW4, south of onsite tank pit release source area (Figure 10).
6) 10,900 ppb benzene in DW11 on the former E & L Supply property (Table 3 and Figure 10).
7) 7,380 ppb benzene in DW12 on the former E & L Supply property (Table 3 and Figure 10).

The sheen and highly-elevated benzene impacts in wells DE1, MW1, MW2, MW3, MW5 and MW5 indicate submerged product at the Site. The presence of submerged product is further indicated by product thicknesses of 0.48 feet measured in MW5 and 0.33 feet measured in MW2 after the HVDPE pilot test in September 2013 (Table 3). Upon lowering the water table in MW2 and MW5 during HVDPE, product from the formation was allowed to enter the wells. The presence of submerged product at the Site indicates that the Case does not meet the LTCP cleanup criteria of "product removed to the extent practicable."

6.0 CONCLUSIONS

Based on the above-presented findings, we conclude the following:

1) Product sheen, TPHg, and benzene impacts in DW24 indicate probable plume migration onto the Classical Academy High School property. Specific contamination migration pathways from the bifurcated plume into DW24 have not been determined.

2) The GWE data indicate that bifurcated groundwater flow pathways are caused by the hydrodynamics of the local storm drain system which also affects contamination migration at the Site. At the Site and west of the Site, a southwestward groundwater flow direction is indicated by the data. East of the Site, groundwater flows in a more directly southward direction (Figure 3). The southward bend in the groundwater flow pathway east of the Site is also consistent with the contamination migration pathways indicated by the soil and groundwater data discussed in this Report.

3) Table 3 shows that in 1998 and 1999, the depth to groundwater at the site was recorded at 17.5 feet bgs in the pilot boring for Well MW2 (B-7). Furthermore, free product was encountered in borings MW2 and B-2. Since 2005, the depth to groundwater at the site was measured between 8 and 12 feet bgs. The resulting increase in GWE has submerged the product and the associated smear zone that was reported at 17.5 feet bgs.

4) The lack of MTBE impacts in soil and groundwater in eastward wells DW11, DW12, DW13, DW17, DW18, DW19, and DW20 indicates a co-mingled plume of older gasoline impacts from the Golden State Gasoline Site and 3rd-Party eastward sources.

5) As discussed in Section 1.4 of this Report, it is probable that the storm drain on the former E&L Supply property was installed in the mid 1980s, before MTBE was subject to widespread use in California after 1990. Therefore, the hydrodynamics of the storm drain (shown on Figure 3) create a hydrologic boundary that prevents newer MTBE impacts from the Golden State Gasoline release from migrating to the east (Figure 8). Whereas, pre-MTBE older gasoline impacts (containing benzene) from the Golden State Gasoline Site were not subject to that eastward boundary condition and migrated to the east (Figures 9 and 10).

6) The probable operation of the gasoline UST System at the Golden State Gasoline Site in the period from 1970 to installation of the storm drain on the former E&L Supply property in the 1980s (as discussed in Section 1.4 of this Report) provides the conditions for eastward migration of the older gasoline release from the Golden State Gasoline Site. It is probable that the dissolved-phase and submerged product impacts at the DW11 and DW17 locations are from the older gasoline release from the Golden State Gasoline Site (Figures 9 and 10). Well DW17 may have co-mingled gasoline impacts from the 3rd-Party release that appears to be a source of gasoline in farther eastward wells DW18 and DW19 (Figure 10).

7) The eastward source of older gasoline impacts, as found in the soil and groundwater in DW18 and DW19, has not been determined.

8) The Case does not meet the LTCP criteria for case closure because of the following findings:

   a. There is measurable free product in the Site well network. Upon completing the pilot test activities on September 3, 2013, product thicknesses of 0.48 feet were measured in MW5 and 0.33 feet were measured in MW2 (Table 3).

   b. Recent benzene concentrations in groundwater up to 22,300 ppb (DE1) (Table 3) exceed the LTCP cleanup criteria for benzene of 3,000 ppb.

   c. Recent MTBE concentrations in groundwater up to 108,000 ppb (DE1) (Table 3) exceed the LTCP cleanup criteria for MTBE of 1,000 ppb.

7.0 RECOMMENDATIONS

Based on the findings and conclusions of this Report, DES recommends the following:

1) The TPHg and benzene impacts in groundwater at DW24, and product sheen observed in DW24 in March 2016 (Table 3), indicate probable plume migration under the Classical Academy High School property (Figures 7, 9 and 10). Install proposed wells DW25 and DW26 (Figure 11) to investigate possible migration pathways outward from the school property to determine whether well installation on the Classical Academy High School property should be recommended.

2) To investigate the downgradient lateral extent of the dissolved-phase plume, outward from DW24, install and sample proposed well DW27 (Figure 11).

3) In response to the enclosed DEH Letter (February 17, 2016) implement the HVDPE removal action in the DES Remediation Work Plan (October 21, 2015) using the a mobile HVDPE System.

4) In response to the enclosed DEH Letter (July 6, 2015) continue quarterly groundwater monitoring of DW21, DW22, DW23, and newly-installed well DW24 to build a cumulative data record without data gaps to support a future basis for Case Closure. Should the proposed wells DW25, DW26, and DW27 in this Report be approved, monitor them quarterly with the wells listed above. In response to the enclosed DEH Letter (July 6, 2015), monitor the rest of the Case well network semi-annually.

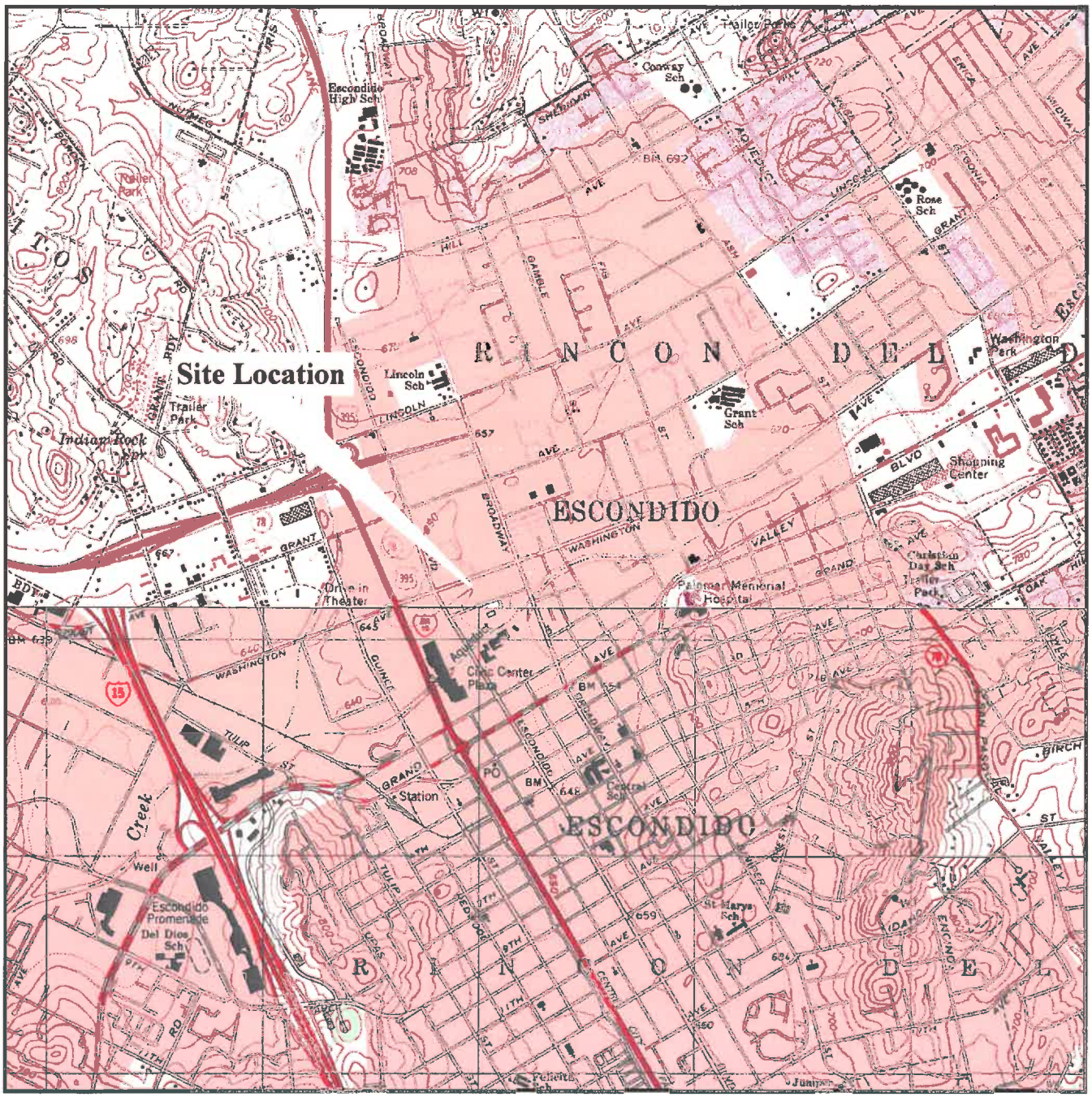
8.0 LIMITATIONS

This Technical Report (Report) is intended for the sole usage of Golden State Gasoline, Inc. (the Client). The use of this Report is subject to the fully-executed Contract between Donan Environmental Services, Inc. (DES) and the Client. Any unauthorized third party usage of this Report shall be subject to the provisions of the Contract and any unauthorized misuse of or reliance upon this Report shall be without risk or liability to DES.

The conclusions of this Report are judged to be relevant at the time the work described in this Report was conducted. Future conditions may differ and this Report should not be relied upon to represent future site conditions. Although this Report has attempted to update the assessment of the petroleum hydrocarbon impacted soil and groundwater at the site and off-site, the full assessment of the petroleum hydrocarbon impact may have escaped detection for reasons which include, but are not limited to: 1) our reliance on inadequate or inaccurate information rightly provided to DES by the Client or third parties, such as the laboratory, surveyor, public agencies, etc.; 2) the limited scope of the assessment; 3) the presence of undetected, unknown or unreported petroleum releases, chemical spills, tanks, and/or environmental issues; and/or 4) the dynamic migration of the petroleum hydrocarbons through the subsurface since the historical sampling was collected and reported.

FIGURES

Figure 1 - Site Location
Figure 2 - Site Plan
Figure 3 - Groundwater Plan, April 2016
Figure 4 - Offsite Conceptual Impact Model - from DES Report (9/22/2011)
Figure 5 - Soil Sample Plan - TPH-Gasoline Iso-Concentrations
Figure 6 - Conceptual Model, Geologic Cross-Section A-A', and TPHg Soil Impacts
Figure 7 - Conceptual Model, Geologic Cross-Section B-B', and TPHg Soil Impacts
Figure 8 - MTBE-Impacted Groundwater Plan, April 2016
Figure 9 - Gasoline-Impacted Groundwater Plan, April 2016
Figure 10 - Benzene-Impacted Groundwater plan, April 2016
Figure 11 - Proposed Groundwater Monitoring Well Locations



Source: USGS 7.5" Quadrangle Map from MyTopo.com

0 2,325 4,650

Approximate Scale in feet

Disclaimer: This figure is an interpretation based on available data. Actual site conditions may differ. All locations and dimensions are approximate.

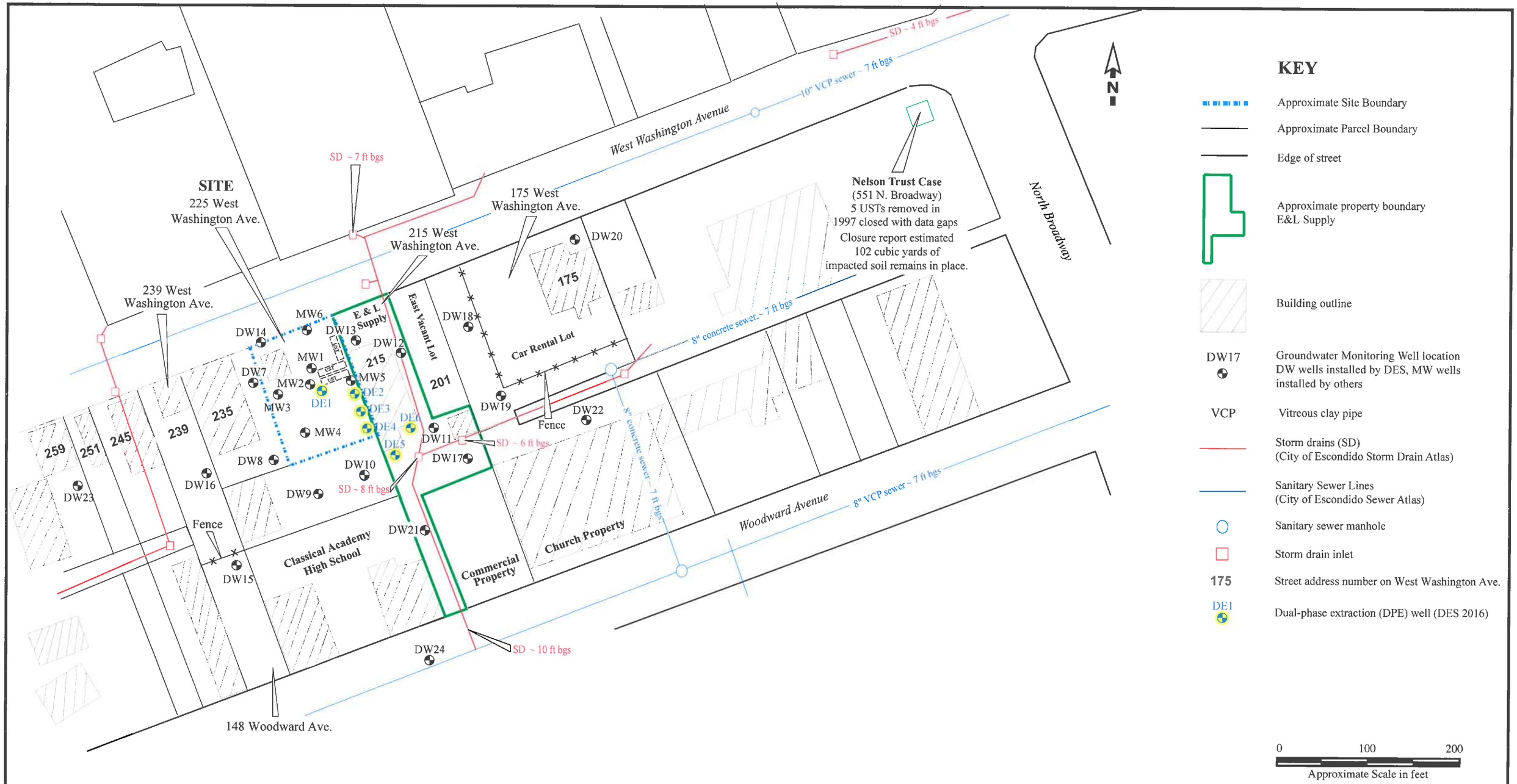
Donan Environmental Services, Inc.

Site Location

Golden State Gasoline
225 West Washington Ave.
Escondido, California 92025

Project No.
09E3857

Figure 1



Disclaimer: This figure is an interpretation based on available data. Actual site conditions may differ. All locations and dimensions are approximate.

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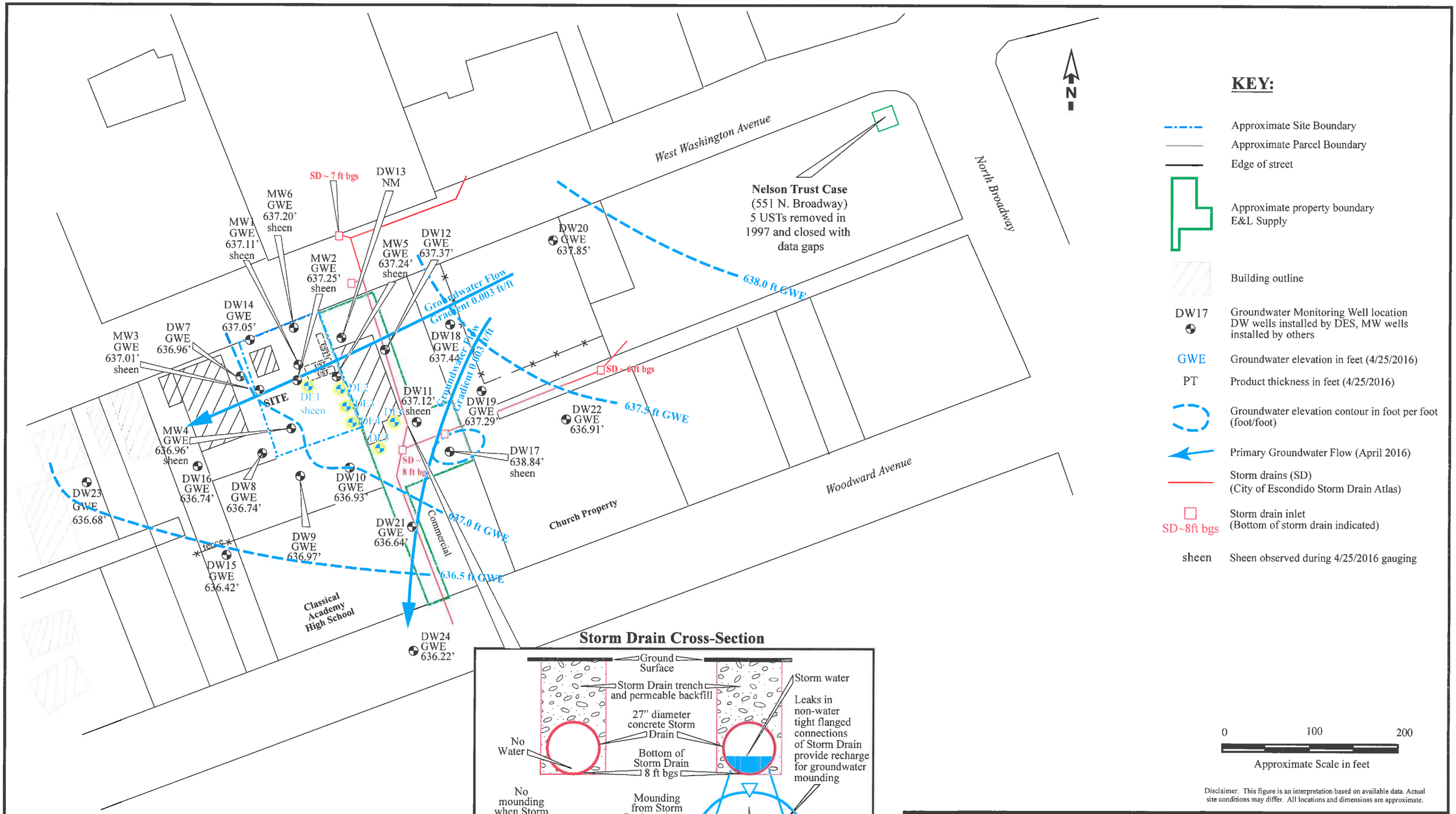
Site Plan

Golden State Gasoline
225 West Washington Avenue
Escondido, California

Project No.
09E3857

Figure 2



Disclaimer: This figure is an interpretation based on available data. Actual site conditions may differ. All locations and dimensions are approximate.

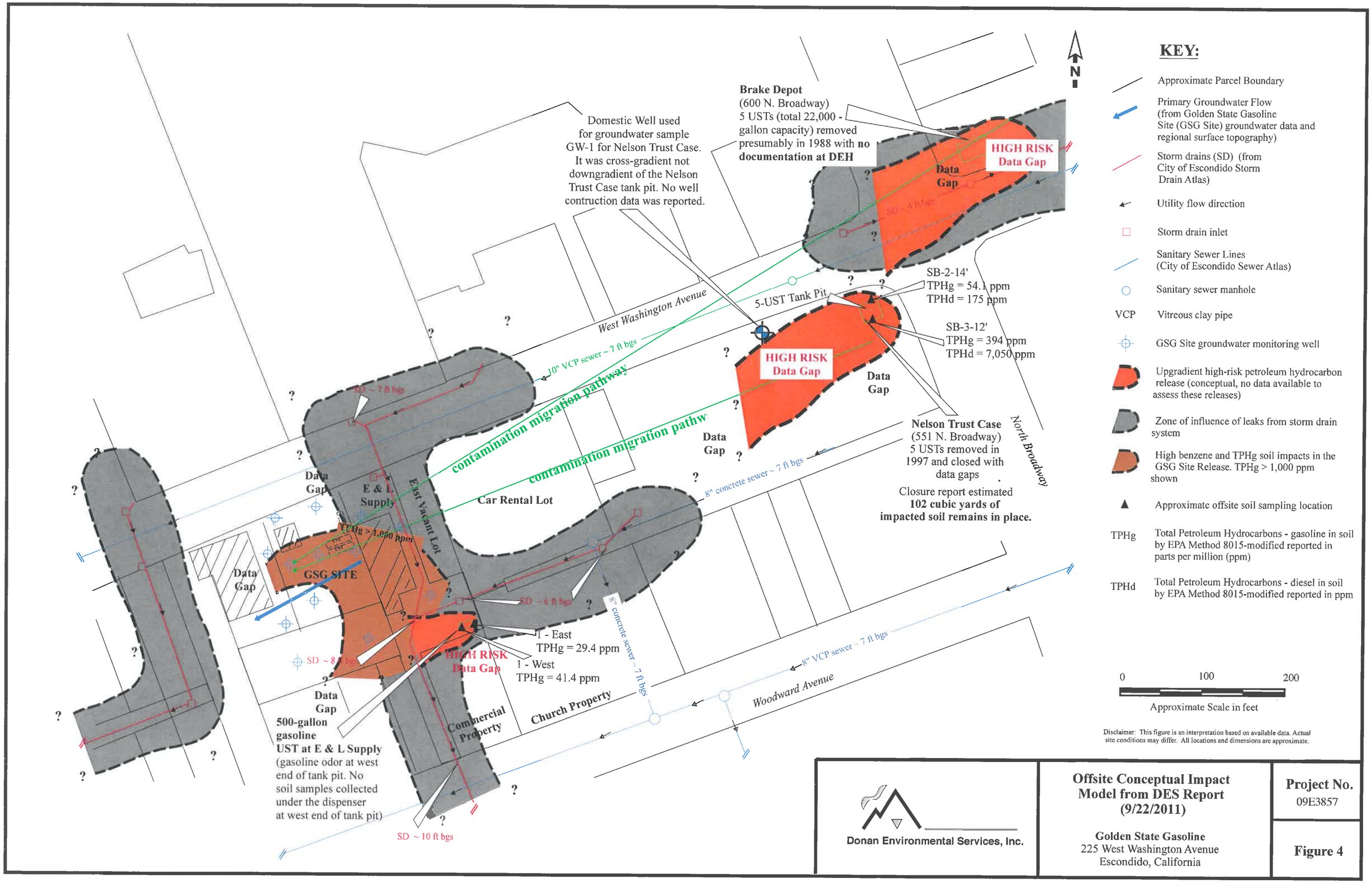
Donan Environmental Services, Inc.

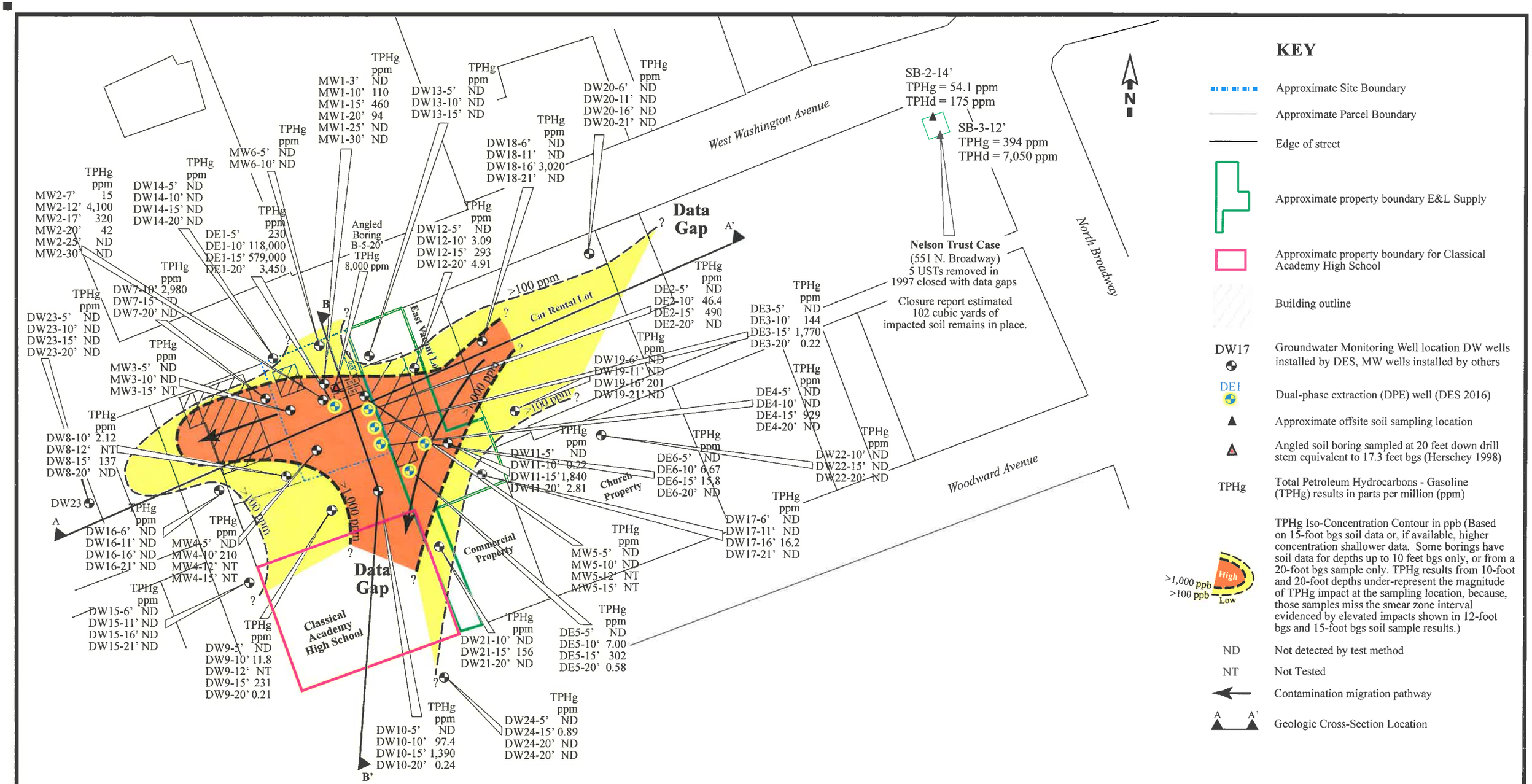
Groundwater Plan
April 2016

Golden State Gasoline
225 West Washington Avenue
Escondido, California

Project No.
09E3857

Figure 3


N
Brake Depot
(600 N. Broadway)
5 USTs (total 22,000 - gallon capacity) removed presumably in 1988 with no documentation at DEH
Domestic Well used for groundwater sample GW-1 for Nelson Trust Case. It was cross-gradient not downgradient of the Nelson Trust Case tank pit. No well contruction data was reported.
HIGH RISK
Data Gap
Data Gap
SB-2-14'
TPHg = 54.1 ppm
TPHd = 175 ppm
5-UST Tank Pit
West Washington Avenue
SB-3-12'
TPHg = 394 ppm
TPHd = 7,050 ppm
10" VCP sewer ~ 7 ft bgs
contamination migration pathway
contamination migration pathway
HIGH RISK
Data Gap
Data Gap
Nelson Trust Case
(551 N. Broadway)
5 USTs removed in 1997 and closed with data gaps
Closure report estimated
102 cubic yards of impacted soil remains in place.
North Broadway
8" concrete sewer ~ 7 ft bgs
Data Gap
E & L Supply
East Vacant Lot
Car Rental Lot
TPHg > 1,000 ppm
GSG SITE
Data Gap
SD ~ 6 ft bgs
8" concrete sewer ~ 7 ft bgs
1 - East
TPHg = 29.4 ppm
1 - West
TPHg = 41.4 ppm
SD ~ 8 ft bgs
HIGH RISK
Data Gap
8" VCP sewer ~ 7 ft bgs
Woodward Avenue
Data Gap
500-gallon gasoline UST at E & L Supply
(gasoline odor at west end of tank pit. No soil samples collected under the dispenser at west end of tank pit)
Commercial Property
Church Property
SD ~ 10 ft bgs
KEY:
Approximate Parcel Boundary
Primary Groundwater Flow (from Golden State Gasoline Site (GSG Site) groundwater data and regional surface topography)
Storm drains (SD) (from City of Escondido Storm Drain Atlas)
Utility flow direction
Storm drain inlet
Sanitary Sewer Lines (City of Escondido Sewer Atlas)
Sanitary sewer manhole
VCP Vitreous clay pipe
GSG Site groundwater monitoring well
Upgradient high-risk petroleum hydrocarbon release (conceptual, no data available to assess these releases)
Zone of influence of leaks from storm drain system
High benzene and TPHg soil impacts in the GSG Site Release. TPHg > 1,000 ppm shown
Approximate offsite soil sampling location
TPHg Total Petroleum Hydrocarbons - gasoline in soil by EPA Method 8015-modified reported in parts per million (ppm)
TPHd Total Petroleum Hydrocarbons - diesel in soil by EPA Method 8015-modified reported in ppm
0 100 200
Approximate Scale in feet
Disclaimer: This figure is an interpretation based on available data. Actual site conditions may differ. All locations and dimensions are approximate.
Donan Environmental Services, Inc.
Offsite Conceptual Impact Model from DES Report (9/22/2011)
Golden State Gasoline
225 West Washington Avenue
Escondido, California
Project No.
09E3857
Figure 4



KEY

- Approximate Site Boundary
- Approximate Parcel Boundary
- Edge of street
- Approximate property boundary E&L Supply
- Approximate property boundary for Classical Academy High School
- Building outline
- DW17 — Groundwater Monitoring Well location DW wells installed by DES, MW wells installed by others
- DE1 — Dual-phase extraction (DPE) well (DES 2016)
- Approximate offsite soil sampling location
- Angled soil boring sampled at 20 feet down drill stem equivalent to 17.3 feet bgs (Herschey 1998)
- TPHg — Total Petroleum Hydrocarbons - Gasoline (TPHg) results in parts per million (ppm)
- >1,000 ppb High; >100 ppb Low — TPHg Iso-Concentration Contour in ppb (Based on 15-foot bgs soil data or, if available, higher concentration shallower data. Some borings have soil data for depths up to 10 feet bgs only, or from a 20-foot bgs sample only. TPHg results from 10-foot and 20-foot depths under-represent the magnitude of TPHg impact at the sampling location, because, those samples miss the smear zone interval evidenced by elevated impacts shown in 12-foot bgs and 15-foot bgs soil sample results.)
- ND — Not detected by test method
- NT — Not Tested
- Contamination migration pathway
- A A' — Geologic Cross-Section Location

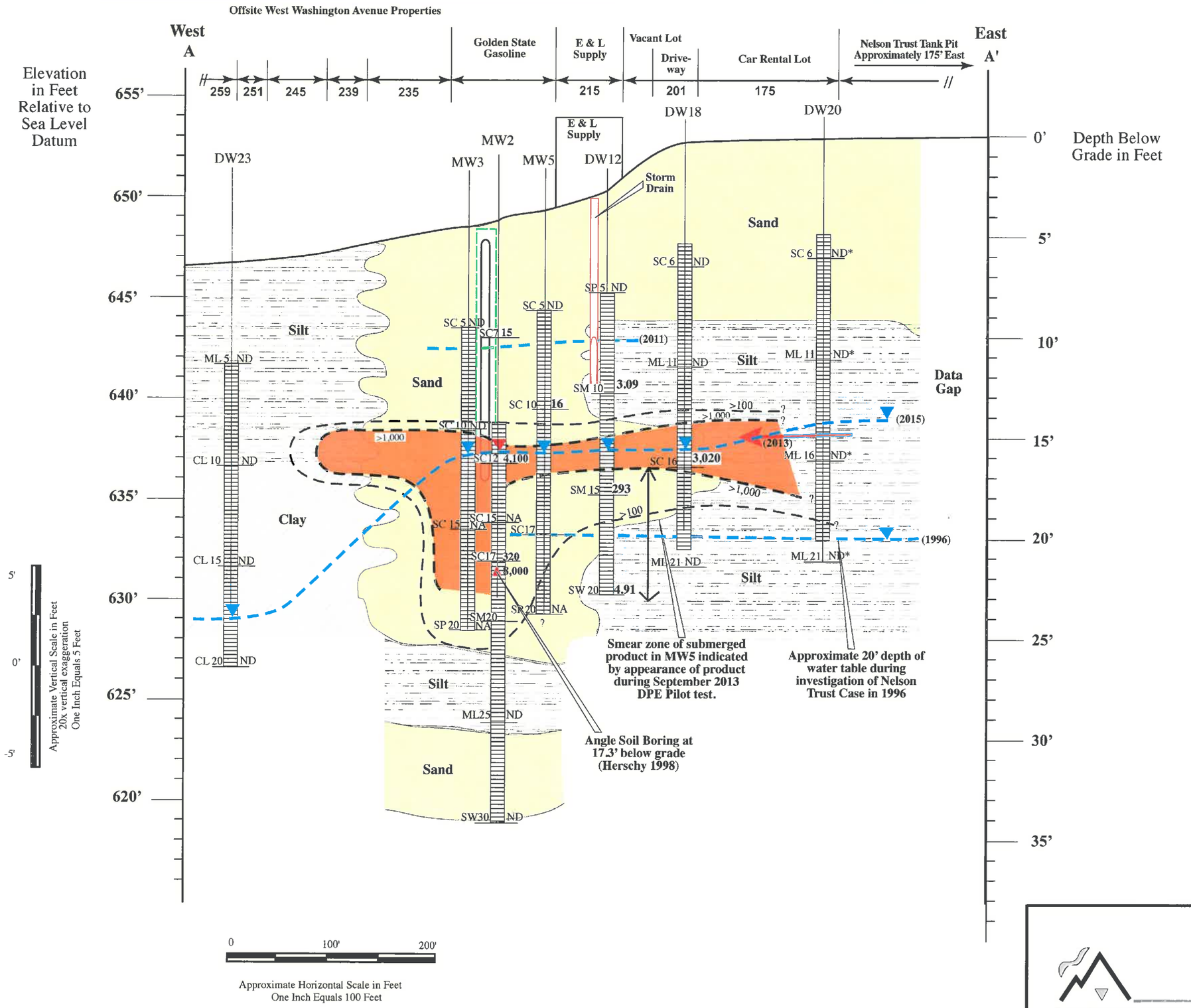
Donan Environmental Services, Inc.

Soil Sample Plan
TPH-Gasoline Iso-Concentrations

Golden State Gasoline
225 West Washington Avenue
Escondido, California

Project No.
09E3857

Figure 5



KEY:

Sample depth below grade (feet)

Soil Boring or Well

MW4

Soil USCS Code

SM 5 20

Soil Sampling and Analysis Information TPHg concentration in parts per million (ppm) by EPA 8015

Well screen interval

*DW20 40 feet north of pathway from Nelson Trust Case UST Tank Pit to the Site, ND results in DW20 do not assess impacts to the east.

Contamination Migration Direction

Angled soil boring sampled at 20 feet down drill stem equivalent to 17.3 feet bgs (Herschey 1998)

Historically there was a possible hydraulic relationship (Figure 3) with the storm drain and the higher groundwater table (2011).

Existing UST Pit and Tank

Soil USCS Codes

GP/GW/SW	Gravel
SW/SM/SC	Silty sand/ Clayey sand
ML	Silt
CL	Clay

>1,000
>100
TPHg Impacted soil Iso-concentration contour in ppb, queries where inferred.

Free Product Measured in MW5 and MW2 after, the September 2013 pilot test

GWE, Groundwater Elevation (3/2015)

175 Street address number on West Washington Ave.

Disclaimer: Actual site conditions may differ. All locations and dimensions are approximate.

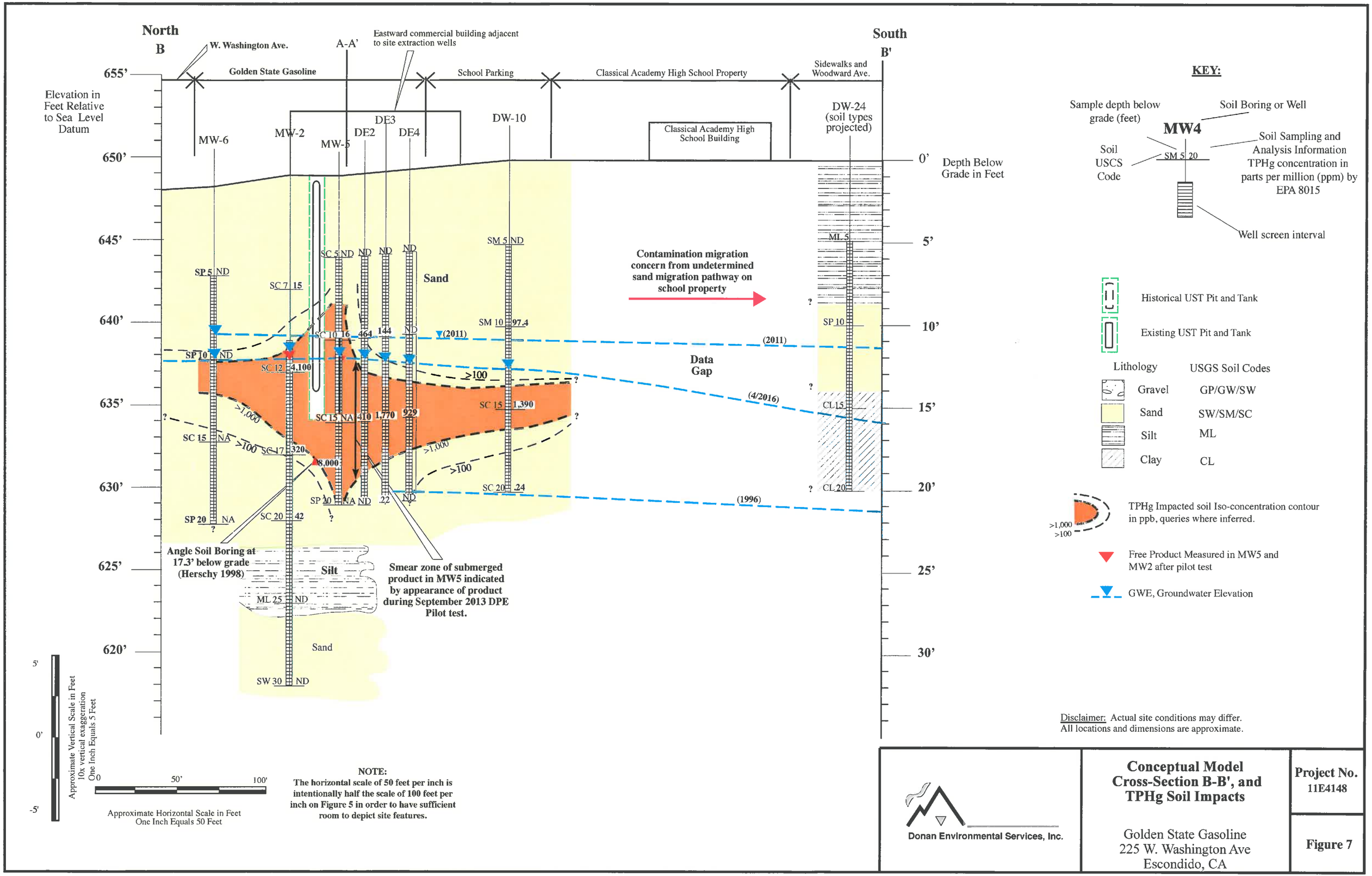
Donan Environmental Services, Inc.

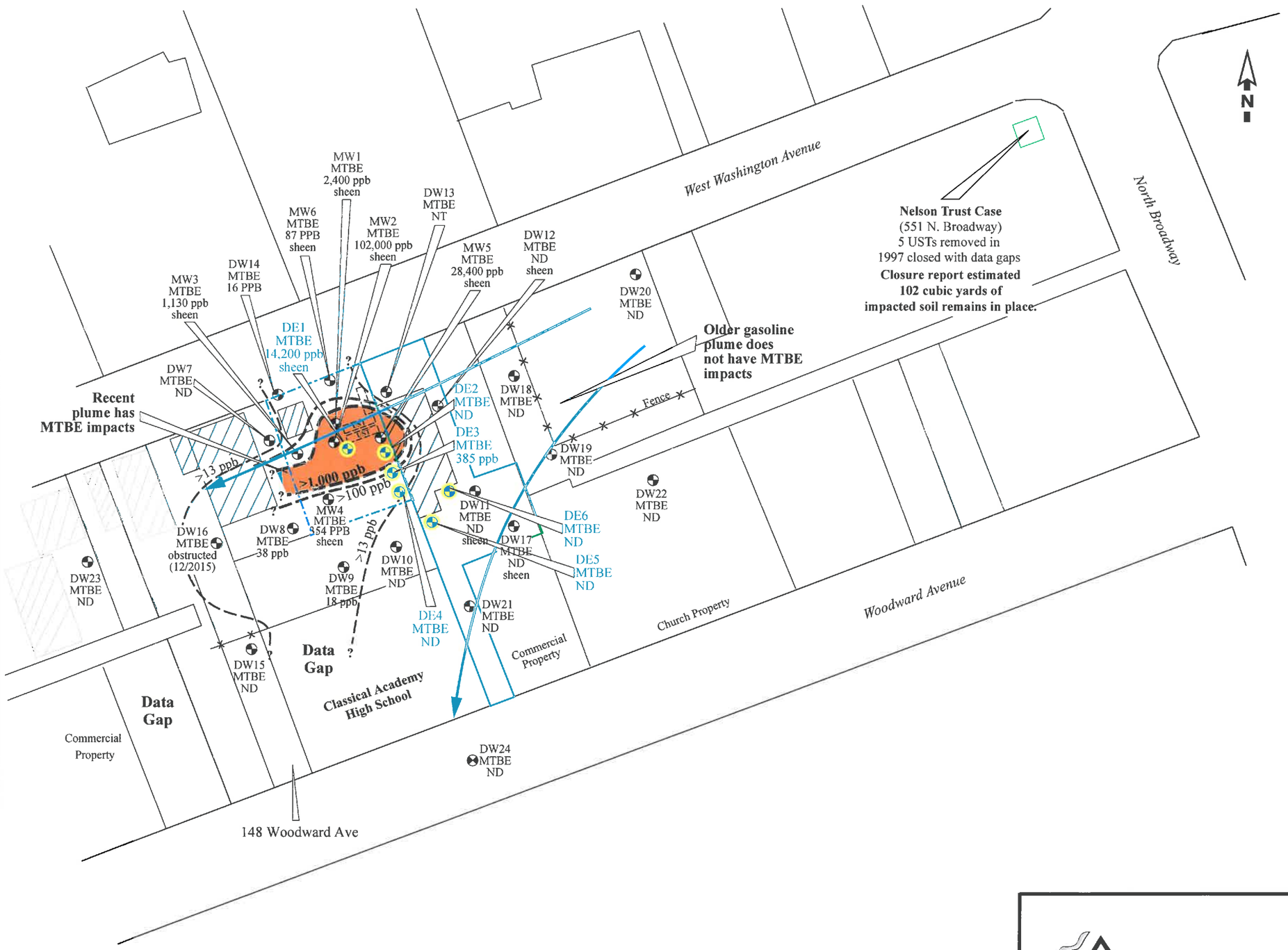
Conceptual Model Cross-Section A-A', and TPHg Soil Impacts

Golden State Gasoline
225 West Washington Avenue
Escondido, CA

Project No. 11E4148

Figure 6


North
B
South
B'
W. Washington Ave.
A-A'
Eastward commercial building adjacent to site extraction wells
Golden State Gasoline
School Parking
Classical Academy High School Property
Sidewalks and Woodward Ave.
Classical Academy High School Building
Elevation in Feet Relative to Sea Level Datum
655'
650'
645'
640'
635'
630'
625'
620'
MW-6
MW-2
MW-5
DE2
DE3
DE4
DW-10
DW-24 (soil types projected)
0'
5'
10'
15'
20'
25'
30'
Depth Below Grade in Feet
Sand
Silt
Sand
Contamination migration concern from undetermined sand migration pathway on school property
Data Gap
(2011)
(4/2016)
(1996)
Angle Soil Boring at 17.3' below grade (Herschy 1998)
Smear zone of submerged product in MW5 indicated by appearance of product during September 2013 DPE Pilot test.
Approximate Vertical Scale in Feet
10x vertical exaggeration
One Inch Equals 5 Feet
Approximate Horizontal Scale in Feet
One Inch Equals 50 Feet
NOTE:
The horizontal scale of 50 feet per inch is intentionally half the scale of 100 feet per inch on Figure 5 in order to have sufficient room to depict site features.
KEY:
Sample depth below grade (feet)
Soil Boring or Well
MW4
Soil USCS Code
Soil Sampling and Analysis Information TPHg concentration in parts per million (ppm) by EPA 8015
Well screen interval
Historical UST Pit and Tank
Existing UST Pit and Tank
Lithology
USGS Soil Codes
Gravel GP/GW/SW
Sand SW/SM/SC
Silt ML
Clay CL
TPHg Impacted soil Iso-concentration contour in ppb, queries where inferred.
Free Product Measured in MW5 and MW2 after pilot test
GWE, Groundwater Elevation
Disclaimer: Actual site conditions may differ.
All locations and dimensions are approximate.
Donan Environmental Services, Inc.
Conceptual Model Cross-Section B-B', and TPHg Soil Impacts
Golden State Gasoline
225 W. Washington Ave
Escondido, CA
Project No. 11E4148
Figure 7



KEY:

Approximate Site Boundary

Approximate Parcel Boundary

Edge of street

Approximate property boundary
E&L Supply

DW17 — Groundwater Monitoring Well location
DW wells installed by DES, MW wells installed by others

DE1 — Dual-phase extraction (DPE) well (DES 2016)

MTBE — Methyl Tertiary Butyl Ether (MTBE) by EPA Method 8260B in parts per billion (ppb)

NT — Not tested

ND — Not detected at concentration above the laboratory detection limit.

>1,000 ppb
>100 ppb
>13 ppb
high
low

MTBE iso-concentration contour in ppb. Due to limitations on groundwater testing from DEH Directive in July 6, 2015 letter and the continued presence of sheen in the onsite wells, the MTBE Iso-Concentration contours in ppb from DES Report (May 22, 2015) are still applicable and are shown on this figure.

Primary Groundwater Flow (April 2016)
(and contamination migration pathway)

sheen — Sheen observed on date of associated MTBE result, as shown

0 100 200
Approximate Scale in feet

Disclaimer: This figure is an interpretation based on available data. Actual site conditions may differ. All locations and dimensions are approximate.

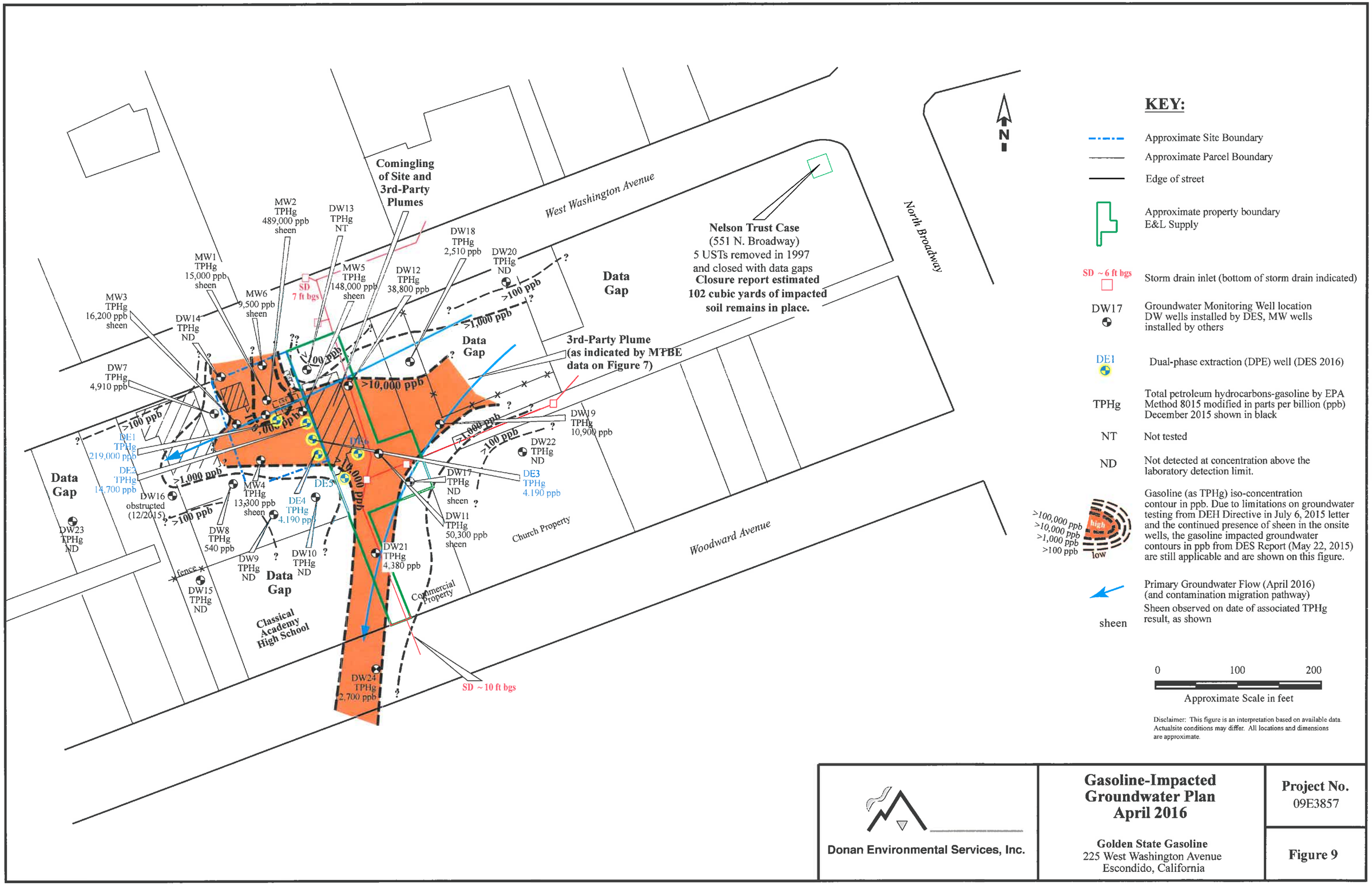
Donan Environmental Services, Inc.

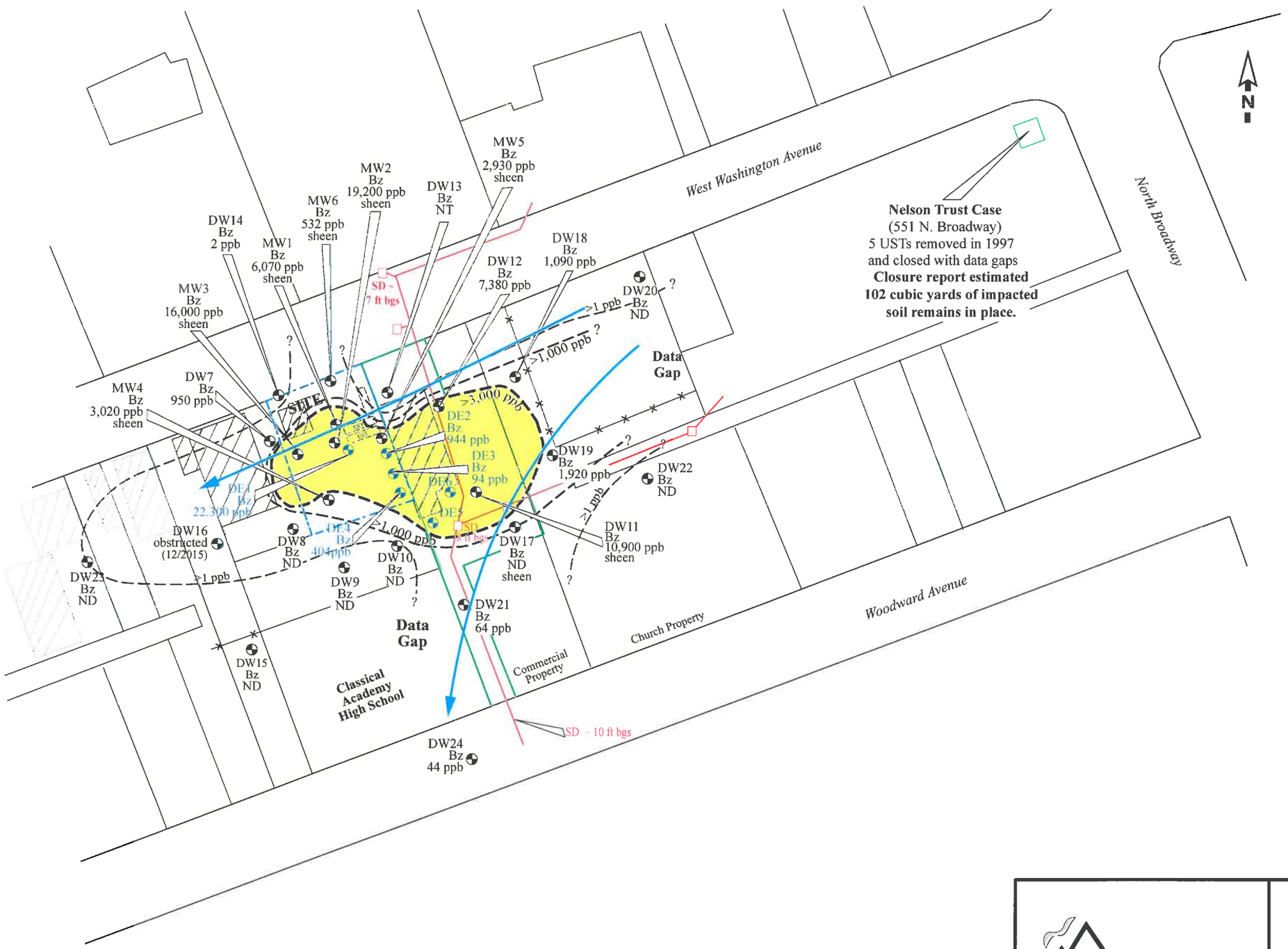
MTBE-Impacted Groundwater Plan
April 2016

Golden State Gasoline
225 West Washington Avenue
Escondido, California

Project No.
09E3857

Figure 8


West Washington Avenue
North Broadway
Woodward Avenue
N
Comingling of Site and 3rd-Party Plumes
Nelson Trust Case
(551 N. Broadway)
5 USTs removed in 1997
and closed with data gaps
Closure report estimated
102 cubic yards of impacted
soil remains in place.
3rd-Party Plume
(as indicated by MTBE
data on Figure 7)
Data Gap
Data Gap
Data Gap
Data Gap
Classical Academy High School
Church Property
Commercial Property
MW1 TPHg 15,000 ppb sheen
MW2 TPHg 489,000 ppb sheen
MW3 TPHg 16,200 ppb sheen
MW4 TPHg 13,300 ppb sheen
MW5 TPHg 148,000 ppb sheen
MW6 9,500 ppb sheen
DW7 TPHg 4,910 ppb
DW8 TPHg 540 ppb
DW9 TPHg ND
DW10 TPHg ND
DW11 TPHg 50,300 ppb sheen
DW12 TPHg 38,800 ppb
DW13 TPHg NT
DW14 TPHg ND
DW15 TPHg ND
DW16 obstructed (12/2015)
DW17 TPHg ND sheen
DW18 TPHg 2,510 ppb
DW19 TPHg 10,900 ppb
DW20 TPHg ND
DW21 TPHg 4,380 ppb
DW22 TPHg ND
DW23 TPHg ND
DW24 TPHg 2,700 ppb
DE1 TPHg 219,000 ppb
DE2 TPHg 14,700 ppb
DE3 TPHg 4,190 ppb
DE4 TPHg 4,190 ppb
DE5
SD 7 ft bgs
SD ~ 6 ft bgs
SD ~ 10 ft bgs
fence
>100 ppb
>1,000 ppb
>10,000 ppb
KEY:
Approximate Site Boundary
Approximate Parcel Boundary
Edge of street
Approximate property boundary E&L Supply
SD ~ 6 ft bgs
Storm drain inlet (bottom of storm drain indicated)
DW17
Groundwater Monitoring Well location DW wells installed by DES, MW wells installed by others
DE1
Dual-phase extraction (DPE) well (DES 2016)
TPHg
Total petroleum hydrocarbons-gasoline by EPA Method 8015 modified in parts per billion (ppb) December 2015 shown in black
NT
Not tested
ND
Not detected at concentration above the laboratory detection limit.
>100,000 ppb
>10,000 ppb
>1,000 ppb
>100 ppb
high
low
Gasoline (as TPHg) iso-concentration contour in ppb. Due to limitations on groundwater testing from DEH Directive in July 6, 2015 letter and the continued presence of sheen in the onsite wells, the gasoline impacted groundwater contours in ppb from DES Report (May 22, 2015) are still applicable and are shown on this figure.
Primary Groundwater Flow (April 2016) (and contamination migration pathway)
sheen
Sheen observed on date of associated TPHg result, as shown
0
100
200
Approximate Scale in feet
Disclaimer: This figure is an interpretation based on available data. Actualsite conditions may differ. All locations and dimensions are approximate.
Donan Environmental Services, Inc.
Gasoline-Impacted Groundwater Plan April 2016
Golden State Gasoline
225 West Washington Avenue
Escondido, California
Project No. 09E3857
Figure 9



KEY:

Approximate Site Boundary

Approximate Parcel Boundary

Edge of street

Approximate property boundary
E&L Supply

SD ~ 6 ft bgs — Storm drain inlet (bottom of storm drain indicated)

DW17 — Groundwater Monitoring Well location DW wells installed by DES, MW wells installed by others

Bz — Benzene by EPA Method 8260 B modified in parts per billion (ppb) December 2015 data shown in black

DE1 — Dual-phase extraction (DPE) well (DES 2016)

ND — Not detected at concentration above the laboratory detection limit.

NT — Not tested

>3,000 ppb, >1,000 ppb, >1 ppb, high, low — Benzene iso-concentration contour in ppb. Due to limitations on groundwater testing from DEH Directive in July 6, 2015 letter and the continued presence of sheen in the onsite wells, the Benzene Iso-Concentration contours in ppb fromDES Report (May 22, 2015) are still applicable and are shown on this figure.

Primary Groundwater Flow (April 2016) (and contamination migration pathway)

sheen — Sheen observed on date of associated benzene result, as shown

0 100 200

Approximate Scale in feet

Disclaimer: This figure is an interpretation based on available data. Actualsite conditions may differ. All locations and dimensions are approximate.

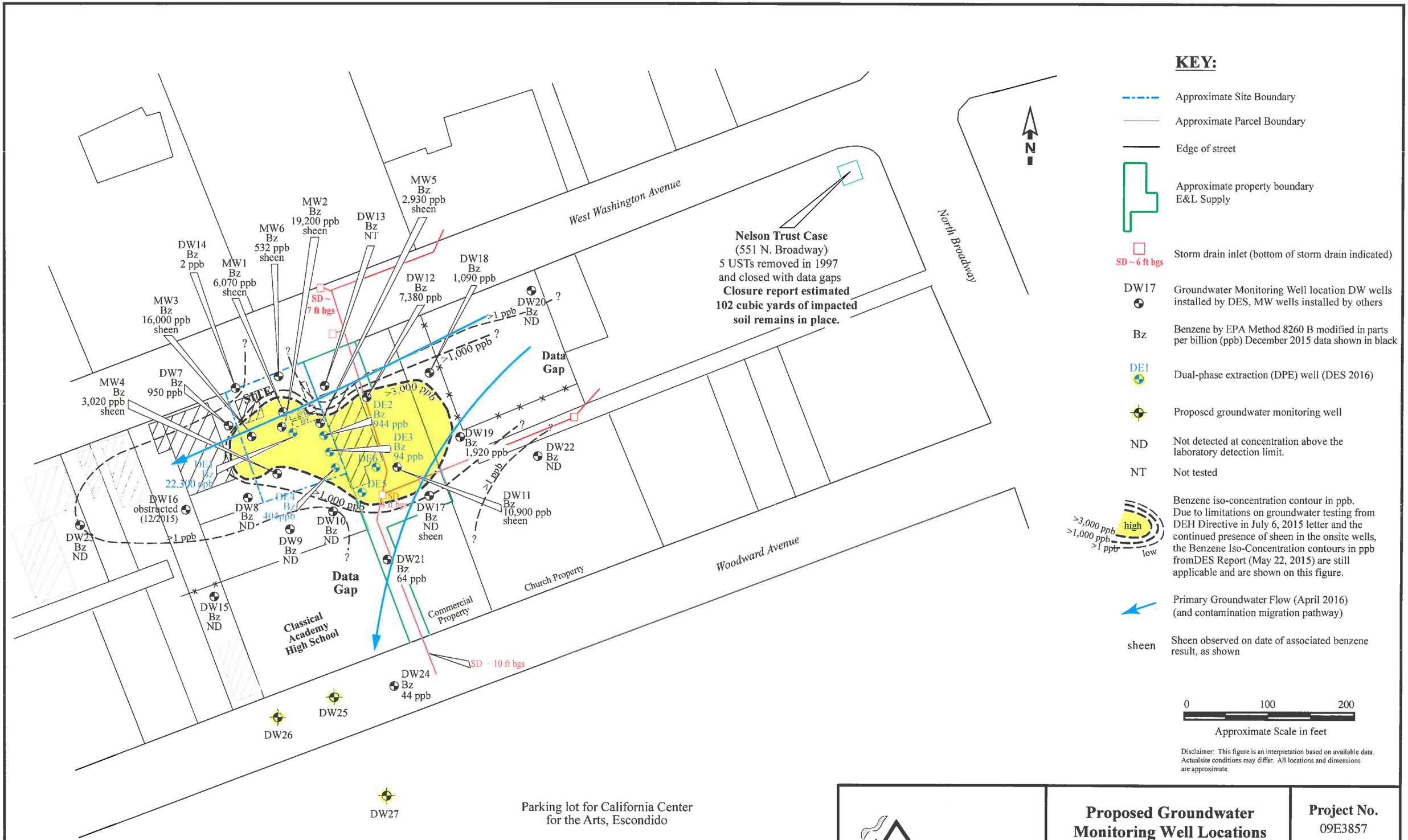
Donan Environmental Services, Inc.

Benzene-Impacted Groundwater Plan April 2016

Golden State Gasoline
225 West Washington Avenue
Escondido, California

Project No.
09E3857

Figure 10



KEY:

Approximate Site Boundary

Approximate Parcel Boundary

Edge of street

Approximate property boundary
E&L Supply

SD ~ 6 ft bgs — Storm drain inlet (bottom of storm drain indicated)

DW17 — Groundwater Monitoring Well location DW wells installed by DES, MW wells installed by others

Bz — Benzene by EPA Method 8260 B modified in parts per billion (ppb) December 2015 data shown in black

DE1 — Dual-phase extraction (DPE) well (DES 2016)

Proposed groundwater monitoring well

ND — Not detected at concentration above the laboratory detection limit.

NT — Not tested

>3,000 ppb high
>1,000 ppb
>1 ppb low

Benzene iso-concentration contour in ppb. Due to limitations on groundwater testing from DEH Directive in July 6, 2015 letter and the continued presence of sheen in the onsite wells, the Benzene Iso-Concentration contours in ppb fromDES Report (May 22, 2015) are still applicable and are shown on this figure.

Primary Groundwater Flow (April 2016) (and contamination migration pathway)

sheen — Sheen observed on date of associated benzene result, as shown

0 100 200
Approximate Scale in feet

Disclaimer: This figure is an interpretation based on available data. Actualsite conditions may differ. All locations and dimensions are approximate.

Donan Environmental Services, Inc.

Proposed Groundwater Monitoring Well Locations

Golden State Gasoline
225 West Washington Avenue
Escondido, California

Project No.
09E3857

Figure 11

TABLES

Table 1 - Summary of Soil Sample and Analytical Data
Table 2 - Monitoring Well Construction Data
Table 3 - Summary of Site Groundwater Levels
Table 4 - Summary of Groundwater Sample and Analytical Data

TABLE 1

Summary of Soil Sample and Analytical Data

Golden State Gasoline - Escondido

UR# H03089-001

225 West Washington Ave., Escondido, CA

Sample Data				TPH-g	TPH-d	Volatile Organic Compounds											
Sample Location	Sample ID	Date Sampled	Depth (feet)	(1) ppm	(2) ppm	B (3) ppb	T (3) ppb	E (3) ppb	X (3) ppb	MTBE (3) ppb	ETBE (3) ppb	TAME (3) ppb	DIPE (3) ppb	TBA (3) ppb	NAP (3) ppb	Lab	CARs/ Refs
HerSchy 1998 Soil Investigation																	
B-1	B-1@20'	11/21/98	17.3	ND		21	34	7.9	25	490						Castle	A
B-2	B-2@20'	11/21/98	20.0	ND		25	52	7.6	32	31						Castle	A
B-3	B-3@20'	11/21/98	17.3	470		5,500	2,100	5,700	30,000	26,000						Castle	A
B-4	B-4@20'	11/21/98	17.3	140		3,300	7,800	1,700	8,900	2,200						Castle	A
B-5	B-5@20'	11/21/98	17.3	8,000		110,000	410,000	120,000	610,000	ND						Castle	A
D.R. Sorben 1999 Soil Investigation*																	
MW1	MW1@3'	12/15/99	3.0	ND	ND											Mobl	B
MW1	MW1@10'	12/15/99	10.0	110	ND											Mobl	B
MW1	MW1@15'	12/15/99	15.0	460	ND	1,400	7,000	1,900	11,000	1,600						Mobl	B
MW1	MW1@20'	12/15/99	20.0	94	ND											Mobl	B
MW1	MW1@25'	12/15/99	25.0	ND	ND											Mobl	B
MW1	MW1@30'	12/15/99	30.0	ND	ND											Mobl	B
MW2	MW2@7'	12/15/99	7.0	15	ND											Mobl	B
MW2	MW2@12'	12/15/99	12.0	4,100	ND	23,000	130,000	37,000	220,000	62,000						Mobl	B
MW2	MW2@17'	12/15/99	17.0	320	ND											Mobl	B
MW2	MW2@20'	12/15/99	20.0	42	ND											Mobl	B
MW2	MW2@25'	12/15/99	25.0	ND	ND											Mobl	B
MW2	MW2@30'	12/15/99	30.0	ND	ND											Mobl	B
PIC 2005 Soil Investigation																	
MW3	MW3-5'	04/12/05	5.0	ND	ND											H&P	C
MW3	MW3-10'	04/12/05	10.0	ND	ND											H&P	C
MW4	MW4-5'	04/12/05	5.0	ND	ND											H&P	C
MW4	MW4-10'	04/12/05	10.0	210	110	560	12,000	10,000	38,000	ND						H&P	C
MW5	MW5-5'	04/12/05	5.0	ND	ND											H&P	C
MW5	MW5-10'	04/12/05	10.0	ND	ND											H&P	C
MW6	MW6-5'	04/12/05	5.0	ND	ND											H&P	C
MW6	MW6-10'	04/12/05	10.0	ND	ND											H&P	C
DES 2010 Soil Investigation																	
DW7	DW7-10'	08/14/10	10.0	2,980	ND	1,620	18,700	34,800	211,000	ND	ND	ND	ND	ND	27,500	CHTK	D
DW7	DW7-15'	08/14/10	15.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		CHTK	D
DW7	DW7-20'	08/14/10	20.0	ND	ND	ND	ND	2	12	ND	ND	ND	ND	ND		CHTK	D
DW8	DW8-10'	08/14/10	10.0	2.12	ND	83	38	37	140	ND	ND	ND	ND	42		CHTK	D
DW8	DW8-15'	08/14/10	15.0	137	ND	ND	ND	1,000	1,250	ND	ND	ND	ND	ND	400	CHTK	D
DW8	DW8-20'	08/14/10	20.0	ND	ND	ND	ND	ND	4	ND	ND	ND	ND	ND		CHTK	D
DW9	DW9-5'	08/14/10	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		CHTK	D
DW9	DW9-10'	08/14/10	10.0	11.8	ND	650	900	173	1,180	ND	ND	ND	ND	ND		CHTK	D
DW9	DW9-15'	08/14/10	15.0	231	ND	820	2,500	1,840	10,600	ND	ND	ND	ND	ND	1,550	CHTK	D
DW9	DW9-20'	08/14/10	20.0	0.21	ND	6	10	4	22	ND	ND	ND	ND	ND		CHTK	D
DW10	DW10-5'	08/16/10	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		CHTK	D
DW10	DW10-10'	08/16/10	10.0	97.4	ND	94	ND	833	1,700	ND	ND	ND	ND	ND		CHTK	D
DW10	DW10-15'	08/16/10	15.0	1,390	ND	7,900	15,200	16,300	86,500	ND	ND	ND	ND	ND	7,000	CHTK	D
DW10	DW10-20'	08/16/10	20.0	0.24	ND	8	7	4	19	ND	ND	ND	ND	ND		CHTK	D
DW11	DW11-5'	08/16/10	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		CHTK	D
DW11	DW11-10'	08/16/10	10.0	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		CHTK	D
DW11	DW11-15'	08/16/10	15.0	1,840	ND	15,500	31,900	15,900	96,800	ND	ND	ND	ND	ND	10,600	CHTK	D
DW11	DW11-20'	08/16/10	20.0	2.81	ND	90	67	63	378	ND	ND	ND	ND	ND		CHTK	D
DW12	DW12-5'	08/16/10	5.0	ND	ND	ND	ND	ND	3	ND	ND	ND	ND	ND		CHTK	D
DW12	DW12-10'	08/16/10	10.0	3.09	ND	43	ND	31	128	ND	ND	ND	ND	ND		CHTK	D
DW12	DW12-15'	08/16/10	15.0	293	ND	2,800	8,960	3,760	25,800	ND	ND	ND	ND	ND	3,460	CHTK	D
DW12	DW12-20'	08/16/10	20.0	4.91	ND	113	134	34	150	ND	ND	ND	ND	ND		CHTK	D
DW13	DW13-5'	08/15/10	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		CHTK	D
DW13	DW13-10'	08/15/10	10.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		CHTK	D
DW13	DW13-15'	08/15/10	15.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CHTK	D
DW14	DW14-5'	08/15/10	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		CHTK	D
DW14	DW14-10'	08/15/10	10.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		CHTK	D
DW14	DW14-15'	08/15/10	15.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CHTK	D
DW14	DW14-20'	08/15/10	20.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		CHTK	D

TABLE 1

Summary of Soil Sample and Analytical Data

Golden State Gasoline - Escondido

UR# H03089-001

225 West Washington Ave., Escondido, CA

Sample Data				TPH-g	TPH-d	Volatile Organic Compounds											
Sample Location	Sample ID	Date Sampled	Depth (feet)	(1) ppm	(2) ppm	B (3) ppb	T (3) ppb	E (3) ppb	X (3) ppb	MTBE (3) ppb	ETBE (3) ppb	TAME (3) ppb	DIPE (3) ppb	TBA (3) ppb	NAP (3) ppb	Lab	CARs/ Refs
DES 2013 Soil Investigation																	
DW15	DW15-6'	10/01/13	6.0	ND	ND											Assoc	E
DW15	DW15-11'	10/01/13	11.0	ND	ND											Assoc	E
DW15	DW15-16'	10/01/13	16.0	ND	ND											Assoc	E
DW15	DW15-21'	10/01/13	21.0	ND	ND											Assoc	E
DW16	DW16-6'	10/03/13	6.0	ND	ND											Assoc	F
DW16	DW16-11'	10/03/13	11.0	ND	ND											Assoc	F
DW16	DW16-16'	10/03/13	16.0	ND	ND											Assoc	F
DW16	DW16-21'	10/03/13	21.0	ND	ND											Assoc	F
DW17	DW17-6'	10/01/13	6.0	ND	ND											Assoc	E
DW17	DW17-11'	10/01/13	11.0	ND	4.64											Assoc	E
DW17	DW17-16'	10/01/13	16.0	16.2	13.4	1,100	270	1,500	4,000	ND	ND	ND	ND	ND	NA	Assoc	E
DW17	DW17-21'	10/01/13	21.0	ND	ND											Assoc	E
DW18	DW18-6'	10/02/13	6.0	ND	ND											Assoc	E
DW18	DW18-11'	10/02/13	11.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	Assoc	E
DW18	DW18-16'	10/02/13	16.0	3,020	680	10,000	120,000	67,000	390,000	ND	ND	ND	ND	ND	NA	Assoc	E
DW18	DW18-21'	10/02/13	21.0	ND	ND											Assoc	E
DW19	DW19-6'	10/02/13	6.0	ND	ND											Assoc	E
DW19	DW19-11'	10/02/13	11.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	Assoc	E
DW19	DW19-16'	10/02/13	16.0	201	26.7	ND	ND	3,700	20,000	ND	ND	ND	ND	ND	NA	Assoc	E
DW19	DW19-21'	10/02/13	21.0	ND	ND											Assoc	E
DW20	DW20-6'	10/02/13	6.0	ND	ND											Assoc	E
DW20	DW20-11'	10/02/13	11.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	Assoc	E
DW20	DW20-16'	10/02/13	16.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	Assoc	E
DW20	DW20-21'	10/02/13	21.0	ND	ND											Assoc	E
DES 2014-2015 Soil Investigation																	
DW21	DW21-10'	09/23/14	10.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	Assoc	F
DW21	DW21-15'	09/23/14	15.0	156		ND	600	2,100	9,500	ND	ND	ND	ND	ND	NA	Assoc	F
DW21	DW21-20'	09/23/14	20.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	Assoc	F
DW22	DW22-10'	09/23/14	10.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	Assoc	F
DW22	DW22-15'	09/23/14	15.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	Assoc	F
DW22	DW22-20'	09/23/14	20.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	Assoc	F
DW23	DW23-5'	03/16/15	5.0	ND												Assoc	G
DW23	DW23-10'	03/16/15	10.0	ND												Assoc	G
DW23	DW23-15	03/16/15	15.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	Assoc	G
DW23	DW23-20'	03/16/15	20.0	ND												Assoc	G
DW24	DW24-5'	10/06/15	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CHTK	H
DW24	DW24-10'	10/06/15	10.0	0.89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CHTK	H
DW24	DW24-15'	10/06/15	15.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CHTK	H
DW24	DW24-20'	10/06/15	20.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CHTK	H
DES 2016 Soil Investigation																	
DE1	DE1-5'	04/08/16	5.0	0.23													
DE1	DE1-10'	04/08/16	10.0	118													
DE1	DE1-15'	04/08/16	15.0	579		4,420	15,200	5,480	30,300	14,200	ND	ND	ND	ND	405	CHTK	I
DE1	DE1-20'	04/08/16	20.0	3.45													
DE2	DE2-5'	04/07/16	5.0	ND													
DE2	DE2-10'	04/07/16	10.0	46													
DE2	DE2-15'	04/07/16	15.0	490		2,300	9,300	5,230	35,500	ND	ND	ND	ND	ND	291	CHTK	I
DE2	DE2-20'	04/07/16	20.0	ND													
DE3	DE3-5'	04/07/16	5.0	ND													
DE3	DE3-10'	04/07/16	10.0	144													
DE3	DE3-15'	04/07/16	15.0	1,770		11,700	35,000	15,200	96,000	385	ND	ND	ND	ND	803	CHTK	I
DE3	DE3-20'	04/07/16	20.0	0.22													
DE4	DE4-5'	04/08/16	5.0	ND													
DE4	DE4-10'	04/08/16	10.0	ND													
DE4	DE4-15'	04/08/16	15.0	929		4,760	9,300	9,200	56,700	ND	ND	ND	ND	ND	566	CHTK	I
DE4	DE4-20'	04/08/16	20.0	ND													
DE5	DE5-5'	05/20/16	5.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CHTK	J
DE5	DE5-10'	05/20/16	10.0	7		47	4	2	94	ND	ND	ND	ND	ND	119	CHTK	J
DE5	DE5-15'	05/20/16	15.0	302		2,040	5,020	4,030	28,600	ND	ND	ND	ND	ND	5,820	CHTK	J
DE5	DE5-20'	05/20/16	20.0	0.58		18	23	6	32	ND	ND	ND	ND	ND	23	CHTK	J
DE6	DE6-5'	05/20/16	5.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CHTK	J
DE6	DE6-10'	05/20/16	10.0	6.67		35	2	1	137	ND	ND	ND	ND	ND	89	CHTK	J
DE6	DE6-15'	05/20/16	15.0	15.8		453	795	302	2,570	ND	ND	ND	ND	ND	196	CHTK	J
DE6	DE6-20'	05/20/16	20.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CHTK	J

TABLE 1

Summary of Soil Sample and Analytical Data

Golden State Gasoline - Escondido

UR# H03089-001

225 West Washington Ave., Escondido, CA

Sample Data				TPH-g	TPH-d		Volatile Organic Compounds											
Sample Location	Sample ID	Date Sampled	Depth (feet)	(1) ppm	(2) ppm		B (3) ppb	T (3) ppb	E (3) ppb	X (3) ppb	MTBE (3) ppb	ETBE (3) ppb	TAME (3) ppb	DIPE (3) ppb	TBA (3) ppb	NAP (3) ppb	Lab	CARs/ Refs

E	Ethylbenzene	TPH-g	Total Petroleum Hydrocarbons-Gasoline Standard	Castle	Castle Analytical Laboratory
B	Benzene	TPH-d	Total Petroleum Hydrocarbons-Diesel Standard	H&P	Hand P Mobile Geochemistry
T	Toluene	NAP	Napthalene	Mob1	Mobile/One Laboratories Inc.
X	Total Xylenes	CARs	Certified Analytical Reports		
MTBE	Methyl Tertiary Butyl Ether	Refs	Reference where chemical data are first reported		
ETBE	Ethyl Tertiary Butyl Ether	ppb	Parts per billion or Micrograms per kilograms (ug/kg)		
TAME	Tertiary Amyl Methyl Ether	ppm	Parts per million or Millegrams per kilograms (mg/kg)		
DIPE	Diisopropyl Ether	CHTK	CHEMTEK Environmental Laboratories Inc.		
TBA	Tertiary Butyl Alcohol	Assoc	Associated Laboratories		
		ND	Not detected		

Footnotes:

*	Monitorings wells MW1 and MW2 were converted on December 15, 1999, and formerly known as B-6 and B-7
(1)	Total Petroleum Hydrocarbons (TPH-gasoline) - Analyzed using EPA Method 8015-modified using gasoline as a standard.
(2)	Total Petroleum Hydrocarbons (TPH-diesel) - Analyzed using EPA Method 8015-modified using diesel as a standard.
(3)	Volatile Organic Compounds - VOCS - Analyzed using EPA Method 8260B.
(A)	Castle Analytical Laboratory - report dated December 2, 1998
(B)	Mobile/One Laboratories Inc. - report dated December 29, 1999
(C)	H and P Mobile Geochemistry - report dated April 18, 2005
(D)	CHEMTEK Environmental Laboratories Inc. - report dated August 24, 2010
(E)	Associated Laboratories report dated October 10, 2013
(F)	Associated Laboratories report dated October 1, 2014
(G)	Associated Laboratories report dated April 17, 2015
(H)	CHEMTEK Environmental Laboratories Inc. - report dated October 15, 2015
(I)	CHEMTEK Environmental Laboratories Inc. - report dated April 18, 2016
(J)	CHEMTEK Environmental Laboratories Inc. - report dated June 2, 2016

Table 2
Monitoring Well Construction Data
Golden State Gasoline - Escondido
UR# H03089-001
225 West Washington Ave., Escondido, CA

WELL #	MW1	MW2	MW3	MW4	MW5	MW6	DW7	DW8
Well Information								
Diameter	2"	2"	2"	2"	2"	2"	2"	2"
Blank	Not Recorded	Not Recorded	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC
Slot Size	Not Recorded	Not Recorded	0.02	0.02	0.02	0.02	0.02	0.02
Blank Length	10'	10'	5'	5'	5'	5'	5'	5'
Blank Interval	0-10'	0-10'	0-5'	0-5'	0-5'	0-5'	0-5'	0-5'
Slot Length	20'	20'	15'	15'	15'	15'	15'	15'
Slot Interval	10'-30'	10'-30'	5'-20'	5'-20'	5'-20'	5'-20'	5'-20'	5'-20'
Traffic Box	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap + Padlock	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bottom Cap	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Concrete Seal	2'	2'	3'	3'	3'	3'	3'	3'
Interval	0-2'	0-2'	0-3'	0-3'	0-3'	0-3'	0-3'	0-3'
Bentonite Chips	8'	8'	1'	1'	1'	1'	1'	1'
Interval	2'-10'	2'-10'	3'-4'	3'-4'	3'-4'	3'-4'	3'-4'	3'-4'
Sand	Not Recorded	Not Recorded	#3-16'	#3-16'	#3-16'	#3-16'	#3-16'	#3-16'
Interval	10'-30'	10'-30'	4'-21'	4'-21'	4'-21'	4'-21'	4'-21'	4'-21'
Boring Information								
Diameter	6"	6"	8"	8"	8"	8"	8"	8"
Depth	0-30'	0-30'	0-21'	0-21'	0-21'	0-21'	0-21'	0-21'

Table 2
Monitoring Well Construction Data
Golden State Gasoline - Escondido
UR# H03089-001
225 West Washington Ave., Escondido, CA

WELL #	DW9	DW10	DW11	DW12	DW13	DW14	DW15	DW16
Well Information								
Diameter	2"	2"	2"	2"	2"	2"	2"	2"
Blank	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC
Slot Size	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Blank Length	5'	5'	5'	5'	5'	5'	5'	5'
Blank Interval	0-5'	0-5'	0-5'	0-5'	0-5'	0-5'	0-5'	0-5'
Slot Length	15'	15'	15'	15'	15'	15'	15'	15'
Slot Interval	5'-20'	5'-20'	5'-20'	5'-20'	5'-20'	5'-20'	5'-20'	5'-20'
Traffic Box	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap + Padlock	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bottom Cap	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Concrete Seal	3'	3'	3'	3'	3'	3'	3'	3'
Interval	0-3'	0-3'	0-3'	0-3'	0-3'	0-3'	0-3'	0-3'
Bentonite Chips	1'	1'	1'	1'	1'	1'	1'	1'
Interval	3'-4'	3'-4'	3'-4'	3'-4'	3'-4'	3'-4'	3'-4'	3'-4'
Sand	#3-16'	#3-16'	#3-16'	#3-16'	#3-16'	#3-16'	#3-16'	#3-16'
Interval	4'-21'	4'-21'	4'-21'	4'-21'	4'-21'	4'-21'	4'-21'	4'-21'
Boring Information								
Diameter	8"	8"	8"	8"	8"	8"	8"	8"
Depth	0-21'	0-21'	0-21'	0-21'	0-21'	0-21'	0-21'	0-21'

Table 2
Monitoring Well Construction Data
Golden State Gasoline - Escondido
UR# H03089-001
225 West Washington Ave., Escondido, CA

WELL #	DW17	DW18	DW19	DW20	DW21	DW22	DW23	DW24
Well Information								
Diameter	2"	2"	2"	2"	2"	2"	2"	2"
Blank	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC	SCH 40 PVC	SCH 40 PVC	SCH 40 PVC	Sch 40 PVC
Slot Size	0.02	0.02	0.02	0.02	0.02"	0.02"	0.02"	0.02
Blank Length	5'	5'	5'	5'	5'	5'	5'	5'
Blank Interval	0-5'	0-5'	0-5'	0-5'	0'-5'	0'-5'	0'-5'	0-5'
Slot Length	15'	15'	15'	15'	15'	15'	15'	15'
Slot Interval	5'-20'	5'-20'	5'-20'	5'-20'	5'-20'	5'-20'	5'-20'	5'-20'
Traffic Box	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap + Padlock	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bottom Cap	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Concrete Seal	3'	3'	3'	3'	3'	3'	3'	3'
Interval	0-3'	0-3'	0-3'	0-3'	0-3'	0-3'	0-3'	0-3'
Bentonite Chips	1'	1'	1'	1'	1'	1'	1'	1'
Interval	3'-4'	3'-4'	3'-4'	3'-4'	3'-4'	3'-4'	3'-4'	3'-4'
Sand	#3-16'	#3-16'	#3-16'	#3-16'	#3-17.5'	#3-17.5'	#3-17.5'	#3-17.5'
Interval	4'-21'	4'-21'	4'-21'	4'-21'	4'-21.5'	4'-21.5'	4'-21.5'	4'-21.5'
Boring Information								
Diameter	8"	8"	8"	8"	8"	8"	8"	8"
Depth	0-21'	0-21'	0-21'	0-21'	0-21.5'	0-21.5'	0-21.5'	0-21.5'

Table 2
Monitoring Well Construction Data
Golden State Gasoline - Escondido
UR# H03089-001
225 West Washington Ave., Escondido, CA

WELL #	DE1	DE2	DE3	DE4	DE5	DE6
Well Information						
Diameter	4"	4"	4"	4"	4"	4"
Blank	Sch 40 PVC	Sch 40 PVC	Sch 40 PVC	SCH 40 PVC	SCH 40 PVC	SCH 40 PVC
Slot Size	0.02	0.02	0.02	0.02"	0.02"	0.02"
Blank Length	5'	5'	5'	5'	5'	5'
Blank Interval	0-5'	0-5'	0-5'	0'-5'	0'-5'	0'-5'
Slot Length	15'	15'	15'	15'	15'	15'
Slot Interval	5'-20'	5'-20'	5'-20'	5'-20'	5'-20'	5'-20'
Traffic Box	Yes	Yes	Yes	Yes	Yes	Yes
Cap + Padlock	Yes	Yes	Yes	Yes	Yes	Yes
Bottom Cap	Yes	Yes	Yes	Yes	Yes	Yes
Concrete Seal	3'	3'	3'	3'	3'	3'
Interval	0-3'	0-3'	0-3'	0-3'	0-3'	0-3'
Bentonite Chips	1'	1'	1'	1'	1'	1'
Interval	3'-4'	3'-4'	3'-4'	3'-4'	3'-4'	3'-4'
Sand	#3-17.5'	#3-17.5'	#3-17.5'	#3-17.5'	#3-17.5'	#3-17.5'
Interval	4'-21.5'	4'-21.5'	4'-21.5'	4'-21.5'	4'-21.5'	4'-21.5'
Boring Information						
Diameter	10"	10"	10"	10"	10"	10"
Depth	0-21'	0-21'	0-21'	0-21.5'	0-21.5'	0-21.5'

Table 3
Summary of Site Groundwater Levels
Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Field Measurements									
Well Number	Date Measured	TOCE (ft)	DTOS (ft)	DTW (ft)	DTP (ft)	GWE (ft)	Water Level Change (ft)[a]	FP (ft)	Adjusted GWE (ft)[1]
B-6 (MW1)	D.R. Sorben 12/15/99	None		17.00				np	
MW1 Screen 10'-30'	PIC 11/16/05	648.31	10	10.78		637.53		np	
	DES 12/10/09			11.20		637.11	-0.42	np	
	DES 4/7/10			10.50		637.81	0.70	np	
	DES 8/24/10			10.88		637.43	-0.38	np	
	DES 11/6/10				Well needs repair			np	
	DES 12/18/11	648.77		11.36		637.41	-0.02	np	
	DES 3/18/12			11.04		637.73	0.32	np	
	DES 5/27/12			11.32		637.45	-0.28	np	
	DES 9/30/12			11.65		637.12	-0.33	np	
	DES 9/3/13			11.84		636.93	-0.19	np	
	DES 9/25/13			11.82	11.81	636.95	0.03	0.01	636.96
	DES 10/9/13			11.88	11.87	636.89	-0.06	0.01	636.90
	DES 12/11/13			12.09	12.08	636.68	-0.21	0.01	636.69
	DES 3/28/14			11.52		637.25	0.57	np	
	DES 6/24/14			11.91	11.90	636.86	-0.39	0.01	636.87
	DES 9/29/14			12.02		636.75	-0.11	sheen	
	DES 12/18/14			11.51	11.50	637.26	0.51	0.01	637.27
	DES 3/18/15			11.62		637.15	-0.11	sheen	
	DES 6/16/15			11.76	11.74	637.01	-0.14	0.02	637.03
	DES 9/21/15			11.93		636.84	-0.17	sheen	
	DES 12/14/15			20.17		628.60	-8.24	sheen	
	DES 3/11/16			11.49		628.60	0.00	sheen	
	DES 4/25/16			11.66		637.11	8.51	sheen	
B-7 (MW2)	D.R. Sorben 12/15/99	None		17.00				sheen	
MW2 Screen 10'-30'	PIC 11/16/05	648.92	10	11.35		637.57		np	
	DES 12/10/09			11.90		637.02	-0.55	np	
	DES 4/7/10			11.01		637.91	0.89	sheen	
	DES 8/24/10			11.50		637.42	-0.49	np	
	DES 11/6/10			10.92		638.00	0.58	np	
	DES 1/16/11			10.91		638.01	0.01	np	
	DES 4/20/11			10.19		638.73	0.72	np	
	DES 7/18/11			11.00		637.92	-0.81	np	
	DES 12/18/11			10.72	10.71	638.20	0.29	0.01	638.21
	DES 3/18/12			11.17		637.75	-0.46	np	
	DES 5/27/12			11.45		637.47	-0.28	np	
	DES 9/30/12			11.78		637.14	-0.33	np	
	DES 9/3/13			12.22	11.89	636.70	-0.09	0.33	636.95
	DES 9/25/13			12.35	11.95	636.57	-0.06	0.04	636.60
	DES 10/9/13			11.90	11.89	637.02	0.06	0.01	637.03
	DES 12/11/13			12.95	12.00	635.97	-0.11	0.95	636.69
	DES 3/28/14			12.04	11.51	636.88	0.91	0.53	637.28
	DES 6/24/14			11.82	11.81	637.10	0.22	0.01	637.11
	DES 9/29/14			12.10	12.07	636.82	-0.28	0.03	636.84
	DES 12/18/14			11.92	11.59	637.00	0.18	0.33	637.25
	DES 3/18/15			11.72		637.20	0.20	sheen	
	DES 6/16/15			12.24	11.81	636.68	-0.52	0.43	637.01
	DES 9/21/15			12.04		636.88	0.20	sheen	
	DES 12/14/15			20.15		628.77	-8.11	sheen	
	DES 3/11/16			11.54	11.53	637.38	8.61	0.01	637.38
	DES 4/25/16			11.67		637.25	-0.13	sheen	

Table 3
Summary of Site Groundwater Levels
Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Field Measurements									
Well Number	Date Measured	TOCE (ft)	DTOS (ft)	DTW (ft)	DTP (ft)	GWE (ft)	Water Level Change (ft)[a]	FP (ft)	Adjusted GWE (ft)[1]
MW3	PIC 11/16/05	648.42	5	8.98		639.44		np	
Screen	DES 12/10/09			12.26		636.16	3.28	np	
5'-20'	DES 4/7/10			11.57		636.85	0.69	np	
	DES 8/24/10			11.17		637.25	0.40	np	
	DES 11/6/10			11.25		637.17	-0.08	np	
	DES 1/16/11			10.48		637.94	0.77	sheen	
	DES 4/25/11			10.62		637.80	-0.14	np	
	DES 7/18/11			11.25		637.17	-0.63	np	
	DES 12/18/11			11.29		637.13	-0.04	np	
	DES 3/18/12			11.49		636.93	-0.20	np	
	DES 5/27/12			11.81		636.61	-0.32	np	
	DES 9/30/12			11.69		636.73	0.12	np	
	DES 9/3/13			11.57		636.85	0.12	np	
	DES 9/24/13			11.55	11.54	636.87	0.03	0.01	636.88
	DES 10/9/13			11.61		636.81	-0.07	odor	
	DES 12/11/13			11.85		636.57	-0.24	np	
	DES 3/28/14			11.25		637.17	0.60	np	
	DES 6/24/14			11.64		636.78	-0.39	sheen	
	DES 9/29/14			11.77		636.65	-0.13	sheen	
	DES 12/18/14			11.25	11.24	637.17	0.52	0.01	637.18
	DES 3/18/15			11.40		637.02	-0.15	sheen	
	DES 6/16/15			11.49		636.93	-0.09	sheen	
	DES 9/21/15			11.69		636.73	-0.20	sheen	
	DES 12/14/15			16.33		632.09	-4.64	sheen	
	DES 3/11/16			11.30		637.12	-5.03	sheen	
	DES 4/25/16			11.41		637.01	-0.11	sheen	
MW4	PIC 11/16/05	649.14	5	11.79		637.35		np	
Screen	DES 12/10/09			12.22		636.92	-0.43	sheen	
5'-20'	DES 4/7/10			11.42		637.72	0.80	np	
	DES 8/24/10			11.88		637.26	-0.46	np	
	DES 11/6/10			11.66		637.48	0.22	np	
	DES 1/16/11			10.21		638.93	1.45	np	
	DES 4/20/11			11.04		638.10	-0.83	np	
	DES 7/18/11			11.65		637.49	-0.61	np	
	DES 12/18/11			10.46		638.68	1.19	np	
	DES 3/18/12			12.64		636.50	-2.18	np	
	DES 5/27/12			11.86		637.28	0.78	np	
	DES 9/30/12			11.63		637.51	0.23	np	
	DES 9/3/13			12.30		636.84	-0.67	np	
	DES 9/24/13			12.32	12.31	636.82	-0.01	0.01	636.83
	DES 10/10/13			12.39		636.75	-0.08	np	
	DES 12/11/13			12.60		636.54	0.21	np	
	DES 3/28/14			12.00		637.14	0.60	np	
	DES 6/24/14			12.43		636.71	-0.43	sheen	
	DES 9/29/14			12.50		636.64	-0.07	sheen	
	DES 12/18/14			12.15	12.04	636.99	0.35	0.11	637.07
	DES 3/18/15			12.12		637.02	0.03	sheen	
	DES 6/16/15			12.24		636.90	-0.12	sheen	
	DES 9/21/15			12.43		636.71	-0.19	sheen	
	DES 12/14/15			16.20		632.94	-3.77	sheen	
	DES 3/11/16			11.40		637.74	4.80	sheen	
	DES 4/25/16			12.18		636.96	-0.78	sheen	

Table 3
Summary of Site Groundwater Levels
Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Field Measurements									
Well Number	Date Measured	TOCE (ft)	DTOS (ft)	DTW (ft)	DTP (ft)	GWE (ft)	Water Level Change (ft)[a]	FP (ft)	Adjusted GWE (ft)[1]
MW5	PIC 11/16/05	648.95	5	11.24		637.71		np	
Screen	DES 12/10/09			12.42		636.53	-1.18	np	
5'-20'	DES 4/7/10			10.88		638.07	1.54	np	
	DES 8/24/10			11.51		637.44	-0.63	np	
	DES 11/6/10			11.09		637.86	0.42	np	
	DES 1/16/11			9.93		639.02	1.16	np	
	DES 4/20/11			10.46		638.49	-0.53	np	
	DES 7/18/11			11.05		637.90	-0.59	np	
	DES 12/18/11	649.30		11.47		637.83	-0.07	sheen	
	DES 3/19/12			11.41		637.89	0.06	np	
	DES 5/27/12			11.69		637.61	-0.28	np	
	DES 9/30/12			12.02		637.28	-0.33	np	
	DES 9/3/13			12.57	12.09	636.73	-0.07	0.48	637.09
	DES 9/24/13			12.55	12.11	636.75	-0.02	0.44	637.08
	DES 10/9/13			12.24		637.06	-0.13	odor	
	DES 12/11/13			12.42	12.40	636.88	-0.16	0.02	636.90
	DES 3/28/14			12.51	11.81	636.79	-0.09	0.70	637.32
	DES 6/24/14			12.31	12.28	636.99	0.20	0.03	637.02
	DES 9/29/14			12.42		636.88	-0.11	sheen	
	DES 12/18/14			11.91	11.90	637.39	0.51	0.01	637.40
	DES 3/18/15			12.01		637.29	-0.10	sheen	
	DES 6/16/15			12.13		637.17	-0.12	sheen	
	DES 9/21/15			12.31		636.99	-0.18	sheen	
	DES 12/14/15			16.22		633.08	-3.91	sheen	
	DES 3/11/16			11.90		637.40	4.32	sheen	
	DES 4/25/16			12.06		637.24	-0.16	sheen	
MW6	PIC 11/16/05	648.21	5	10.57		637.64		np	
Screen	DES 12/10/09			11.02		637.19	-0.45	sheen	
5'-20	DES 4/7/10			10.09		638.12	0.93	sheen	
	DES 8/24/10			12.40		635.81	-2.31	np	
	DES 11/6/10			9.55		638.66	2.85	np	
	DES 1/16/11			9.15		639.06	0.40	sheen	
	DES 4/20/11			9.89		638.32	-0.74	np	
	DES 7/18/11			10.70		637.51	-0.81	np	
	DES 12/18/11			10.12	10.11	638.09	0.59	0.01	638.10
	DES 3/19/12			10.31		637.90	-0.20	np	
	DES 5/27/12			10.65		637.56	-0.34	np	
	DES 9/30/12			11.00		637.21	-0.35	np	
	DES 9/3/13			11.15		637.06	-0.15	np	
	DES 9/24/13			11.12	11.11	637.09	0.04	0.01	637.10
	DES 10/9/13			11.25		636.96	-0.14	odor	
	DES 12/11/13			11.59		636.62	-0.34	np	
	DES 3/28/14			11.56		636.65	0.03	np	
	DES 6/24/14			11.26		636.95	0.30	np	
	DES 9/29/14			11.38		636.83	-0.12	sheen	
	DES 12/18/14			10.86	10.85	637.35	0.52	0.01	637.36
	DES 3/18/15			10.97		637.24	-0.11	np	
	DES 6/16/15			11.08		637.13	-0.11	sheen	
	DES 9/21/15			11.27		636.94	-0.19	np	
	DES 12/14/15			13.10		635.11	-1.83	sheen	
	DES 3/11/16			10.80		637.41	2.30	sheen	
	DES 4/25/16			11.01		637.20	-0.21	sheen	

Table 3
Summary of Site Groundwater Levels
Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Field Measurements									
Well Number	Date Measured	TOCE (ft)	DTOS (ft)	DTW (ft)	DTP (ft)	GWE (ft)	Water Level Change (ft)[a]	FP (ft)	Adjusted GWE (ft)[1]
DW7	DES 8/25/10	647.66	5	10.37		637.29		np	
Screen	DES 11/6/10			10.10		637.56	0.27	np	
5'-20'	DES 1/17/11			9.10		638.56	1.00	np	
	DES 4/21/11			9.31		638.35	-0.21	np	
	DES 7/19/11			10.21		637.45	-0.90	np	
	DES 12/19/11			10.11		637.55	0.10	np	
	DES 3/19/12			10.18		637.48	-0.07	np	
	DES 5/26/12			10.26		637.40	-0.08	np	
	DES 9/30/12			10.62		637.04	-0.36	np	
	DES 9/3/13			10.81		636.85	-0.19	np	
	DES 9/25/13			10.82		636.84	-0.01	np	
	DES 10/9/13			10.94		636.72	-0.12	np	
	DES 12/11/13			10.47		637.19	0.47	np	
	DES 3/28/14			11.30		636.36	-0.83	np	
	DES 6/24/14			10.79		636.87	0.51	sheen	
	DES 9/29/14			11.10		636.56	-0.31	np	
	DES 12/18/14			10.29		637.37	0.81	np	
	DES 3/18/15			10.22		637.44	0.07	np	
	DES 6/16/15			10.79		636.87	-0.57	np	
	DES 9/21/15			10.95		636.71	-0.16	sheen	
	DES 12/14/15			10.79		636.87	0.16	np	
	DES 3/11/16			10.60		637.06	0.19	np	
	DES 4/25/16			10.70		636.96	-0.10	np	
DW8	DES 08/25/10	648.18	5	11.15		637.03		np	
Screen	DES 11/6/10			10.90		637.28	0.25	np	
5'-20'	DES 1/17/11			9.95		638.23	0.95	np	
	DES 4/21/11			10.31		637.87	-0.36	np	
	DES 7/19/11			10.91		637.27	-0.60	np	
	DES 12/19/11			11.12		637.06	-0.21	np	
	DES 3/18/12			10.80		637.38	0.32	np	
	DES 5/26/12			11.11		637.07	-0.31	np	
	DES 9/30/12			11.41		636.77	-0.30	np	
	DES 9/3/13			11.55		636.63	-0.14	np	
	DES 9/25/13			11.58		636.60	-0.03	np	
	DES 10/9/13			11.66		636.52	-0.08	np	
	DES 12/11/13			11.85		636.33	-0.19	np	
	DES 3/28/14			11.94		636.24	-0.09	np	
	DES 6/24/14			11.68		636.50	0.26	np	
	DES 9/29/14			11.78		636.40	-0.10	np	
	DES 12/18/14			11.31		636.87	0.47	np	
	DES 3/18/15			11.39		636.79	-0.08	np	
	DES 6/16/15			11.57		636.61	-0.18	np	
	DES 9/21/15			11.66		636.52	-0.09	np	
	DES 12/14/15			11.73		636.45	-0.07	np	
	DES 3/11/16			11.15		637.03	0.58	np	
	DES 4/25/16			11.44		636.74	-0.29	np	

Table 3
Summary of Site Groundwater Levels
Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Field Measurements									
Well Number	Date Measured	TOCE (ft)	DTOS (ft)	DTW (ft)	DTP (ft)	GWE (ft)	Water Level Change (ft)[a]	FP (ft)	Adjusted GWE (ft)[1]
DW9	DES 8/25/10	648.82	5	11.85		636.97		np	
Screen	DES 11/5/10			11.50		637.32	0.35	np	
5'-20'	DES 1/17/11			10.42		638.40	1.08	np	
	DES 4/21/11			10.95		637.87	-0.53	np	
	DES 7/19/11			11.58		637.24	-0.63	np	
	DES 12/19/11			11.76		637.06	-0.18	np	
	DES 3/19/12			11.45		637.37	0.31	np	
	DES 5/26/12			11.73		637.09	-0.28	np	
	DES 9/30/12			12.19		636.63	-0.46	np	
	DES 9/3/13			-		-	-	roots	
	DES 9/25/13			-		-	-	roots	
	DES 10/9/13			-		-	-	roots	
	DES 12/11/13			-		-	-	roots	
	DES 3/28/14			-		-	-	DRY	
	DES 6/24/14			-	-	-	-	DRY	
	DES 9/29/14			12.2		636.62	-	sheen	
	DES 12/18/14			11.40		637.42	0.80	np	
	DES 3/18/15			11.78		637.04	-0.38	np	
	DES 6/16/15			11.91		636.91	-0.13	np	
	DES 9/21/15			12.07		636.75	-0.16	np	
	DES 12/14/15			12.11		636.71	-0.04	np	
	DES 3/11/16			12.65		636.17	-0.54	np	
	DES 4/25/16			11.85		636.97	0.80	np	
DW10	DES 8/25/10	648.97	5	11.82		637.15		np	
Screen	DES 11/5/10			11.52		637.45	0.30	np	
5'-20'	DES 1/17/11			10.49		638.48	1.03	np	
	DES 4/21/11			11.02		637.95	-0.53	np	
	DES 7/19/11			11.61		637.36	-0.59	np	
	DES 12/19/11			11.85		637.12	-0.24	np	
	DES 3/20/12			11.51		637.46	0.34	np	
	DES 5/26/12			11.81		637.16	-0.30	np	
	DES 9/30/12			12.11		636.86	-0.30	np	
	DES 9/3/13			12.25		636.72	-0.14	np	
	DES 9/25/13			12.24		636.73	0.01	np	
	DES 10/9/13			12.36		636.61	-0.12	np	
	DES 12/11/13			12.51		636.46	-0.15	np	
	DES 3/28/14			12.46		636.51	0.05	np	
	DES 6/24/14			12.36		636.61	0.10	sheen	
	DES 9/29/14			12.48	12.47	636.49	-0.12	0.01	636.50
	DES 12/18/14			12.01		636.96	0.47	np	
	DES 3/18/15			12.09		636.88	-0.08	np	
	DES 6/16/15			12.21		636.76	-0.12	np	
	DES 9/21/15			12.42		636.55	-0.21	np	
	DES 12/14/15			11.61		637.36	0.81	np	
	DES 3/11/16			12.00		636.97	-0.39	np	
	DES 4/25/16			12.04		636.93	-0.04	np	

Table 3
Summary of Site Groundwater Levels
Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Field Measurements									
Well Number	Date Measured	TOCE (ft)	DTOS (ft)	DTW (ft)	DTP (ft)	GWE (ft)	Water Level Change (ft)[a]	FP (ft)	Adjusted GWE (ft)[1]
DW11	DES 8/25/10	649.90	5	12.55		637.35		np	
Screen	DES 11/5/10			12.25		637.65	0.30	np	
5'-20'	DES 1/17/11			11.00		638.90	1.25	np	
	DES 4/24/11			11.68		638.22	-0.68	np	
	DES 7/19/11			12.27		637.63	-0.59	np	
	DES 12/19/11			12.54		637.36	-0.27	sheen	
	DES 3/20/12			12.25		637.65	0.29	np	
	DES 5/26/12			12.46		637.44	-0.21	np	
	DES 9/28/12			12.81		637.09	-0.35	np	
	DES 9/3/13			12.93		636.97	-0.12	np	
	DES 9/24/13			12.96		636.94	-0.03	np	
	DES 10/9/13			13.02		636.88	-0.06	np	
	DES 12/11/13			13.20		636.70	-0.18	sheen	
	DES 3/28/14			13.24		636.66	-0.04	sheen	
	DES 6/24/14			14.06		635.84	-0.82	np	
	DES 9/29/14			13.19		636.71	0.87	np	
	DES 12/18/14			12.72		637.18	0.47	np	
	DES 3/18/15			12.78		637.12	-0.06	sheen	
	DES 6/16/15			12.89		637.01	-0.11	sheen	
	DES 9/21/15			NM					
	DES 12/14/15			13.12		636.78	-0.23	sheen	
	DES 3/11/16			NM					
	DES 4/25/16			12.78		637.12		sheen	
DW12	DES 8/25/10	650.26	5	12.62		637.64		np	
Screen	DES 11/5/10			12.31		637.95	0.31	sheen	
5'-20'	DES 1/17/11			11.21		639.05	1.10	np	
	DES 4/24/11			11.72		638.54	-0.51	np	
	DES 7/19/11			12.35		637.91	-0.63	np	
	DES 12/19/11			12.60		637.66	-0.25	sheen	
	DES 3/20/12			12.35		637.91	0.25	np	
	DES 5/29/12			12.51		637.75	-0.16	np	
	DES 9/28/12			12.90		637.36	-0.39	np	
	DES 9/3/13			13.45		636.81	-0.55	np	
	DES 9/24/13			13.06		637.20	0.39	np	
	DES 10/9/13			13.10		637.16	-0.04	np	
	DES 12/11/13			13.28		636.98	-0.18	sheen	
	DES 3/28/14			13.19		637.07	0.09	np	
	DES 6/26/14			13.15		637.11	0.04	sheen	
	DES 9/29/14			13.30		636.96	-0.15	np	
	DES 12/18/14			12.79		637.47	0.51	np	
	DES 3/18/15			12.87		637.39	-0.08	sheen	
	DES 6/16/15			12.97		637.29	-0.10	sheen	
	DES 9/21/15			NM					
	DES 12/14/15			13.14		637.12	-0.17	sheen	
	DES 3/11/16			NM					
	DES 4/25/16			12.89		637.37		np	

Table 3
Summary of Site Groundwater Levels
Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Field Measurements									
Well Number	Date Measured	TOCE (ft)	DTOS (ft)	DTW (ft)	DTP (ft)	GWE (ft)	Water Level Change (ft)[a]	FP (ft)	Adjusted GWE (ft)[1]
DW13	DES 8/25/10	650.24	5	12.66		637.58		np	
Screen	DES 11/6/10			12.40		637.84	0.26	np	
5'-20'	DES 1/17/11			11.05		639.19	1.35	np	
	DES 4/24/11			11.59		638.65	-0.54	np	
	DES 7/19/11			12.11		638.13	-0.52	np	
	DES 12/19/11			12.41		637.83	-0.30	sheen	
	DES 3/19/12			12.31		637.93	0.10	np	
	DES 5/26/12			12.57		637.67	-0.26	np	
	DES 9/28/12			12.92		637.32	-0.35	np	
	DES 9/3/13			13.09		637.15	-0.17	np	
	DES 9/24/13			13.05		637.19	0.04	np	
	DES 10/9/13			13.11		637.13	-0.06	np	
	DES 12/11/13			13.34		636.90	-0.23	np	
	DES 3/28/14			13.45		636.79	0.11	np	
	DES 6/24/14			13.07		637.17	0.38	np	
	DES 9/29/14			13.32		636.92	-0.25	np	
	DES 12/18/14			12.81		637.43	0.51	np	
	DES 3/18/15			12.88		637.36	-0.07	np	
	DES 6/16/15			12.98		637.26	-0.10	np	
	DES 9/21/15			13.21		637.03	-0.23	sheen	
	DES 12/14/15			13.20		637.04	0.01	np	
	DES 3/11/16			NM					
	DES 4/25/16			NM					
DW14	DES 08/25/10	648.14	5	10.81		637.33		np	
Screen	DES 11/6/10			10.54		637.60	0.27	np	
5'-20'	DES 1/17/11			9.35		638.79	1.19	np	
	DES 4/24/11			9.90		638.24	-0.55	np	
	DES 7/19/11			10.55		637.59	-0.65	np	
	DES 12/19/11			10.78		637.36	-0.23	np	
	DES 3/18/12			10.45		637.69	0.33	np	
	DES 5/26/12			10.74		637.40	-0.29	np	
	DES 9/30/12			11.08		637.06	-0.34	np	
	DES 9/3/13			11.24		636.90	-0.16	np	
	DES 10/9/13			11.35		636.79	-0.11	np	
	DES 12/11/13			11.65		636.49	-0.30	np	
	DES 3/28/14			11.63		636.51	0.02	np	
	DES 6/24/14			11.35		636.79	0.28	np	
	DES 9/29/14			11.45		636.69	-0.10	np	
	DES 12/18/14			10.95		637.19	0.50	np	
	DES 3/18/15			11.06		637.08	-0.11	np	
	DES 6/16/15			11.18		636.96	-0.12	np	
	DES 9/21/15			11.38		636.76	-0.20	np	
	DES 12/14/15			11.60		636.54	-0.22	np	
	DES 3/11/16			10.91		637.23	0.69	np	
	DES 4/25/16			11.09		637.05	-0.18	np	

Table 3
Summary of Site Groundwater Levels
Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Field Measurements									
Well Number	Date Measured	TOCE (ft)	DTOS (ft)	DTW (ft)	DTP (ft)	GWE (ft)	Water Level Change (ft)[a]	FP (ft)	Adjusted GWE (ft)[1]
DW15	DES 10/10/13	651.85	5	15.67		636.18		np	
Screen	DES 12/12/13			15.81		636.04	-0.14	np	
5'-20'	DES 3/28/14			15.85		636.00	-0.04	np	
	DES 6/24/14			15.68		636.17	0.17	np	
	DES 9/29/14			15.78		636.07	-0.10	np	
	DES 12/18/14			15.23		636.62	0.55	np	
	DES 3/18/15			15.40		636.45	-0.17	np	
	DES 6/16/15			15.51		636.34	-0.11	np	
	DES 9/21/15			NM					
	DES 12/14/15			15.72		636.13	-0.21	np	
	DES 3/11/16			15.23		636.62	0.49	np	
	DES 4/25/16			15.43		636.42	-0.20	np	
DW16	DES 10/10/13	647.15	5	10.72		636.43		np	
Screen	DES 12/11/13			10.91		636.24	-0.19	np	
5'-20'	DES 3/28/14			10.98		636.17	-0.07	np	
	DES 6/24/14			10.73		636.42	0.25	np	
	DES 9/29/14			10.85		636.30	-0.12	np	
	DES 12/18/14			10.25		636.90	0.60	np	
	DES 3/18/15			10.45		636.70	-0.20	np	
	DES 6/16/15			dry				dry	
	DES 9/21/15			dry				dry	
	DES 12/14/15			dry				dry	
	DES 3/11/16			dry				dry	
	DES 4/25/16			10.41		636.74		np	
DW17	DES 10/9/13	649.90	5	13.55		636.35		np	
Screen	DES 12/11/13			13.35		636.55	0.20	np	
5'-20'	DES 3/28/14			13.33		636.57	0.02	sheen	
	DES 6/24/14			13.16		636.74	0.17	np	
	DES 9/29/14			13.31		636.59	-0.15	np	
	DES 12/18/14			12.92		636.98	0.39	np	
	DES 3/18/15			12.43		637.47	0.49	sheen	
	DES 6/16/15			12.86		637.04	-0.43	np	
	DES 9/21/15			NM					
	DES 12/14/15			13.24		636.66	-0.38	sheen	
	DES 3/11/16			NM					
	DES 4/25/16			11.06		638.84		sheen	
DW18	DES 10/10/13	652.73	5	15.45		637.28		np	
Screen	DES 12/11/13			15.65		637.08	-0.20	np	
5'-20'	DES 3/28/14			15.68		637.05	-0.03	np	
	DES 6/24/14			15.59		637.14	0.09	np	
	DES 9/29/14			15.66		637.07	-0.07	sheen	
	DES 12/18/14			15.21		637.52	0.45	np	
	DES 3/18/15			15.23		637.50	-0.02	sheen	
	DES 6/16/15			15.41		637.32	-0.18	sheen	
	DES 9/21/15			15.54		637.19	-0.13	sheen	
	DES 12/14/15			15.63		637.10	-0.09	sheen	
	DES 3/11/16			15.10		637.63	0.53	sheen	
	DES 4/25/16			15.29		637.44	-0.19	np	

Table 3
Summary of Site Groundwater Levels
Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Field Measurements									
Well Number	Date Measured	TOCE (ft)	DTOS (ft)	DTW (ft)	DTP (ft)	GWE (ft)	Water Level Change (ft)[a]	FP (ft)	Adjusted GWE (ft)[1]
DW19	DES 10/10/13	651.22	5	14.15		637.07		np	
Screen	DES 12/11/13			14.32		636.90	-0.17	sheen	
5'-20'	DES 3/28/14			14.35		636.87	-0.03	np	
	DES 6/24/14			14.18		637.04	0.17	np	
	DES 9/29/14			14.32		636.90	-0.14	np	
	DES 12/18/14			13.86		637.36	0.46	np	
	DES 3/18/15			13.90		637.32	-0.04	np	
	DES 6/16/15			14.03		637.19	-0.13	sheen	
	DES 9/21/15			14.24		636.98	-0.21	sheen	
	DES 12/14/15			10.16		641.06	4.08	sheen	
	DES 3/11/16			13.80		637.42	-3.64	sheen	
	DES 4/25/16			13.93		637.29	-0.13	np	
DW20	DES 10/9/13	652.07	5	14.45		637.62		np	
Screen	DES 12/11/13			14.59		637.48	-0.14	np	
5'-20'	DES 3/28/14			14.55		637.52	0.04	np	
	DES 6/24/14			14.47		637.60	0.08	np	
	DES 9/29/14			14.61		637.46	-0.14	np	
	DES 12/18/14			14.11		637.96	0.50	np	
	DES 3/18/15			14.13		637.94	-0.02	np	
	DES 6/16/15			14.27		637.80	-0.14	np	
	DES 9/21/15			14.57		637.50	-0.30	np	
	DES 12/14/15			14.58		637.49	-0.01	np	
	DES 3/11/16			14.03		638.04	0.55	np	
	DES 4/25/16			14.22		637.85	-0.19	np	
DW21	DES 9/29/14	650.09	5	13.60		636.49		np	
Screen	DES 12/19/14			14.70		635.39	-1.10	np	
5'-20'	DES 3/18/15			13.35		636.74	1.35	np	
	DES 6/16/15			13.49		636.60	-0.14	np	
	DES 9/21/15			13.68		636.41	-0.19	sheen	
	DES 12/14/15			13.81		636.28	-0.13	sheen	
	DES 3/11/16			13.26		636.83	0.55	sheen	
	DES 4/25/16			13.45		636.64	-0.19	np	
DW22	DES 9/29/14	651.65	5	15.12		636.53		np	
Screen	DES 12/19/14			13.65		638.00	1.47	np	
5'-20'	DES 3/18/15			14.70		636.95	-1.05	np	
	DES 6/16/15			14.80		636.85	-0.10	np	
	DES 9/21/15			14.98		636.67	-0.18	np	
	DES 12/14/15			15.09		636.56	-0.11	np	
	DES 3/11/16			14.60		637.05	0.49	np	
	DES 4/25/16			14.74		636.91	-0.14	np	

Table 3
Summary of Site Groundwater Levels
Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Field Measurements									
Well Number	Date Measured	TOCE (ft)	DTOS (ft)	DTW (ft)	DTP (ft)	GWE (ft)	Water Level Change (ft)[a]	FP (ft)	Adjusted GWE (ft)[1]
DW23	DES 3/18/15	646.77	5	10.49		636.28		np	
Screen	DES 6/16/15			10.42		636.35	0.07	np	
5'-20'	DES 9/21/15			10.73		636.04	-0.31	np	
	DES 12/14/15			10.58		636.19	0.15	np	
	DES 3/11/16			10.81		635.96	-0.23	np	
	DES 4/25/16			10.09		636.68	0.72	np	
DW24	DES 12/14/15	651.09		16.17		634.92		np	
	DES 3/11/16			14.79		636.30		sheen	
	DES 4/25/16			14.87		636.22		np	
DE1	DES 4/25/16			11.70				sheen	
DE2	DES 4/25/16			12.06				np	
DE3	DES 4/25/16			13.51				np	
DE4	DES 4/25/16			12.9				np	

Notes:

[a] Difference in groundwater elevation between consecutive monitoring events, based on air-liquid interface data by using DTW if no product measured or DTP if product measured. If groundwater elevation is decreasing, the value is negative. If groundwater elevation is increasing, the value is positive.

TOCE Top of Casing Elevation

DTOS Depth to top of screen presented in the following reports:
D.R. Sorben Limited Site Assessment Report and Proposed Work Plan (February 15, 2000) (Wells MW1 and MW2)
PIC Soil and Groundwater Investigation Report (May 16, 2006) (Wells MW3, MW4, MW5, and MW6)

DTW Depth to Water in feet below TOCE

GWE Groundwater Elevation in feet above Datum

NM Not Measured

FP Free Product thickness in feet

DTP Depth to product in feet below TOCE

[1] Gasoline is less dense than water, therefore, the adjusted GWE is calculated as follows:
Calculation: [PT x 0.76] + GWE = Adjusted GWE

Submerged well-screen relative to top of groundwater table

TABLE 4

Summary of Groundwater Sample and Analytical Data

Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Sample		Analytical Data																
Sample Location	Date Sampled	TPHg [1] ppb	TPHd [1] ppb	DF g/d	B [2] ppb	T [2] ppb	E [2] ppb	X [2] ppb	MTBE [2] ppb	ETBE [2] ppb	DIPE [2] ppb	TAME [2] ppb	Nap [2] ppb	TBA [2] ppb	DF ppb	Lab	CARs/ Refs
MW1 [3]	12/15/99	63,000	ND<500		7,300	13,000	2,600	8,200	32,000							Mobl	
MW1 [4]	11/16/05	100,000	18,000		5,720	2,170	430	1,370	7,640	ND	ND	1,000		18,000		H&P	
MW1	12/10/09	25,100		10	5,720	2,170	430	1,370	7,640	ND	ND	ND		42,400	100	CTEK	(A)
	04/07/10	72,000	ND	50/1	10,400	9,950	1,400	6,200	53,500	ND	ND	760		31,800	50	CTEK	(B)
	08/24/10	28,000	2,760	50/1	5,000	210	ND	2,200	9,300	ND	ND	130		110,000	50	CTEK	(C)
	11/06/10							Wellhead needs repair									
	12/18/11	120,000	ND	500/1	19,400	7,610	1,520	5,600	88,100	28	ND	1,310		124,000	10	CTEK	(H)
	03/18/12	9,400	ND	5/1	11,000	265	42	510	3,910	23	ND	56		129,000	5	CTEK	(I)
	05/27/12	24,000	ND	50/1	8,900	130	ND	350	2,740	20	ND	35		113,000	5	CTEK	(J)
	09/30/12	6,400	ND	50/1	6,900	50	110	106	270	18	4	ND		106,000	1	CTEK	(K)
	09/25/13	88,800	8,100	100/5	11,000	5,500	2,100	10,000	47,000	ND	ND	800		160,000	200	Assoc	(L)
	12/11/13	Product															
	12/11/13	66,500	4,500	100/5	13,000	790	2,000	5,900	17,000	28	ND	330		99,000	20	Assoc	(N)
	03/31/14	33,800	770	50/1	4,000	2,500	ND	2,200	16,000	ND	ND	460		20,000	100	Assoc	(P)
	06/24/14	Product															
	09/29/14	Sheen															
	12/23/14	Product															
	12/23/14	26,700		40	10,000	ND	1,600	2,000	5,000	ND	ND	180		46,000	50	Assoc	(V)
	03/18/15	Sheen															
	06/18/15	33,300		20	7,800	1,000	1,200	3,700	9,500	ND	ND	280		110,000	50	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/16/15	1,340,000		250	5,740	5,200	7,340	47,600	3,800	ND	ND	ND	27,300	16,600	250	CTEK	(Z)
	04/29/16	15,000		10	6,070	67	115	420	2,400	ND	ND	ND	975	27,700	10	CTEK	(AB)
MW2 [3]	12/15/99							No Sample collected because free product in well									
MW2 [4]	11/16/05	78,000	7,400		20,000	18,000	2,100	10,700	270,000	ND	ND	3,900		21,000		H&P	
MW2	12/10/09	50,200		20	3,970	3,190	700	2,500	34,100	ND	ND	ND		ND	400	CTEK	(A)
	04/07/10	180,000	ND	200/1	9,900	11,800	1,740	8,000	143,000	ND	ND	2,800		49,000	200	CTEK	(B)
	08/24/10	400,000	2,670	200/1	27,400	25,500	ND	11,700	406,000	ND	ND	8,200		170,000	200	CTEK	(C)
	11/06/10	21,000	5,800	50/1	8,300	842	795	1,100	13,500	ND	ND	195		86,100	50	CTEK	(D)
	01/16/11	59,000	ND	200/1	18,500	1,350	1,500	2,000	21,900	ND	ND	230		183,600	200	CTEK	(E)
	04/20/11	73,000	ND	10/1	17,200	1,900	1,740	2,480	28,500	ND	ND	292		156,000	80	CTEK	(F)
	07/18/11	30,000	ND	100/1	17,000	1,530	1,870	2,100	21,040	ND	ND	242		73,650	100	CTEK	(G)
	12/18/11	Product															
	03/18/12	126,000	ND	250/1	10,300	9,440	1,110	5,300	72,100	ND	ND	1,690		23,000	25	CTEK	(I)
	05/27/12	305,000	ND	400/1	24,800	23,600	1,160	8,400	240,000	ND	ND	5,240		77,300	50	CTEK	(J)
	09/30/12	286,000	ND	500/1	29,800	24,100	1,900	9,900	183,000	72	ND	6,100		86,000	40	CTEK	(K)
	09/25/13	256,000	20,000	100/20	24,000	30,000	6,000	30,000	170,000	ND	ND	5,800		100,000	1,000	Assoc	(L)
	12/11/13	Product															
	12/11/13	318,000	49,000	200/100	19,000	24,000	5,600	28,000	180,000	ND	ND	7,400		61,000	100	Assoc	(N)
	03/31/14	Product															
	03/31/14	112,000	6,400	200/10	6,700	11,000	2,200	12,000	11,000	ND	ND	910		2,500	100	Assoc	(P)
	06/24/14	Product															
	09/29/14	Product															
	12/23/14	Product															
	12/23/14	161,000		100	18,000	22,000	4,600	28,000	46,000	ND	ND	2,800		26,000	100	Assoc	(V)
	03/18/15	Sheen															
	06/18/15	222,000		100	18,000	23,000	3,700	24,000	98,000	ND	ND	3,200		140,000	500	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/16/15	3,670,000		5,000	16,000	26,400	7,810	45,600	53,100	ND	ND	ND	13,200	22,900	200	CTEK	(Z)
	04/29/16	489,000		2,500	19,200	25,700	5,710	35,600	102,000	ND	ND	2,770	100,000	75,000	2,500	CTEK	(AB)
Primary MCLs					1	150	300	1,750	13								
Notification Levels														12			
LTCP Cleanup Levels		No Product			<3,000 ppb				<1,000 ppb								

TABLE 4

Summary of Groundwater Sample and Analytical Data

Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Sample		Analytical Data															
Sample Location	Date Sampled	TPHg [1] ppb	TPHd [1] ppb	DF g/d	B [2] ppb	T [2] ppb	E [2] ppb	X [2] ppb	MTBE [2] ppb	ETBE [2] ppb	DIPE [2] ppb	TAME [2] ppb	Nap[2] ppb	TBA [2] ppb	DF ppb	Lab	CARs/ Refs
MW3 [4]	11/16/05	20,000	950		13,000	1,300	1,100	1,600	5,600	ND	ND	ND		11,000		H&P	
MW3	12/10/09	52,000		200	13,200	1,380	1,340	1,730	17,400	ND	ND	ND		38,600	200	CTEK	(A)
	04/07/10	48,000	ND	100/1	13,100	890	1,300	1,750	12,300	ND	ND	170		97,300	100	CTEK	(B)
	08/24/10	52,000	710	100/1	19,700	1,570	450	3,300	27,300	ND	ND	325		227,000	100	CTEK	(C)
	11/06/10	90,000	7,900	100/1	6,580	7,110	1,030	5,900	75,600	ND	ND	1,290		42,000	250	CTEK	(D)
	01/16/11	160,000*	850	1000/1	12,300	10,100	1,050	5,700	153,000	ND	ND	2,900		79,300	1,000	CTEK	(E)
	04/20/11	450,000	ND	250/1	29,000	25,700	1,720	11,700	479,000	ND	ND	8,800		250,000	250	CTEK	(F)
	07/18/11	340,000	ND	2000/1	24,360	20,560	1,810	7,250	358,500	ND	ND	5,200		115,200	2,000	CTEK	(G)
	12/18/11	20,000	ND	50/1	13,000	1,110	1,070	980	24,500	ND	ND	214		70,500	50	CTEK	(H)
	03/18/12	22,000	ND	10/1	17,400	587	1,420	1,290	14,500	16	20	150		88,900	10	CTEK	(I)
	05/27/12	53,000	ND	10/1	13,700	1,360	1,280	1,720	18,000	15	22	230		64,800	5	CTEK	(J)
	9/31/12	17,600	ND	100/1	15,400	290	1,120	900	6,630	17	18	110		77,700	4	CTEK	(K)
	09/24/13	57,800	2,400	40/2	13,000	2,000	1,700	5,300	7,400	ND	ND	ND		54,000	50	Assoc	(L)
	12/13/13	44,300	1,400	50/5	8,900	600	490	830	4,500	ND	ND	140		72,000	50	Assoc	(O)
	03/31/14	16,000	530	20/1	1,900	830	ND	1,600	2,000	ND	ND	ND		17,000	100	Assoc	(P)
	06/24/14	Sheen															
	09/29/14	Sheen															
	12/23/14	Product															
	12/23/14	33,100		20	13,000	480	780	2,300	780	ND	ND	ND		81,000	50	Assoc	(V)
	03/18/15	Sheen															
	06/18/15	25,900		40	9,000	570	810	790	1,600	ND	ND	ND		79,000	100	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/16/15	17,400		1	13,700	ND	651	850	614	ND	ND	ND	313	27,100	100	CTEK	(Z)
	04/29/16	16,200		25	16,000	ND	ND	470	1,130	ND	ND	ND	ND	30,400	200	CTEK	(AB)
MW4 [4]	11/16/05	4,500	ND<500		4,400	100	320	101	290	ND	ND	ND		1,500		H&P	
MW4	12/10/09	6,400		40	2,410	ND	132	ND	220	ND	ND	ND		2,610	40	CTEK	(A)
	04/07/10	1,900	ND	10/2	2,340	27	111	86	141	ND	ND	ND		7,400	10	CTEK	(B)
	08/24/10	4,900	ND	10/2	1,100	18	ND	115	295	ND	ND	ND		12,500	10	CTEK	(C)
	11/06/10	1,100	3,600	10/2	2,070	20	64	70	238	ND	ND	ND		3,720	10	CTEK	(D)
	01/16/11	3,900	ND	200/1	1,500	28	32	42	250	ND	ND	ND		6,550	10	CTEK	(E)
	04/20/11	9,400	ND	8/1	4,150	30	45	47	263	ND	ND	ND		16,800	1	CTEK	(F)
	07/18/11	1,700	ND	1/2	3,070	49	20	100	250	ND	ND	ND		5,120	4	CTEK	(G)
	12/18/11	1,700	ND	4/1	3,100	14	90	114	250	ND	ND	ND		4,300	4	CTEK	(H)
	03/18/12	3,700	ND	10/1	1,510	9	62	16	148	ND	3	ND		4,330	1	CTEK	(I)
	05/27/12	4,100	ND	10/1	1,600	9	7	58	152	ND	ND	ND		4,910	1	CTEK	(J)
	09/30/12	950	ND	1/1	2,230	6	34	19	98	ND	3	37		4,430	1	CTEK	(K)
	09/24/13	19,900	2,000	20/2	3,800	2,400	670	1,900	180	ND	ND	ND		3,800	20	Assoc	(L)
	12/13/13	5,680	3,200	5/5	530	470	250	960	98	ND	ND	ND		2,300	5	Assoc	(O)
	03/31/14	39,100	13,000	50/20	2,000	3,800	1,200	7,200	160	ND	ND	ND		8,100	20	Assoc	(P)
	06/24/14	Sheen															
	09/29/14	Sheen															
	12/23/14	Product															
	12/23/14	66,400		40	2,500	3,500	2,600	20,000	280	ND	ND	ND		ND	100	Assoc	(V)
	03/18/15	Sheen															
	06/18/15	24,600		50	2,500	1,200	810	3,900	330	ND	ND	ND		12,000	20	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/16/15	158,000		250	1,860	1,170	1,020	5,860	ND	ND	ND	ND	6,460	ND	250	CTEK	(Z)
	04/29/16	13,300		1	3,020	684	302	2,700	354	ND	ND	ND	8,860	ND	200	CTEK	(AB)
Primary MCLs					1	150	300	1,750	13								
Notification Levels														12			
LTCP Cleanup Levels		No Product			<3,000 ppb				<1,000 ppb								

TABLE 4

Summary of Groundwater Sample and Analytical Data

Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Sample		Analytical Data															
Sample Location	Date Sampled	TPHg [1] ppb	TPHd [1] ppb	DF g/d	B [2] ppb	T [2] ppb	E [2] ppb	X [2] ppb	MTBE [2] ppb	ETBE [2] ppb	DIPE [2] ppb	TAME [2] ppb	Nap[2] ppb	TBA [2] ppb	DF ppb	Lab	CARs/ Refs
MW5 [4]	11/16/05	23,000	1,400		12,000	3,400	1,200	4,300	48,000	ND	ND	ND		ND		H&P	
MW5	12/10/09	48,000		400	5,060	1,220	460	1,350	26,600	ND	ND	ND		5,050	400	CTEK	(A)
	04/07/10	49,000	ND	100/1	4,810	1,640	610	1,600	38,800	ND	ND	ND		22,600	100	CTEK	(B)
	08/24/10	110,000	2,610	100/1	8,400	3,000	ND	2,700	71,300	ND	ND	ND		37,000	300	CTEK	(C)
	11/06/10	20,000	12,000	100/1	1,340	426	ND	450	18,100	ND	ND	ND		49,900	100	CTEK	(D)
	01/16/11	30,000	ND	200/1	3,480	700	ND	1,000	29,000	ND	ND	ND		14,900	200	CTEK	(E)
	04/20/11	89,000	ND	200/1	10,800	3,140	98	2,040	78,900	ND	ND	505		102,000	200	CTEK	(F)
	07/18/11	44,000	ND	8/2	11,500	3,820	1,400	3,400	58,700	13	ND	ND		62,400	8	CTEK	(G)
	12/18/11	50,000	ND	200/1	6,780	2,170	793	2,730	45,000	ND	ND	82		31,500	10	CTEK	(H)
	03/19/12	12,000	ND	8/1	1,350	293	280	450	5,800	ND	ND	16		22,400	8	CTEK	(I)
	05/27/12	36,000	ND	40/1	5,640	735	230	900	21,800	ND	ND	21		45,800	10	CTEK	(J)
	09/30/12	26,700	ND	50/1	5,150	590	580	500	9,980	8	ND	15		50,600	1	CTEK	(K)
	09/24/13	145,000	17,000	100/20	7,200	8,700	4,600	24,000	42,000	ND	ND	ND		25,000	200	Assoc	(L)
	12/11/13	Product															
	12/11/13	160,000	400,000	200/200	6,600	6,500	3,600	20,000	53,000	ND	ND	280		38,000	100	Assoc	(N)
	03/31/14	Product															
	03/31/14	13,600	1,700	20/1	440	440	140	2,600	2,800	ND	ND	40		710	20	Assoc	(P)
	06/24/14	Product															
	09/29/14	Sheen															
	12/23/14	Product															
	12/23/14	49,900	NT	40	5,100	1,400	920	4,200	21,000	ND	ND	ND		5,400	100	Assoc	(V)
	03/18/15	Sheen															
	06/18/15	30,700		50	2,500	ND	700	1,400	27,000	ND	ND	ND		12,000	100	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/16/15	84,800		100	3,950	2,240	1,660	10,400	16,200	ND	ND	ND	1,210	4,100	100	CTEK	(Z)
	04/29/16	148,000		100	2,930	418	180	9,300	28,400	ND	ND	ND	2,950	17,000	100	CTEK	(AB)
MW6 [4]	11/16/05	3,300	540		450	130	350	540	100	ND	ND	ND		ND		H&P	
MW6	12/10/09	960		1	61	7	45	26	12	ND	ND	ND		ND	1	CTEK	(A)
	04/07/10	6,600	ND	1/2	300	157	280	630	58	ND	ND	ND		860	1	CTEK	(B)
	08/24/10	15,000	ND	10/2	910	252	280	2,060	155	ND	ND	ND		322	10	CTEK	(C)
	11/06/10	1,800	2,300	1/2	74	25	120	200	19	ND	ND	ND		18	1	CTEK	(D)
	01/16/11	6,700*	ND	1/2	240	19	ND	580	69	ND	ND	ND		ND	1	CTEK	(E)
	04/20/11	32,000	ND	8/1	1,420	1,040	946	4,180	ND	ND	ND	ND		ND	8	CTEK	(F)
	07/18/11	15,000	ND	1/2	905	230	1,260	1,800	102	ND	ND	ND		134	1	CTEK	(G)
	12/18/11	Product															
	03/19/12	18,000	ND	25/1	770	230	920	1,000	82	ND	ND	ND		80	1	CTEK	(I)
	05/27/12	15,000	ND	5/1	750	280	34	1,200	102	ND	ND	ND		90	1	CTEK	(J)
	09/30/12	11,700	ND	1/1	600	172	484	550	65	ND	ND	ND		112	1	CTEK	(K)
	09/24/13	9,490	990	5/5	680	110	870	450	110	ND	ND	ND		ND	5	Assoc	(L)
	12/11/13	10,900	2,200	10/5	710	100	1,200	430	140	ND	ND	ND		ND	20	Assoc	(N)
	03/31/14	741	120	1/2	41	10	51	42	11	ND	ND	ND		11	1	Assoc	(P)
	06/26/14	9,830		1/21	440	170	940	840	62	ND	ND	ND		58	5	Assoc	(S)
	09/29/14																
	12/23/14	Product															
	12/23/14	9,740		10	500	100	750	710	92	ND	ND	ND		61	5	Assoc	(V)
	03/20/15	609		1	21	6.8	45	35	6.4	ND	ND	ND		ND	1	Assoc	(W)
	06/18/15	12,200		10	520	210	1,200	1,400	75	ND	ND	ND		99	5	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/16/15	1,470,000		250	544	3,030	6,020	43,300	ND	ND	ND	ND	32,900	ND	250	CTEK	(Z)
	05/03/16	9,500		20	532	101	564	400	87	ND	ND	ND	606	ND	20	CTEK	(AB)
Primary MCLs					1	150	300	1,750	13								
Notification Levels														12			
LTCP Cleanup Levels		No Product			<3,000 ppb				<1,000 ppb								

TABLE 4

Summary of Groundwater Sample and Analytical Data

Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Sample		Analytical Data															
Sample Location	Date Sampled	TPHg [1] ppb	TPHd [1] ppb	DF g/d	B [2] ppb	T [2] ppb	E [2] ppb	X [2] ppb	MTBE [2] ppb	ETBE [2] ppb	DIPE [2] ppb	TAME [2] ppb	Nap [2] ppb	TBA [2] ppb	DF ppb	Lab	CARs/ Rcfs
DW7	08/28/10	460	ND	1/1	ND	ND	ND	ND	35	ND	ND	ND	2	3,040	1	CTEK	(C)
	11/06/10	3,700	2,600	1/1	200	35	196	307	7	ND	ND	ND		148	1	CTEK	(D)
	01/17/11	1,000	ND	1/1	49	6	25	36	34	ND	ND	ND		1,460	1	CTEK	(E)
	04/21/11	4,300	ND	1/1	474	57	246	237	22	ND	ND	ND		ND	1	CTEK	(F)
	07/19/11	870	ND	1/1	39	ND	2	5	48	ND	ND	ND		1,090	1	CTEK	(G)
	12/19/11	2,200	ND	4/1	346	13	318	12	ND	ND	ND	ND		52	1	CTEK	(H)
	03/19/12	1,400	ND	5/1	83	ND	ND	23	25	ND	ND	ND		1,170	1	CTEK	(I)
	5/26/121	4,800	ND	10/1	560	53	60	400	10	ND	ND	ND		318	1	CTEK	(J)
	09/30/12	1,400	ND	1/1	106	10	30	32	ND	ND	ND	ND		66	1	CTEK	(K)
	09/25/13	2,760	180	1/1	470	26	51	250	ND	ND	ND	ND		ND	5	Assoc	(L)
	12/11/13	284	960	1/1	61	ND	16	12	57	1.1	1.2	ND		5,300	1	Assoc	(N)
	03/31/14	179	ND	1/1	ND	ND	ND	ND	62	ND	ND	ND		3,900	10	Assoc	(P)
	06/24/14	Sheen															
	10/01/14	76.7	ND	1/1	16	ND	ND	ND	57	ND	ND	ND		4,600	5	Assoc	(T)
	12/23/14	166		1	11	ND	ND	ND	45	ND	ND	ND		3,800	1	Assoc	(V)
	03/19/15	139		1	6.8	ND	ND	ND	43	ND	ND	ND		3,600	1	Assoc	(W)
	06/17/15	218		1	41	ND	11	ND	40	ND	ND	ND		3,100	1	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/16/15	2,600		1	354	11	75	144	ND	ND	ND	ND	54	ND	1	CTEK	(Z)
	04/27/16	4,910		20	950	ND	ND	88	ND	ND	ND	ND	42	ND	20	CTEK	(AB)
DW8	08/25/10	560	ND	1/1	ND	ND	ND	ND	68	3	2	ND	2	19,600	1	CTEK	(C)
	11/06/10	1,600	3,700	1/1	200	ND	59	22	89	ND	ND	ND		12,500	10	CTEK	(D)
	01/17/11	1,400	ND	1/1	142	ND	36	20	92	ND	ND	ND		23,700	10	CTEK	(E)
	04/21/11	1,100	ND	1/1	10	ND	ND	ND	90	ND	ND	ND		34,200	5	CTEK	(F)
	07/19/11	520	ND	1/1	ND	ND	ND	ND	117	2	ND	ND		16,000	1	CTEK	(G)
	12/19/11	3,200	ND	10/1	607	10	92	25	104	2	2	ND		25,000	1	CTEK	(H)
	03/18/12	1,200	ND	1/1	14	ND	3	ND	107	5	2	ND		40,100	1	CTEK	(I)
	05/26/12	1,800	ND	1/1	85	3	ND	25	127	4	3	ND		35,500	1	CTEK	(J)
	09/30/12	760	ND	1/1	2	ND	ND	ND	95	4	2	ND		33,600	1	CTEK	(K)
	09/25/13	126	190	1/1	4.8	ND	ND	ND	52	ND	2.7	ND		8,300	1	Assoc	(L)
	12/13/13	73.7	210	1/1	ND	ND	ND	ND	39	ND	1.9	ND		5,600*	1	Assoc	(O)
	03/31/14	111	ND	1/1	ND	ND	ND	ND	62	ND	ND	ND		6,400	10	Assoc	(P)
	06/26/14	53.6		1	ND	ND	ND	ND	47	ND	ND	ND		5,600	10	Assoc	(S)
	10/01/14	70.5	ND	1/1	ND	ND	ND	ND	63	ND	ND	13		4,700	10	Assoc	(T)
	12/23/14	75		1	ND	ND	ND	ND	56	ND	1.7	ND		5,400	1	Assoc	(V)
	03/19/15	67.9		1	ND	ND	ND	ND	48	ND	1.3	ND		5,500	1	Assoc	(W)
	06/17/15	52.7		1	ND	ND	ND	ND	44	ND	1.4	ND		5,700	1	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/16/15	220		1	4	ND	ND	ND	36	ND	ND	ND	ND	4,450	1	CTEK	(Z)
	04/27/16	540		1	ND	ND	ND	ND	38	ND	ND	ND	ND	10,700	20	CTEK	(AB)
Primary MCLs					1	150	300	1,750	13								
Notification Levels														12			
LTCP Cleanup Levels		No Product			<3,000 ppb				<1,000 ppb								

TABLE 4

Summary of Groundwater Sample and Analytical Data

Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Sample		Analytical Data															
Sample Location	Date Sampled	TPHg [1] ppb	TPHd [1] ppb	DF g/d	B [2] ppb	T [2] ppb	E [2] ppb	X [2] ppb	MTBE [2] ppb	ETBE [2] ppb	DIPE [2] ppb	TAME [2] ppb	Nap [2] ppb	TBA [2] ppb	DF ppb	Lab	CARs/ Refs
DW9	08/25/10	4,600	ND	10/1	600	290	ND	392	180	ND	ND	ND	8	58	3	CTEK	(C)
	11/05/10	480	3,400	1/1	52	14	12	45	2	ND	ND	ND		37	1	CTEK	(D)
	01/17/11	5,700	ND	4/1	875	530	98	480	245	ND	ND	ND		ND	4	CTEK	(E)
	04/21/11	10,000	ND	1/1	2,750	880	230	470	261	ND	ND	ND		ND	10	CTEK	(F)
	07/19/11	8,600	ND	10/1	1,660	1,270	220	657	210	ND	ND	ND		162	2	CTEK	(G)
	12/19/11	5,000	ND	10/1	610	225	93	91	274	ND	ND	ND		100	1	CTEK	(H)
	03/19/12	2,000	ND	5/1	181	55	43	90	194	ND	ND	ND		27	1	CTEK	(I)
	05/26/12	440	ND	1/1	ND	ND	ND	ND	234	ND	ND	ND		64	1	CTEK	(J)
	09/30/12	620	ND	1/1	194	ND	26	ND	90	ND	ND	ND		20	1	CTEK	(K)
	09/25/13	--	--	--	--	--	not sampled due to root intrusion in well					--	--	--			
	12/11/13	--	--	--	--	--	not sampled due to root intrusion in well					--	--	--			
	03/31/14	--	--	--	--	--	not sampled due to root intrusion in well					--	--	--			
	06/24/14	--	--	--	--	--	not sampled due to root intrusion in well					--	--	--			
	10/02/14	504	440	1/1	8.4	ND	ND	6.9	16	ND	ND	ND		ND	1	Assoc	(T)
	12/22/14	116		1	11	ND	ND	ND	27	ND	ND	ND		ND	1	Assoc	(V)
	03/19/15	439		1	24	11	9.6	11	75	ND	ND	ND		10	1	Assoc	(W)
	06/17/15	72.2		1	4	ND	ND	ND	17	ND	ND	ND		ND	1	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/16/15	140		1	8	ND	4	4	11	ND	ND	ND	ND	ND	1	CTEK	(Z)
	04/29/16	ND		1	ND	ND	ND	ND	18	ND	ND	ND	ND	ND	1	CTEK	(AB)
DW10	08/25/10	630	ND	1/1	ND	ND	ND	10	2	ND	2	ND	ND	50	1	CTEK	(C)
	11/05/10	4,000	1,500	1/1	550	576	114	624	171	ND	ND	ND		ND	1	CTEK	(D)
	01/17/11	620	ND	1/1	120	7	17	20	ND	ND	ND	ND		ND	1	CTEK	(E)
	04/21/11	1,100	ND	1/1	324	13	4	16	6	ND	1	ND		ND	1	CTEK	(F)
	07/19/11	470	ND	1/1	122	5	21	9	2	ND	ND	ND		ND	1	CTEK	(G)
	12/19/11	290	ND	1/1	233	4	32	4	2	ND	ND	ND		50	1	CTEK	(H)
	03/20/12	1,000	ND	1/1	207	18	30	39	2	ND	ND	ND		16	1	CTEK	(I)
	05/26/12	ND	ND	1/1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	CTEK	(J)
	09/30/12	ND	ND	1/1	2	ND	ND	ND	ND	ND	ND	ND		22	1	CTEK	(K)
	09/25/13	113	ND	1/1	38	ND	ND	ND	1.2	ND	ND	ND		ND	1	Assoc	(L)
	12/11/13	188	250	1/1	7.8	ND	ND	ND	1.1	ND	ND	ND		36	1	Assoc	(N)
	04/03/14	497	ND	1/1	110	7.8	11	21	1.4	ND	1.1	ND		73	1	Assoc	(R)
	06/24/14	Sheen															
	09/29/14	Product															
	12/22/14	213		1	16	ND	ND	8.5	ND	ND	ND	ND		ND	1	Assoc	(V)
	03/19/15	342		1	35	ND	11	13	ND	ND	ND	ND		ND	1	Assoc	(W)
	06/17/15	184		1	12	ND	ND	ND	ND	ND	ND	ND		29	1	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/16/15	280		1	186	5	11	15	ND	ND	ND	ND	ND	ND	1	CTEK	(Z)
	04/29/16	ND		1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(AB)
Primary MCLs					1	150	300	1,750	13								
Notification Levels														12			
LTCP Cleanup Levels		No Product			<3,000 ppb				<1,000 ppb								

TABLE 4

Summary of Groundwater Sample and Analytical Data

Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Sample		Analytical Data															
Sample Location	Date Sampled	TPHg [1] ppb	TPHd [1] ppb	DF g/d	B [2] ppb	T [2] ppb	E [2] ppb	X [2] ppb	MTBE [2] ppb	ETBE [2] ppb	DIPE [2] ppb	TAME [2] ppb	Nap [2] ppb	TBA [2] ppb	DF ppb	Lab	CARs/ Refs
DW11	08/25/10	4,500	730	1/1	4,680	580	ND	810	ND	ND	ND	ND	22	ND	20	CTEK	(C)
	11/05/10	2,400	6,600	1/1	1,050	207	105	330	ND	ND	ND	ND		233	5	CTEK	(D)
	01/17/11	3,500	ND	1/1	1,120	172	83	240	ND	ND	ND	ND		ND	1	CTEK	(E)
	04/21/11	15,000	ND	30/1	6,140	1,130	360	800	ND	ND	ND	ND		ND	30	CTEK	(F)
	07/19/11	5,500	ND	4/1	1,960	574	196	700	ND	ND	ND	ND		143	4	CTEK	(G)
	12/19/11	17,000	ND	10/1	2,990	1,430	293	2,810	2	ND	2	ND		75	1	CTEK	(H)
	03/20/12	66,000	ND	100/1	15,700	4,800	956	4,130	ND	ND	ND	ND		334	10	CTEK	(I)
	05/29/12	70,000	ND	100/1	14,900	6,130	1,210	7,400	ND	ND	ND	ND		207	5	CTEK	(J)
	09/28/12	51,800	ND	100/1	14,800	6,500	960	9,570	ND	ND	ND	ND		208	4	CTEK	(K)
	09/24/13	47,500	1,400	20/1	16,000	2,100	1,700	4,400	ND	ND	ND	ND		ND	50	Assoc	(L)
	12/13/13	13,400	200	20/1	2,000	510	260	920	ND	ND	ND	ND		ND	10	Assoc	(O)
	04/01/14	62,400	3,700	20/5	14,000	2,200	1,300	3,000	ND	ND	ND	ND		410	10	Assoc	(Q)
	06/25/14	63,300		50	16,000	4,400	2,100	9,800	ND	ND	ND	ND		ND	100	Assoc	(S)
	10/02/14	7,990	730	10/1	1,700	230	200	750	ND	ND	ND	ND		ND	5	Assoc	(T)
	12/22/14	3,870		5	1,300	110	93	190	ND	ND	ND	ND		26	1	Assoc	(V)
	03/18/15	Sheen															
	06/18/15	72,600		50	18,000	4,300	2,000	10,000	ND	ND	ND	ND		320	10	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/15/15	16,500		100	10,800	870	722	2,500	ND	ND	ND	ND	ND	ND	100	CTEK	(Z)
	04/27/16	50,300		40	10,900	1,300	249	4,000	ND	ND	ND	ND	713	ND	40	CTEK	(AB)
DW12	08/25/10	16,000	ND	1/1	2,830	1,770	114	1,930	ND	ND	ND	ND	23	ND	10	CTEK	(C)
	11/05/10	6,800*	2,500	10/1	1,400	450	200	577	ND	ND	ND	ND		7,400	10	CTEK	(D)
	01/17/11	11,000	ND	20/1	2,680	520	290	800	ND	ND	ND	ND		ND	20	CTEK	(E)
	04/21/11	13,000	ND	15/1	4,720	662	186	516	ND	ND	2	ND		ND	1	CTEK	(F)
	07/19/11	5,200	ND	4/1	1,930	368	181	400	ND	ND	ND	ND		ND	4	CTEK	(G)
	12/19/11	8,400	ND	10/1	1,800	755	168	580	ND	ND	ND	ND		92	1	CTEK	(H)
	03/20/12	23,000	ND	25/1	5,900	2,240	588	1,770	ND	ND	ND	ND		ND	10	CTEK	(I)
	05/29/12	31,000	ND	40/1	6,460	3,610	680	1,900	ND	ND	ND	ND		295	5	CTEK	(J)
	09/28/12	28,200	ND	50/1	5,420	2,550	734	2,360	2	ND	2	ND		144	1	CTEK	(K)
	09/24/13	11,300	370	20/1	3,400	510	440	1,200	ND	ND	ND	ND		ND	20	Assoc	(L)
	12/13/13	3,770	320	5/1	780	160	68	230	ND	ND	ND	ND		ND	10	Assoc	(O)
	04/03/14	3,310	ND	5/2	850	120	67	180	ND	ND	ND	ND		ND	5	Assoc	(R)
	06/26/14	Sheen															
	10/01/14	7,990	1,700	5/1	770	350	180	790	ND	ND	ND	ND		51	5	Assoc	(T)
	12/22/14	4,310		10	1,000	250	99	340	ND	ND	ND	ND		31	1	Assoc	(V)
	03/18/15	Sheen															
	06/18/15	29,400		40	6,700	3,400	970	3,500	ND	ND	ND	ND		410	10	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/15/15	11,600		5	3,300	645	344	915	ND	ND	ND	ND	ND	ND	100	CTEK	(Z)
	04/27/16	38,800		25	7,380	2,260	170	2,150	ND	ND	ND	ND	516	ND	25	CTEK	(AB)
Primary MCLs					1	150	300	1,750	13								
Notification Levels														12			
ILTCP Cleanup Levels		No Product			<3,000 ppb				<1,000 ppb								

TABLE 4

Summary of Groundwater Sample and Analytical Data

Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Sample		Analytical Data															
Sample Location	Date Sampled	TPHg [1] ppb	TPHd [1] ppb	DF g/d	B [2] ppb	T [2] ppb	E [2] ppb	X [2] ppb	MTBE [2] ppb	ETBE [2] ppb	DIPE [2] ppb	TAME [2] ppb	Nap[2] ppb	TBA [2] ppb	DF ppb	Lab	CARs/ Refs
DW13	08/25/10	ND	ND	1/1	ND	ND	ND	ND	3	ND	2	ND	ND	195	1	CTEK	(C)
	11/06/10	300	ND	1/1	2	ND	5	ND	2	ND	ND	ND		62	1	CTEK	(D)
	01/17/11	600	ND	1/1	12	ND	22	5	ND	ND	ND	ND		100	1	CTEK	(E)
	04/21/11	1,000	ND	1/1	15	ND	40	3	ND	ND	1	ND		ND	1	CTEK	(F)
	07/19/11	300	ND	1/1	3	ND	7	ND	2	ND	ND	ND		64	1	CTEK	(G)
	12/19/11	270	ND	1/1	5	3	8	6	2	ND	ND	ND		72	1	CTEK	(H)
	03/19/12	700	ND	1/1	10	ND	24	ND	2	ND	ND	ND		55	1	CTEK	(I)
	05/26/12	430	ND	1/1	2	ND	ND	ND	2	ND	ND	ND		37	1	CTEK	(J)
	09/28/12	500	ND	1/1	2	ND	ND	ND	2	ND	ND	ND		46	1	CTEK	(K)
	09/24/13	121	ND	1/1	ND	ND	ND	ND	1.3	ND	ND	ND		ND	1	Assoc	(L)
	12/11/13	216	ND	1/1	ND	ND	ND	ND	1.4	ND	ND	ND		41	1	Assoc	(N)
	04/01/14	236	ND	1/1	3.8	ND	8.5	ND	ND	ND	ND	ND		24	1	Assoc	(Q)
	06/25/14	63.1		1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(S)
	10/01/14	ND	ND	1/1	ND	ND	ND	ND	ND	ND	ND	ND		15	1	Assoc	(T)
	12/22/14	NT															
	03/20/15	154		1	2.7	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(W)
	06/18/15	228		1	4.5	ND	13	ND	ND	ND	ND	ND		23	1	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/15/15	120		1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(Z)
DW14	08/25/10	ND	ND	1/1	ND	ND	ND	ND	29	ND	ND	ND	ND	156	1	CTEK	(C)
	11/69/10	ND	2,200	1/1	ND	ND	ND	ND	17	ND	ND	ND	ND	63	1	CTEK	(D)
	01/17/11	ND	ND	1/1	ND	ND	ND	ND	19	ND	ND	ND		29	1	CTEK	(E)
	04/21/11	ND	ND	1/1	ND	ND	ND	ND	28	ND	ND	ND		99	1	CTEK	(F)
	07/19/11	ND	ND	1/1	ND	ND	ND	ND	24	ND	ND	ND		75	1	CTEK	(G)
	12/19/11	ND	ND	1/1	ND	ND	ND	ND	23	ND	ND	ND		100	1	CTEK	(H)
	03/18/12	ND	ND	1/1	ND	ND	ND	ND	8	ND	ND	ND		ND	1	CTEK	(I)
	5/26/912	ND	ND	1/1	ND	ND	ND	ND	17	ND	ND	ND		24	1	CTEK	(J)
	09/30/12	ND	ND	1/1	ND	ND	ND	ND	19	ND	ND	ND		96	1	CTEK	(K)
	10/09/13	ND	ND	1/1	ND	ND	ND	ND	27	ND	ND	ND		210	1	Assoc	(M)
	12/11/13	ND	ND	1/1	ND	ND	ND	ND	44	ND	ND	ND		370	1	Assoc	(N)
	03/31/14	53	ND	1/1	ND	ND	ND	ND	38	ND	ND	ND		290	1	Assoc	(P)
	06/26/14	ND		1	ND	ND	ND	ND	24	ND	ND	ND		340	1	Assoc	(S)
	10/01/14	ND	ND	1/1	ND	ND	ND	ND	26	ND	ND	ND		300	1	Assoc	(T)
	12/23/14	ND		1	ND	ND	ND	ND	20	ND	ND	ND		160	1	Assoc	(V)
	03/20/15	ND		1	ND	ND	ND	ND	21	ND	ND	ND		230	1	Assoc	(W)
	06/17/15	ND		1	ND	ND	ND	ND	16	ND	ND	ND		230	1	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/16/15	14,800		100	ND	750	440	2,890	ND	ND	ND	ND	512	ND	100	CTEK	(Z)
	05/03/16	ND		1	2	ND	ND	ND	16	ND	ND	ND	ND	128	1	CTEK	(AB)
Primary MCLs					1	150	300	1,750	13								
Notification Levels														12			
LTCP Cleanup Levels		No Product			<3,000 ppb				<1,000 ppb								

TABLE 4
Summary of Groundwater Sample and Analytical Data
Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Sample		Analytical Data															
Sample Location	Date Sampled	TPHg [1] ppb	TPHd [1] ppb	DF g/d	B [2] ppb	T [2] ppb	E [2] ppb	X [2] ppb	MTBE [2] ppb	ETBE [2] ppb	DIPE [2] ppb	TAME [2] ppb	Nap [2] ppb	TBA [2] ppb	DF ppb	Lab	CARs/ Refs
DW15	10/10/13	**50.5**	ND	1/1	ND	ND	ND	ND	**21**	ND	ND	ND		ND	1	Assoc	(M)
	12/12/13	ND	ND	1/1	ND	ND	ND	ND	**23**	ND	ND	ND		ND	1	Assoc	(N)
	04/01/14	ND	ND	1/1	ND	ND	ND	ND	**26**	ND	ND	ND		ND	1	Assoc	(Q)
	06/24/14	ND		1	ND	ND	ND	ND	2.7	ND	ND	ND		ND	1	Assoc	(S)
	09/30/14	ND	ND	1/1	ND	ND	ND	ND	**22**	ND	ND	ND		ND	1	Assoc	(T)
	12/19/14	ND		1	ND	ND	ND	ND	**21**	ND	ND	ND		ND	1	Assoc	(U)
	03/18/15	ND		1	ND	ND	ND	ND	19	ND	ND	ND		ND	1	Assoc	(W)
	06/17/15	ND		1	ND	ND	ND	ND	**21**	ND	ND	ND		ND	1	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/14/15	ND		1	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	1	Assoc	(Y)
	04/26/16	ND		1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(AB)
DW16	10/10/13	**196**	ND	1/1	ND	ND	ND	7.9	**440**	ND	ND	3.7		**1,500**	1	Assoc	(M)
	12/11/13	**420**	ND	1/1	**7.7**	ND	ND	7.4	**390**	ND	ND	3		**920**	1	Assoc	(N)
	04/01/14	**264**	ND	1/1	ND	ND	ND	ND	**400**	ND	ND	ND		**920**	5	Assoc	(Q)
	06/25/14	**142**		1	ND	ND	ND	ND	**220**	ND	ND	ND		**610**	5	Assoc	(S)
	09/30/14	**196**	ND	1/1	ND	ND	ND	ND	**320**	ND	ND	ND		**1,100**	5	Assoc	(T)
	12/19/14	**182**		1	ND	ND	ND	ND	**280**	ND	ND	ND		**1,400**	2	Assoc	(U)
	03/18/15	**177**		1	ND	ND	ND	ND	**260**	ND	ND	ND		**1,100**	5	Assoc	(W)
	06/17/15	dry		–	--	--	--	--	--	--	--	--		--	--	--	--
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
DW17	10/09/13	**44,300**	1,900	40/10	**3,100**	**4,100**	**1,800**	**7,500**	ND	ND	ND	ND		ND	1	Assoc	(M)
	12/13/13	**16,700**	1,500	20/5	**2,000**	**720**	**330**	**1,800**	ND	ND	ND	ND		**150**	10	Assoc	(O)
	04/01/14	**17,000**	450	20/1	**1,300**	**480**	290	570	ND	ND	ND	ND		ND	10	Assoc	(Q)
	06/25/14	**6,630**	NT	10	**670**	**400**	110	590	ND	ND	ND	ND		ND	10	Assoc	(S)
	10/01/14	**4,480**	700	10/1	**670**	110	180	320	ND	ND	ND	ND		**130**	10	Assoc	(T)
	12/19/14	**10,100**		5	**1,100**	**410**	**450**	1,300	ND	ND	ND	ND		**150**	10	Assoc	(U)
	03/18/15	**Sheen**															
	06/18/15	**4,950**		10	**540**	110	210	800	ND	ND	ND	ND		ND	10	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/15/15	**4,300**		1	**1,000**	130	66	135	ND	ND	ND	ND	50	ND	10	CTEK	(Z)
	04/27/16	ND		1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(AB)
DW18	10/10/13	**7,170**	0.96	10/5	**1,900**	**610**	240	950	ND	ND	ND	ND		ND	10	Assoc	(M)
	12/11/13	**29,600**	2,000	20/5	**2,100**	**2,400**	**840**	**3,800**	ND	ND	ND	ND		ND	20	Assoc	(N)
	04/01/14	**15,100**	1,600	20/1	**1,800**	**860**	**470**	**1,900**	ND	ND	ND	ND		ND	20	Assoc	(Q)
	06/24/14	**9,490**		20	**1,700**	**890**	**580**	**1,100**	ND	ND	ND	ND		ND	20	Assoc	(S)
	10/01/14																
	12/22/14	**5,880**		5	**1,100**	**250**	170	570	ND	ND	1.3	ND		**13**	1	Assoc	(V)
	03/18/15	**Sheen**															
	06/16/15	**8,050**		5	**2,100**	92	**620**	720	ND	ND	ND	ND		ND	10	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/14/15	**4,700**		20	**1,900**	40	**435**	233	ND	ND	ND	ND	46	ND	1	CTEK	(Y)
	04/26/16	**2,510**		20	**1,090**	40	ND	75	ND	ND	ND	ND	56	ND	20	CTEK	(AB)
Primary MCLs					1	150	300	1,750	13								
Notification Levels														12			
LTCP Cleanup Levels		No Product			<3,000 ppb				<1,000 ppb								

TABLE 4

Summary of Groundwater Sample and Analytical Data

Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Sample		Analytical Data															
Sample Location	Date Sampled	TPHg [1] ppb	TPHd [1] ppb	DF g/d	B [2] ppb	T [2] ppb	E [2] ppb	X [2] ppb	MTBE [2] ppb	ETBE [2] ppb	DIPE [2] ppb	TAME [2] ppb	Nap [2] ppb	TBA [2] ppb	DF ppb	Lab	CARs/ Refs
DW19	10/10/13	6,730	1,000	10/5	2,000	ND	800	290	ND	ND	ND	ND		ND	10	Assoc	(M)
	12/11/13	9,910	1,200	5/1	1,400	49	780	540	ND	ND	1.8	ND		57	1	Assoc	(N)
	04/01/14	8,580	780	10/1	1,800	ND	690	66	ND	ND	ND	ND		ND	10	Assoc	(Q)
	06/24/14	9,140		10	1,900	ND	770	280	ND	ND	ND	ND		ND	10	Assoc	(S)
	09/30/14	8,340	1,200	10/1	2,300	ND	630	67	ND	ND	ND	ND		ND	10	Assoc	(T)
	12/19/14	10,600		10	2,700	ND	810	120	ND	ND	ND	ND		ND	20	Assoc	(U)
	03/19/15	12,700		10	3,100	ND	1,200	61	ND	ND	ND	ND		ND	10	Assoc	(W)
	06/16/15	10,100		10	2,500	ND	820	210	ND	ND	ND	ND		ND	20	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/14/15	9,300		20	1,720	56	600	410	ND	ND	ND	ND	172	ND	20	CTEK	(Z)
	04/26/16	10,900		25	1,920	ND	146	90	ND	ND	ND	ND	63	ND	25	CTEK	(AB)
DW20	10/09/13	ND	ND	1/1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(M)
	12/11/13	ND	ND	1/1	1.2	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(N)
	04/01/14	ND	ND	1/1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(Q)
	06/24/14	ND		1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(S)
	09/30/14	ND	ND	1/1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(T)
	12/22/14	ND		1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(V)
	03/18/15	ND		1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(W)
	06/16/15	ND		1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(X)
	09/21/15	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT		NT			
	12/14/15	ND		1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(Z)
	04/26/16	ND		1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(AB)
DW21	10/02/14	5,340	1,800	5/1	160	59	130	460	ND	ND	ND	ND		ND	1	Assoc	(T)
	12/19/14	3,100		5	150	17	210	110	ND	ND	ND	ND		ND	1	Assoc	(U)
	03/18/15	2,980		5	130	22	210	120	ND	ND	ND	ND		ND	1	Assoc	(W)
	06/17/15	3,440		5	130	20	180	99	ND	ND	ND	ND		ND	1	Assoc	(X)
	09/21/15	8,370		1	175	70	296	380	ND	ND	ND	ND		ND	1	CTEK	(Y)
	12/14/15	7,000		20	177	54	196	345	ND	ND	ND	ND	37	ND	1	CTEK	(Z)
	03/11/16	16,900		5	391	41	210	13	ND	ND	ND	ND	ND	ND	5	CTEK	(AA)
	04/25/16	4,380		1	64	9	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(AB)
DW22	10/02/14	ND		1/1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(T)
	12/19/14	ND		1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(U)
	03/18/15	ND		1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(W)
	06/17/15	ND		1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(X)
	09/21/15	ND		1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	CTEK	(Y)
	12/14/15	ND		1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(Z)
	03/11/16	ND		1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(AA)
	04/26/16	ND		1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(AB)
Primary MCLs					1	150	300	1,750	13								
Notification Levels														12			
LTCP Cleanup Levels		No Product			<3,000 ppb				<1,000 ppb								

TABLE 4

Summary of Groundwater Sample and Analytical Data

Golden State Gasoline - Escondido
225 West Washington Ave., Escondido, CA (Site)

Sample		Analytical Data																
Sample Location	Date Sampled	TPHg [1] ppb	TPHd [1] ppb	DF g/d	B [2] ppb	T [2] ppb	E [2] ppb	X [2] ppb	MTBE [2] ppb	ETBE [2] ppb	DIPE [2] ppb	TAME [2] ppb	Nap [2] ppb	TBA [2] ppb	DF ppb	Lab	CARs/ Refs
DW23	03/20/15	ND		1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(W)
	06/16/15	ND		1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	Assoc	(X)
	09/21/15	ND		1	ND	ND	ND	ND	ND	ND	ND	ND		ND	1	CTEK	(Y)
	12/15/15	**40,891**		1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(Z)
	03/11/16	ND		1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(AA)
	04/25/16	ND		1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	CTEK	(AB)
DW24	12/15/15	**4,200**		1	ND	37	**330**	362	ND	ND	ND	ND	119	ND	1	CTEK	(Z)
	03/11/16	**2,150**		1	8	18	122	102	ND	ND	ND	ND	11	ND	1	CTEK	(AA)
	04/28/16	**12,700**		20	**44**	89	110	700	ND	ND	ND	ND	49	ND	1	CTEK	(AB)
Primary MCLs					1	150	300	1,750	13								
Notification Levels														12			
LTCP Cleanup Levels		No Product			<3,000 ppb				<1,000 ppb								
DE1	4/28/16	**219,000**		250	**22,300**	**19,500**	**670**	**12,600**	**108,000**	ND	ND	1,580	2,300	**44,300**	250	CTEK	(AB)
DE2	4/28/16	**14,700**		1	**944**	95	**2,000**	ND	**160**	ND	ND	ND	157	ND	20	CTEK	(AB)
DE3	4/28/16	**4,190**		1	**94**	ND	ND	384	**268**	ND	3	ND	6	ND	1	CTEK	(AB)
DE4	4/28/16	**5,310**		1	**404**	4	ND	387	**88**	ND	2	ND	ND	**257**	1	CTEK	(AB)
Primary MCLs					1	150	300	1,750	13								
Notification Levels														12			
LTCP Cleanup Levels		No Product			<3,000 ppb				<1,000 ppb								
Detection Limits		100			1	1	1	2	1	1	1	1		10			

Abbreviations:

TPHg	Total Petroleum Hydrocarbons per a gasoline standard			CARs	Certified Analytical Reports
TPHd	Total Petroleum Hydrocarbons per a diesel standard			Refs	Reference where chemical data are first reported
				CTEK	CHEMTEK Environmental Laboratories, Inc.
B	Benzene	MTBE	Methyl-Tertiary-Butyl-Ether	Assoc	Associated Laboratories
T	Toluene	ETBE	Ethyl-Tertiary-Butyl-Ether	ppb	Parts per billion (ppb) or micrograms per liter
E	Ethylbenzene	DIPE	Di-isopropyl-Ether	ND	not detected above detection limit x dilution factor
X	Total Xylenes	TAME	Tertiary-Amyl-Methyl-Ether	NT	Not taken or not tested
Nap	Naphthalene	TBA	Tertiary-Butyl-Alcohol	---	Not Applicable, Analyzed or Available
G/D	Gasoline / Diesel	DF	Lab dilution factor, for ND analytes	*	Free Product Sheen

MCL Maximum Contaminant Levels for Organic Chemicals specified in Table 64444-A - Section 64444 of Title 22 (California Code of Regulations) as amended March 10, 2010.
Notificatio Non-enforceable notification levels (also known as California Action Levels) developed by the California Department of Public Health (CDPH) for contaminants not having M
Levels Intended for use of drinking water suppliers for protecting their consumers. Published in "Drinking Water Notification Levels and Response Levels: An Overview" (CDPH, December 14, 2007).
Note: Bold results are above applicable MCL or Notification Level
Highlighted results are above applicable LTCP Cleanup Levels
(1) Analyzed using EPA Method 8015-modified using gasoline as a standard (TPHg) or using a diesel standard (TPHd)
(2) Analyzed using EPA Method 8260
(3) Sampled by D.R. Sorben, analyzed by Mobile One Laboratories Inc., (Mob1) and presented in Report dated February 15, 2000. All else sampled by DES unless noted.
(4) Sampled by PIC, analyzed by H&P Mobile Geochemistry (H&P), and presented in Report dated May 18, 2006. All else sampled by DES unless noted.

(A)	CHEMTEK Environmental Laboratories, Inc. report dated December 16, 2009	(O)	Associated Laboratories report dated December 24, 2013
(B)	CHEMTEK Environmental Laboratories, Inc. report dated April 15, 2010	(P)	Associated Laboratories report dated March 31, 2014
(D)	CHEMTEK Environmental Laboratories, Inc. report dated November 18, 2010	(R)	Associated Laboratories report dated April 3, 2014
(E)	CHEMTEK Environmental Laboratories, Inc. Report dated January 28, 2011	(S)	Associated Laboratories report dated July 9, 2014
(F)	CHEMTEK Environmental Laboratories, Inc. Report dated May 2, 2011	(T)	Associated Laboratories report dated October 13, 2014
(G)	CHEMTEK Environmental Laboratories, Inc. Report dated July 29, 2011	(U)	Associated Laboratories report no. 350875 dated January 12, 2015
(H)	CHEMTEK Environmental Laboratories, Inc. Report dated December 30, 2011	(V)	Associated Laboratories report no. 350928 dated January 12, 2015
(I)	CHEMTEK Environmental Laboratories, Inc. Report dated March 26, 2012	(W)	Associated Laboratories report dated April 9, 2015
(J)	CHEMTEK Environmental Laboratories, Inc. Report dated June 13, 2012	(X)	Associated Laboratories report dated June 29, 2015
(K)	CHEMTEK Environmental Laboratories, Inc. Report dated October 10, 2012	(Y)	CHEMTEK Environmental Laboratories, Inc. Report dated September 30, 2015
(L)	Associated Laboratories report dated October 8, 2013	(Z)	CHEMTEK Environmental Laboratories, Inc. Report dated December 30, 2015
(M)	Associated Laboratories report dated October 23, 2013	(AA)	CHEMTEK Environmental Laboratories, Inc. Report dated March 18, 2016
(N)	Associated Laboratories report dated January 2, 2014	(AB)	CHEMTEK Environmental Laboratories, Inc. Report dated May 20, 2016

LOGS

DW24 Borehole/Well Log
DE1 Borehole/Well Log
DE2 Borehole/Well Log
DE3 Borehole/Well Log
DE4 Borehole/Well Log
DE5 Borehole/Well Log
DE6 Borehole/Well Log

BOREHOLE LOG

Number: DW24

Client: Golden State Gasoline, Escondido

Job No: 09E3858

Sheet: 1 of 1

Donan Environmental Services, Inc.

DES Rep: Brandon Ginos

Location: On Woodward Ave Adjacent to Commercial Property
259 W. Washington Ave.
Escondido, Ca 92025
DEH Permit #LMWP-001913

Drilling Company/Driller: Cal Pac Drilling
J.J. Hitt

Date Drilled: 10/6/15

Time: Start / End

Drill Rig/ Sampling Method: B-61 Hollow stem auger / California Split Spoon

Borehole Dia: 8"

Casing Dia: 2"

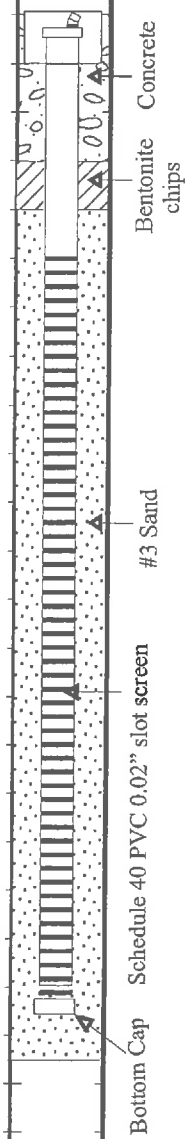
Surface Elevation: TBD

SAMPLE LOG						BOREHOLE LOG		
Sample Number	TPH-g Results (ppm)	PID (ppmv)	Depth in Feet	sample	Blow Counts	USCS Symbols	Graphic Log	Geologic Description (Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.)
			0			ML		0 - 8" Asphalt 1.0' Native: Silt, dark yellowish brown (10YR 3/6), some clay, dry, dense, no hydrocarbon odor.
			1					
			2					
			3					
			4					
DW24-5	ND	21.4	5		17	ML		5.0' Native: Silt, dark yellowish brown (10YR 3/6), some clay, dry, dense, no hydrocarbon odor.
			6		33 40			
			7					
			8					
			9					
			10		7	SP		10.0' Native: Sand, dark yellowish brown (10YR 3/6), poorly graded, fine to medium grained, some gravel, moist, loose, strong hydrocarbon odor.
DW24-10	0.89	1,779	11		11 14			
			12					
			13					
			14					
			15		3	CL		15.0' Native: Clay, dark yellowish brown (10YR3/6), some silt, wet, loose, strong hydrocarbon odor.
DW24-15	ND	1,468	16		5 6			
			17					
			18					
			19					
			20		4	CL		20.0' Native: Clay, dark yellowish brown (10YR3/6), some silt, wet, loose, strong hydrocarbon odor.
DW24-20	ND	4,106	21		5 8			
			22					
			23					
			24					
			25					
			26					
			27					
			28					

Groundwater at 13' bgs
Termination Depth = 21.5' bgs

Well Construction:
2-inch diameter PVC
15 feet Screen 0.02" slot - 5 ft to 20 ft below grade
5 feet Blank - grade to 5 ft bg
2-inch diameter PVC Bottom Cap
#3 Sand - 4 ft to 21.5 ft bg (6.09 cu. ft.)
Bentonite chips hydrated 3 ft to 4 ft bg (0.348 cu. ft.)
Traffic box with concrete pad - grade to 3 ft bg
Concrete 4.92 cu. ft.

Well Log



REGISTERED GEOLOGIST
GREGORY W. DELSON
Exp 5-31-16
No. 6983
STATE OF CALIFORNIA

BOREHOLE LOG

Number: DE1

Client: Golden State Gasoline, Escondido

Job No: 09E3858

Sheet: 1 of 1

Donan Environmental Services, Inc.

DES Rep: Brandon Ginos

Location: 225 W. Washington Ave.
Escondido CA
Permit: LMWP-002207

Drilling Company/Driller: Tri County Drilling
Bill Orton

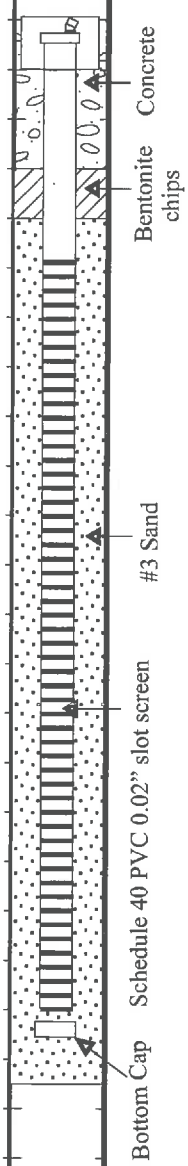
Date Drilled:	Time:	Drill Rig/ Sampling Method:	Borehole Dia:	Casing Dia:	Surface Elevation:
4/8/16	Start / End	CME 75 Hollow stem auger / California Split Spoon	10'	4"	TBD

SAMPLE LOG						BOREHOLE LOG		
Sample Number	TPH-g Results (ppm)	PID (ppmv)	Depth in Feet	sample	Blow Counts	USCS Symbols	Graphic Log	Geologic Description (Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.)
			0					0 - 8" Asphalt
			1					
			2					
			3					
			4					
DE1-5	0.23	42.9	5		5	CL		5.0' Native: Clay, dark yellowish brown (10YR 3/4), dry, dense, no hydrocarbon odor.
			6		7 8			
			7					
			8					
			9					
			10		7	CL		10.0' Native: Clay, dark yellowish brown (10YR 3/4), moist, loose, slight hydrocarbon odor.
DE1-10	118	4,459	11		9 12			
			12					
			13					
			14					
			15		5	CL		15.0' Native: Clay, dark yellowish brown (10YR 3/4), moist, loose, strong hydrocarbon odor.
DE1-15	579	2,944	16		9 12			
			17					
			18					
			19					
			20		10	SP		20.0' Native: Sand, dark yellowish brown (10YR 4/3), poorly graded, medium grained sand grains, moist, loose, strong hydrocarbon odor.
DE1-20	3.45	5,000	21		10 12			
			22					
			23					
			24					
			25					
			26					
			27					

Groundwater at 13' bgs
Termination Depth = 21.5' bgs

Well Construction:
4-inch diameter PVC
15 feet Screen 0.02" slot - 5 ft to 20 ft below grade
5 feet Blank - grade to 5 ft bg
4-inch diameter PVC Bottom Cap
#3 Sand - 4 ft to 21.5 ft bg (6.87 cu. ft.)
Bentonite chips hydrated 3 ft to 4 ft bg (0.458 cu. ft.)
Traffic box with concrete pad - grade to 3 ft bg
Concrete 4.92 cu. ft.

Well Log



REGISTERED GEOLOGIST
GREGORY W. DELSON
Exp. 5-31-18
No. 6983
STATE OF CALIFORNIA

BOREHOLE LOG

Number: DE2

Client: Golden State Gasoline, Escondido

Job No: 09E3858

Sheet: 1 of 1

Donan Environmental Services, Inc.

DES Rep: Brandon Ginos

Location: 225 W. Washington Ave.
Escondido CA
Permit: LMWP-002207

Drilling Company/Driller: Tri County Drilling
Bill Orton

Date Drilled: 4/7/16

Time: Start / End

Drill Rig/ Sampling Method: CME 75 Hollow stem auger / California Split Spoon

Borehole Dia: 10'

Casing Dia: 4"

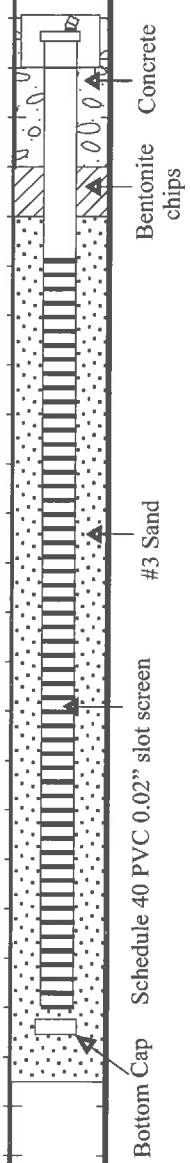
Surface Elevation: TBD

SAMPLE LOG						BOREHOLE LOG		
Sample Number	TPH-g Results (ppm)	PID (ppmv)	Depth in Feet	sample	Blow Counts	USCS Symbols	Graphic Log	Geologic Description (Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.)
			0					0 - 8" Asphalt
			1					
			2					
			3					
			4					
DE2-5	ND	47.5	5		8	CL		5.0' Native: Clay, yellowish brown (10YR 5/6), dry, dense, no hydrocarbon odor.
			6		8, 13			
			7					
			8					
			9					
DE2-10	46.4	162.9	10		8	CL		10.0' Native: Clay, yellowish brown (10YR 5/6), moist, loose, slight hydrocarbon odor.
			11		10, 14			
			12					
			13					
			14					
DE2-15	490	982.6	15		5	CL		15.0' Native: Clay, dark grayish brown (10YR 4/2), moist, loose, hydrocarbon odor.
			16		7, 8			
			17					
			18					
			19					
DE2-20	ND	25.3	20		13	CL		20.0' Native: Clay, dark grayish brown (10YR 4/2), moist, loose, slight hydrocarbon odor.
			21		20, 21			
			22					
			23					
			24					
			25					
			26					

Groundwater at 13' bgs
Termination Depth = 21.5' bgs

Well Construction:
4-inch diameter PVC
15 feet Screen 0.02" slot - 5 ft to 20 ft below grade
5 feet Blank - grade to 5 ft bg
4-inch diameter PVC Bottom Cap
#3 Sand - 4 ft to 21.5 ft bg (6.87 cu. ft.)
Bentonite chips hydrated 3 ft to 4 ft bg (0.458 cu. ft.)
Traffic box with concrete pad - grade to 3 ft bg
Concrete 4.92 cu. ft.

Well Log



REGISTERED GEOLOGIST
GREGORY W. DELSON
Exp 5-31-18
No. 6983
STATE OF CALIFORNIA

BOREHOLE LOG

Number: DE3

Donan Environmental Services, Inc.

Client: Golden State Gasoline, Escondido

Job No: 09E3858

Sheet: 1 of 1

DES Rep: Brandon Ginos

Location: 225 W. Washington Ave.
Escondido CA
Permit: LMWP-002207

Drilling Company/Driller: Tri County Drilling
Bill Orton

Date Drilled: 4/7/16

Time: Start / End

Drill Rig/ Sampling Method: CME 75 Hollow stem auger / California Split Spoon

Borehole Dia: 10'

Casing Dia: 4"

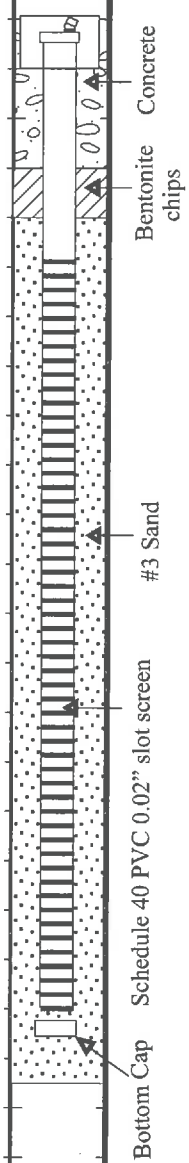
Surface Elevation: TBD

SAMPLE LOG						BOREHOLE LOG		
Sample Number	TPH-g Results (ppm)	PID (ppmv)	Depth in Feet	sample	Blow Counts	USCS Symbols	Graphic Log	Geologic Description (Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.)
			0					0 - 8" Asphalt
			1					
			2					
			3					
			4					
DE3-5	ND	6.6	5		5	CL		5.0' Native: Clay, dark yellowish brown (10YR 4/4), dry, dense, no hydrocarbon odor.
			6		7 8			
			7					
			8					
			9					
			10		8	CL		10.0' Native: Clay, dark yellowish brown (10YR 4/4), moist, loose, no hydrocarbon odor.
DE3-10	144	11.8	11		11 11			
			12					
			13					
			14					
			15		5	CL		15.0' Native: Clay, dark yellowish brown (10YR 4/4), moist, loose, no hydrocarbon odor.
DE3-15	1,770	14.3	16		8 6			
			17					
			18					
			19					
			20		12	CL		20.0' Native: Clay, dark yellowish brown (10YR 4/4), some poorly graded medium grained sand, moist, loose, slight hydrocarbon odor.
DE3-20	0.22	16.1	21		15 25			
			22					
			23					
			24					
			25					
			26					
			27					
			28					

Groundwater at 13' bgs
Termination Depth = 21.5' bgs

Well Construction:
4-inch diameter PVC
15 feet Screen 0.02" slot - 5 ft to 20 ft below grade
5 feet Blank - grade to 5 ft bg
4-inch diameter PVC Bottom Cap
#3 Sand - 4 ft to 21.5 ft bg (6.87 cu. ft.)
Bentonite chips hydrated 3 ft to 4 ft bg (0.458 cu. ft.)
Traffic box with concrete pad - grade to 3 ft bg
Concrete 4.92 cu. ft.

Well Log



REGISTERED GEOLOGIST
GREGORY W. DELSON
Exp. 5-31-18
No. 6983
STATE OF CALIFORNIA

BOREHOLE LOG

Number: DE4

Sheet: 1 of 1

Donan Environmental Services, Inc.

DES Rep: Brandon Ginos

Client: Golden State Gasoline, Escondido

Job No: 09E3858

Location: 225 W. Washington Ave.
Escondido CA
Permit: LMWP-002207

Drilling Company/Driller: Tri County Drilling
Bill Orton

Date Drilled: 4/8/16

Time: Start / End

Drill Rig/ Sampling Method: CME 75 Hollow stem auger / California Split Spoon

Borehole Dia: 10'

Casing Dia: 4"

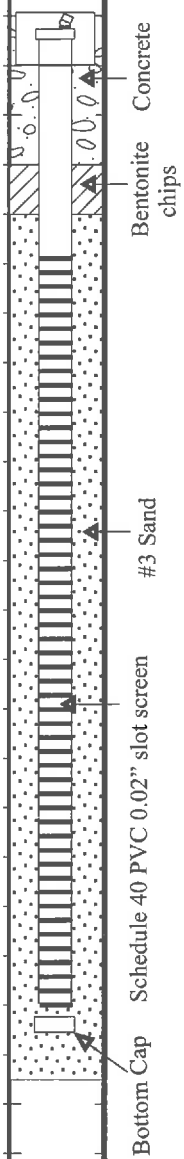
Surface Elevation: TBD

SAMPLE LOG						BOREHOLE LOG		
Sample Number	TPH-g Results (ppm)	PID (ppmv)	Depth in Feet	sample	Blow Counts	USCS Symbols	Graphic Log	Geologic Description (Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.)
			0					0 - 8" Asphalt
			1					
			2					
			3					
			4					
DE4-5	ND	11.1	5		8	CL		5.0' Native: Clay, dark yellowish brown (10YR 4/4), moist, loose, no hydrocarbon odor.
			6		10, 12			
			7					
			8					
			9					
			10		8	CL		10.0' Native: Clay, dark yellowish brown (10YR 4/4), moist, loose, slight hydrocarbon odor.
DE4-10	ND	12.3	11		7, 6			
			12					
			13					
			14					
			15		4	CL		15.0' Native: Clay, dark yellowish brown (10YR 4/4), moist, loose, strong hydrocarbon odor.
DE4-15	929	2,392	16		6, 7			
			17					
			18					
			19					
			20		5	CL		20.0' Native: Clay, dark yellowish brown (10YR 4/4), some poorly graded medium grained sand, moist, loose, slight hydrocarbon odor.
DE4-20	ND	62.6	21		10, 15			
			22					
			23					
			24					
			25					
			26					
			27					

Groundwater at 13' bgs
Termination Depth = 21.5' bgs

Well Construction:
4-inch diameter PVC
15 feet Screen 0.02" slot - 5 ft to 20 ft below grade
5 feet Blank - grade to 5 ft bg
4-inch diameter PVC Bottom Cap
#3 Sand - 4 ft to 21.5 ft bg (6.87 cu. ft.)
Bentonite chips hydrated 3 ft to 4 ft bg (0.458 cu. ft.)
Traffic box with concrete pad - grade to 3 ft bg
Concrete 4.92 cu. ft.

Well Log



REGISTERED GEOLOGIST
GREGORY W. DELSON
Exp. 5-31-18
No. 6983
STATE OF CALIFORNIA

BOREHOLE LOG

Number: DE5

Sheet: 1 of 1

Donan Environmental Services, Inc.

DES Rep: Brandon Ginos

Client: Golden State Gasoline, Escondido

Job No: 09E3858

Location: 215 W. Washington Ave.
Escondido CA
Permit: LMWP-002281

Drilling Company/Driller: Tri County Drilling
James Sauer

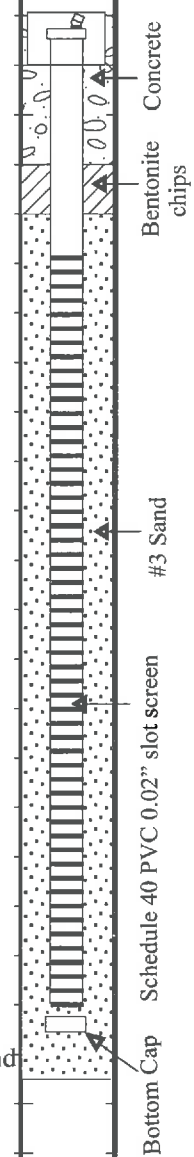
Date Drilled:	Time:	Start / End	Drill Rig/ Sampling Method:	Borehole Dia:	Casing Dia:	Surface Elevation:
5/20/16			CME 75 Hollow stem auger / California Split Spoon	10'	4"	TBD

SAMPLE LOG						BOREHOLE LOG		
Sample Number	TPH-g Results (ppm)	PID (ppmv)	Depth in Feet	sample	Blow Counts	USCS Symbols	Graphic Log	Geologic Description (Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.)
			0					0 - 8" Asphalt
DE5-5	ND	0.2	5–6		10, 31, 29	ML		5.0' Native: Silt, dark yellowish brown (10YR 3/4), some medium grained poorly graded sand, dry, dense, no hydrocarbon odor.
DE5-10	7.00	53.6	10–11		5, 20, 30	CL		10.0' Native: Clay, dark yellowish brown (10YR 3/4), gray streaks, moist, dense, slight hydrocarbon odor.
DE5-15	302	2,314	15–16		4, 4, 6	CL		15.0' Native: Clay, dark yellowish brown (10YR 3/4), gray streaks, loose, wet, strong hydrocarbon odor.
DE5-20	0.58	4,713	20–21		7, 18, 23	SP		20.0' Native: Sand, dark grayish brown (10YR 4/3), poorly graded, medium grained sand grains, wet, loose, strong hydrocarbon odor.

Groundwater at 13' bgs
Termination Depth = 21.5' bgs

Well Construction:
4-inch diameter PVC
15 feet Screen 0.02" slot - 5 ft to 20 ft below grade
5 feet Blank - grade to 5 ft bg
4-inch diameter PVC Bottom Cap
#3 Sand - 4 ft to 21.5 ft bg (6.87 cu. ft.)
Bentonite chips hydrated 3 ft to 4 ft bg (0.458 cu. ft.)
Traffic box with concrete pad - grade to 3 ft bg
Concrete 4.92 cu. ft.

Well Log



REGISTERED GEOLOGIST
GREGORY W. DELSON
Exp. 5-31-18
No. 6983
STATE OF CALIFORNIA

BOREHOLE LOG

Number: DE6

Client: Golden State Gasoline, Escondido

Job No: 09E3858

Sheet: 1 of 1

Donan Environmental Services, Inc.

DES Rep: Brandon Ginos

Location: 215 W. Washington Ave.
Escondido CA
Permit: LMWP-002281

Drilling Company/Driller: Tri County Drilling
James Sauer

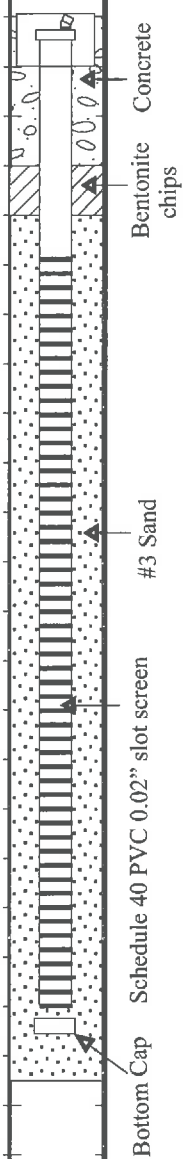
Date Drilled:	Time:	Start / End	Drill Rig/ Sampling Method:	Borehole Dia:	Casing Dia:	Surface Elevation:
5/20/16			CME 75 Hollow stem auger / California Split Spoon	10'	4"	TBD

SAMPLE LOG						BOREHOLE LOG		
Sample Number	TPH-g Results (ppm)	PID (ppmv)	Depth in Feet	sample	Blow Counts	USCS Symbols	Graphic Log	Geologic Description (Formation, soil type, color, grain, minor soil component, moisture, density, odor, etc.)
			0					0 - 8" Asphalt
DE6-5	ND	0.1	5		3	CL		5.0' Native: Clay, dark yellowish brown (10YR 3/4), some medium grained poorly graded sand, dry, dense, no hydrocarbon odor.
			6		11 24			
DE6-10	6.67	5.6	10		6	ML		10.0' Native: Silt, dark yellowish brown (10YR 3/4), gray streaks, moist, dense, slight hydrocarbon odor.
			11		15 26			
DE6-15	15.8	2,101	15		6	CL		15.0' Sufficient recovery only for lab testing
			16		10 9			
DE6-20	ND	5,000	20		60	SP		20.0' Native: Sand, dark grayish brown (10YR 4/3), poorly graded, medium-grained sand grains, wet, dense, strong hydrocarbon odor.
			21		23 26			

Groundwater at 13' bgs
Termination Depth = 21.5' bgs

Well Construction:
4-inch diameter PVC
15 feet Screen 0.02" slot - 5 ft to 20 ft below grade
5 feet Blank - grade to 5 ft bg
4-inch diameter PVC Bottom Cap
#3 Sand - 4 ft to 21.5 ft bg (6.87 cu. ft.)
Bentonite chips hydrated 3 ft to 4 ft bg (0.458 cu. ft.)
Traffic box with concrete pad - grade to 3 ft bg
Concrete 4.92 cu. ft.

Well Log



REGISTERED GEOLOGIST
GREGORY W. DELSON
Exp 5-31-18
No. 6983
STATE OF CALIFORNIA

SUPPORT DOCUMENTS

DEH Letter (July 6, 2015) - Approval to Install DW24
DEH Letter (February 17, 2016) - Remediation Work Plan Approval
Monitoring Well Construction Permit # LMWP-001913 (September 25, 2015)
Monitoring Well Construction Permit # LMWP-002207 (March 28, 2016)
Monitoring Well Construction Permit # LMWP-002281 (May 5, 2016)
Well Development log (October 13, 2015)
Well Development logs (April 11, 2016)
Well Development logs (June 3, 2016)
Monitoring Well Gauging Log (April 25, 2016)
Well Purging/Sampling Logs (April 25-29, 2016)
Soil Safe Manifest, dated May 5, 2016
Non-Hazardous Waste Manifest No. 725002
Geotracker Upload Confirmations

County of San Diego

ELIZABETH A. POZZEBON
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
Phone: (858) 505-6700 or (800) 253-9933 Fax: (858) 505-6786
www.sdcdeh.org

AMY HARBERT
ASSISTANT DIRECTOR

July 6, 2015

Mr. Samuel Boyd
Golden State Gasoline, Inc.
181 N. 2nd Street
El Cajon, CA 92021

Dear Mr. Boyd:

UNAUTHORIZED RELEASE #H03089-001
GOLDEN STATE GASOLINE, INC.
225 W. WASHINGTON AVENUE, ESCONDIDO, CA 92025
RESPONSE LETTER

Staff of the Department of Environmental Health (DEH), Site Assessment and Mitigation Program, reviewed the report titled *Site Assessment Report, Soil and Groundwater Investigation Third Quarter 2014 and First Quarter 2015*, prepared by Donan Environmental Services, Inc. (DES), dated May 22, 2015, and received by DEH on May 26, 2015.

The report summarizes the installation of monitoring wells DW21, DW22, and DW23, re-installation of monitoring well DW9, and the results of groundwater monitoring and sampling during the first quarter of 2015. Petroleum constituents were detected in one soil sample collected during drilling of the monitoring wells, which was from DW21. All monitoring wells were gauged in March 2015, and 14 monitoring wells were sampled. Monitoring wells MW1, MW2, MW3, MW4, MW5, DW11, DW12, DW17, and DW18 were not sampled due to the presence of free product sheen in these wells. Monitoring well DW11 was re-developed prior to sampling.

DES concludes that petroleum-impacted soil has been assessed vertically and laterally to the west and southeast. DES states that there are data gaps to the east of the E & L Supply Building and to the southwest of DW21. DES states that based upon the DEH letter issued February 21, 2014, no further investigation of the data gaps to the east is required in terms of assessment of the Golden State Gasoline Case.

DES also concludes that there is a bifurcated plume that consists of older gasoline that does not contain methyl *tert*-butyl ether (MTBE) and a newer, MTBE containing plume. The older plume extends to the east, southeast, and west of the site, and the newer MTBE containing plume extends from the source area to the west/southwest only. DES attributes the bifurcation and different migration patterns of the older and newer portions of the plume to the storm drain to the east of the site. DES also concludes that the eastern portion of the older plume is commingled with an unidentified third-party release to the east of monitoring wells DW18 and DW19.

DES proposes to install a monitoring well (DW24) down-gradient of monitoring well DW21 to evaluate

potential dissolved-phase contamination migration onto the Classical Academy High School Property. DES also proposes to prepare a design for a fixed-base high vacuum dual-phase extraction (HVDPE) system to mitigate the vapor risk to occupants of the E & L Supply building and site impacts. DES will continue quarterly groundwater monitoring.

DEH concurs with DES's recommendations to install monitoring well DW24 and submit a design for a fixed-base HVDPE system. DEH concurs with quarterly groundwater monitoring for newly installed monitoring wells DW21, DW22, and DW23 only. The remaining wells are to be monitored on a semi-annual basis.

DEH denied the location information (GEO_XY) for DW21, DW22, and DW23 on May 29, 2015 because the longitude for DW22 was incorrect. Please re-upload the location information for these wells to GeoTracker and contact me when completed.

As per the previous DEH response letter dated May 11, 2015, the well purging/sampling logs indicate that fast recovering monitoring wells DW6, DW7, DW8, DW9, DW10, DW14, DW19, DW20, and DW22 were sampled prior to 80 percent recovery. In future monitoring reports ensure that the depth to groundwater at 80 percent recovery is recorded on the well purging/sampling logs and that fast-recovering monitoring wells are not sampled until they reach 80 percent recovery.

If you have any questions, please contact me at (858) 505-6874.

Sincerely,

Colleen Hines, Environmental Health Specialist II
Site Assessment and Mitigation Program

cc: Mr. Anderson Donan, Donan Environmental Services, Inc.
Mr. Greg Delson, Donan Environmental Services, Inc.

County of San Diego

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
Phone: (858) 565-5173
www.sdcdeh.org

AMY HARBERT
ASSISTANT DIRECTOR

February 17, 2016

Mr. Samuel Boyd
Golden State Gasoline, Inc.
181 N. 2nd Street
El Cajon, CA 92021

Dear Mr. Boyd:

UNAUTHORIZED RELEASE #H03089-001
WORKPLAN APPROVAL
GOLDEN STATE GASOLINE
225 W. WASHINGTON AVE., ESCONDIDO, CA

This letter has been prepared in accordance with the requirements set forth in Title 23 (State Underground Storage Tank Regulations), Division 3, Chapter 16, Article 11, Section 2722. The purpose of this letter is to notify the Responsible Party of the status of the Workplan, received by the County of San Diego, Site Assessment and Mitigation Program (SAM) on October 21, 2015, and the Response to DEH Comments, received by SAM on January 28, 2016.

The Workplan to conduct high vacuum dual-phase extraction using a mobile system has been approved with the following conditions:

1. The goal is to remove free product to the extent practicable. Using an arbitrary number, (0.02 ft. product thickness), as the basis for proposed system shut down is not appropriate. DEH will need to approve a proposal to shut the system down.

2. Down-gradient monitoring well DW-24 has been installed on October 6, 2015. Within 60 days, submit a site assessment report for the installation of DW-24.

3. Within 7 days prior to implementation of the workplan, contact me so a site visit may be arranged.

This approval is valid for 6 months from the date of this letter. *Keep this letter for your records as it may be required for corrective action cost reimbursement under Senate Bill 2004 (California Health and Safety Code, Division 20, Chapter 6.75, Article 6).*

The need for further site characterization and mitigation actions will be determined following evaluation of the written report. If you have any questions, please call me at (858) 505-6993.

Sincerely,

LAURIE APECECHEA, Environmental Health Specialist III
Site Assessment and Mitigation Program

cc: Mr. Anderson Donan, Donan Environmental Services, Inc. (via electronic mail)

PERMIT #: LMWP-001913
A.P.N.: Adjacent to 229-281-17
EST #: H03089-SAM

COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
MONITORING WELL PROGRAM

MONITORING WELL CONSTRUCTION PERMIT

SITE NAME: 144 WOODWARD AVE

SITE ADDRESS: ADJACENT TO 114 WOODWARD AVENUE, ESCONDIDO 92025
(Public Right-of-Way)

PERMIT FOR: INSTALLATION OF ONE GROUNDWATER MONITORING WELL

PERMIT APPROVAL DATE: 9/25/2015

PERMIT EXPIRES ON: 1/22/2016

RESPONSIBLE PARTY: GOLDEN STATE GASOLINE, INC. (Sam Boyd)

PERMIT CONDITIONS:

1. Wells must have a **minimum 3-foot concrete surface seal**. The surface seal shall consist of concrete able to withstand the maximum anticipated load without cracking or deteriorating. The concrete should meet Class A specifications of a minimum 4000-pound compressive strength.

2. All water and soil resulting from the activities covered by this permit must be managed, stored and disposed of as specified in the SAM Manual in Section 5, II, D-4. (**http://www.sdcounty.ca.gov/deh/lwq/sam/manual_guidelines.html**). In addition, drill cuttings must be properly handled and disposed in compliance with the Stormwater Best Management Practices of the local jurisdiction.

3. Within 60 days of completing work, submit a well construction report, including all well and/or boring logs and laboratory data to the Well Permit Desk. This report must include all items required by the SAM Manual, Section 5, Pages 6 & 7.

4. This office must be given 24-hour notice of any drilling activity on this site and advanced notification of drilling cancellation. Please contact the Well Permit Desk at (858) 505-6688.

NOTE: **This permit does not constitute approval of a work plan as defined in Section 2722 of Article 11 of C.C.R., Title 23. Work plans are required for all unauthorized release investigations in San Diego County.**

APPROVED BY: _____ DATE: 9/25/2015
Jon Senaha

PERMIT #LMWP-002207
A.P.N. #229-281-11-00
EST #H03089

COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
MONITORING WELL PROGRAM

MONITORING WELL AND BORING CONSTRUCTION AND DESTRUCTION PERMIT

SITE NAME: GOLDEN STATE GASOLINE

SITE ADDRESS: 225 W WASHINGTON AVE., ESCONDIDO, CA 92025

PERMIT FOR: **INSTALL 4 EXTRACTION WELLS**

PERMIT APPROVAL DATE: 03/28/2016

PERMIT EXPIRES ON: 07/26/2016

RESPONSIBLE PARTY: GOLDEN STATE GASOLINE INC. - SAM BOYD

PERMIT CONDITIONS:

1. Wells must have a **minimum 3-foot concrete surface seal**. The surface seal shall consist of concrete able to withstand the maximum anticipated load without cracking or deteriorating. The concrete should meet Class A specifications of a minimum 4000-pound compressive strength.

2. All water and soil resulting from the activities covered by this permit must be managed, stored and disposed of as specified in the SAM Manual in Section 5, II, D-4. In addition, drill cuttings must be properly handled and disposed in compliance with the Stormwater Best Management Practices of the local jurisdiction.

3. Within 60 days of completing work, submit a well construction report, including all well and/or boring logs and laboratory data to the Well Permit Desk. This report must include all items required by the SAM Manual, Section 5, Pages 6 & 7.

4. This office must be given 48-hour notice of any drilling activity on this site and advanced notification of drilling cancellation. Please contact the Well Permit Desk at (858) 505-6688.

NOTE: **This permit does not constitute approval of a work plan as defined in Section 2722 of Article 11 of C.C.R., Title 23. Work plans are required for all unauthorized release investigations in San Diego County.**

APPROVED BY: _____ DATE: 03/28/2016
VERONICA TAVIZON

PERMIT #: LMWP-002281
A.P.N. #: 229-281-26
EST #: H03089-001

COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
MONITORING WELL PROGRAM

MONITORING WELL CONSTRUCTION PERMIT

SITE NAME: GDC PROPERTIES

SITE ADDRESS: 215 WEST WASHINGTON AVENUE, ESCONDIDO 92025

PERMIT FOR: CONSTRUCTION OF TWO EXTRACTION WELLS

PERMIT APPROVAL DATE: 5/5/2016

PERMIT EXPIRES ON: 9/2/2016

RESPONSIBLE PARTY: GOLDEN STATE GASOLINE, INC. (Sam Boyd)

PERMIT CONDITIONS:

1. Wells must have a **minimum 3-foot concrete surface seal.** The surface seal shall consist of concrete able to withstand the maximum anticipated load without cracking or deteriorating. The concrete should meet Class A specifications of a minimum 4000-pound compressive strength.

2. All water and soil resulting from the activities covered by this permit must be managed, stored and disposed of as specified in the SAM Manual in Section 5, II, D-4. In addition, drill cuttings must be properly handled and disposed in compliance with the Stormwater Best Management Practices of the local jurisdiction.

3. Within 60 days of completing work, submit a well construction report, including all well and/or boring logs and laboratory data to the Well Permit Desk. This report must include all items required by the SAM Manual, Section 5, Pages 6 & 7.

4. This office must be given 48-hour notice of any drilling activity on this site and advanced notification of drilling cancellation. Please contact the Well Permit Desk at (858) 505-6688.

NOTE: **This permit does not constitute approval of a work plan as defined in Section 2722 of Article 11 of C.C.R., Title 23. Work plans are required for all unauthorized release investigations in San Diego County.**

APPROVED BY: Jon Senaha Digitally signed by Jon Senaha DN: cn=Jon Senaha, o=DEH, ou=LWQ email=jon.senaha@sdcounty.ca.gov, c=US Date: 2016.05.05 15:00:33 -07'00' DATE: 5/5/2016

JON SENAHA

DES

Well Development

MONITORING WELL ~~GAUGING~~ DEVELOPMENT LOG

Site Name/Facility #: GSG-ES

Date: 10/13/15

Project Number:

Field Representative: PATRICK HUTTON

Checked by: Eric Finley

Well Number	Previous QTR DTW	Gauging Time	Depth to Floating Product	Depth to Water (ft)	Floating Product Thickness	Total Casing Depth (ft)	Casing Elevation*	Groundwater Elevation*	Corrected Groundwater Elevation **	Comments
DW24		9:00AM		15.07		19.45				

NOTES:
* = Feet above mean sea level unless noted otherwise
** = Elevation adjusted by adding (.75 x Product Thickness) to measured water elevation

SHEEN = discontinuous, non-measurable thickness of LPH
TRACE = continuous, non-measurable thickness of LPH

Well Development

Donan Environmental Services, Inc.	WELL PURGING/~~SAMPLING LOG~~		
	Project Name Golden State Gas	Well No.: DW24	
	Project Number 09E3858	Date: 10/13/15	
	Project Address: 225 West Washington Ave, Escondido, CA 92025		
	Well GPS: Latitude:	Longitude:	
	Sampled by: —	Checked by:	License #:

WELL SPECIFICATIONS & MEASUREMENTS	PURGING & SAMPLING EQUIPMENT
Borehole Diameter (in.) BD): 6 8 10 12	Water Level Meter type and ID: Solinst
Casing Diameter (in.)(CD): 2 4 6 8	Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___
Total Well Depth (ft.) (WD): 9.45	
Static Water Level (ft.) (SWL): 15.07	pH/Temp/Conductivity Meter Type and ID: Hanna
Water Column (ft.) (WC+WD-SWL): 4.38	Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:___
Borehole Volume (BV) Calculations	
BV (gal)+0.041 [CD²+P (BD²-CD²)](WC) This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 3.95 gallons	___Steam/High Pressure Wash Decontamination Method: X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity ~~(umhos)~~ mS	Dissolved Oxygen	pH	Tubidity	Temp (°C)
9:00	15.07			4		7.35		25.1
9:14	17.33			5		7.20		25.0
9:30	18.29			5		7.16		25.3
9:51	17.95							

Borehole Volume: (gal) Total Volume Purge Water: (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: — Depth to water at time of sampling (feet): —

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015 TPHG, 8015 TPHD, 8260B BTEX, MTBE, Oxygenates
1		Amber		N		

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= X

DES

Well Development

Page 1 of 1

MONITORING WELL GAUGING LOG

Site Name/Facility #: GSG-ES

Project Number:

Date: 4/11/2016

Field Representative: PH

Checked by: PH

Well Number	Previous QTR DTW	Gauging Time	Depth to Floating Product	Depth to Water (ft)	Floating Product Thickness	Total Casing Depth (ft)	Casing Elevation*	Groundwater Elevation*	Corrected Groundwater Elevation **	Comments
DE 1		10:15		11.47		19.84				
DE 2		10:19		11.93		19.40				
DE 3		10:23		12.22		19.29				
DE 4		10:27		12.68		20.09				

NOTES:

* = Feet above mean sea level unless noted otherwise

** = Elevation adjusted by adding (.75 x Product Thickness) to measured water elevation

SHEEN = discontinuous, non-measurable thickness of LPH

TRACE = continuous, non-measurable thickness of LPH

Well Development

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: GSG-ES	Well No.: DE2
Project Number:	Date: 9/11/2016
Project Address:	
Well GPS: Latitude:	Longitude:
Sampled by:	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS	PURGING & SAMPLING EQUIPMENT
Borehole Diameter (in.) BD): 6 (8) 10 12 8	Water Level Meter type and ID: Solinst
Casing Diameter (in.)(CD): 2 (4) 6 8 4	Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___
Total Well Depth (ft.) (WD): 19.84	
Static Water Level (ft.) (SWL): 11.47	pH/Temp/Conductivity Meter Type and ID: Hanna
Water Column (ft.) (WC+WD-SWL): 8.37	Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:
Borehole Volume (BV) Calculations	
BV (gal)+0.041 [CD²+P (BD²-CD²)](WC) This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 10.42 gallons	Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
10:37	11.47	4.24	10.5	3211		6.84		24.7
10:51	15.71	1.79	10.5	2698		6.86		24.5
11:17	17.50	1.56	10.5	2780		6.70		24.0
11:31	19.06							

Borehole Volume: 10.42 (gal) Total Volume Purge Water: 31.5 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: Depth to water at time of sampling (feet):

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015 TPHG, 8015 TPHD, 8260B BTEX, MTBE, Oxygenates
1		Amber		N		

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 13.15

Well Development

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: GSG-ES | Well No.: DE2
Project Number: | Date: 4/11/2016
Project Address:
Well GPS: Latitude: Longitude:
Sampled by: | Checked by: PH | License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8
Casing Diameter (in.)(CD): 2 (4) 6 8 4
Total Well Depth (ft.) (WD): 19.40
Static Water Level (ft.) (SWL): 11.93
Water Column (ft.) (WC+WD-SWL): 7.47

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)
This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 9.30 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst
Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___
pH/Temp/Conductivity Meter Type and ID: Hanna
Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:
Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date an Date: Time:
Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
11:38	11.93	2.74	9.3	3939		7.50		25.5°C
11:59	14.67	1.80	9.3	3615		7.48		25.3°C
12:13	16.47	0.71	9.3	3080		7.06		24.9°C
12:30	17.18							

Borehole Volume: 9.30 (gal) | Total Volume Purge Water: 27 (gal) | Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: | Depth to water at time of sampling (feet):

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015 TPHG, 8015 TPHD, 8260B BTEX, MTBE, Oxygenates
1		Amber		N		

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 13.43

Well Development

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: GS 6-85	Well No.: DE 3
Project Number:	Date: 4/11/2016
Project Address:	
Well GPS: Latitude:	Longitude:
Sampled by:	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS	PURGING & SAMPLING EQUIPMENT
Borehole Diameter (in.) BD): 6 8 10 12	Water Level Meter type and ID: Solinst
Casing Diameter (in.)(CD): 2 4 6 8	Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___
Total Well Depth (ft.) (WD): 19.29	
Static Water Level (ft.) (SWL): 12.22	pH/Temp/Conductivity Meter Type and ID: Hanna
Water Column (ft.) (WC+WD-SWL): 7.07	Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:
Borehole Volume (BV) Calculations	
BV (gal)+0.041 $[CD^2+P(BD^2-CD^2)](WC)$ This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 8.80 gallons	Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
12:42	12.22	2.68	8.80	3870		7.85		24.5
12:55	14.90	0.92	8.80	3763		7.84		24.3
1:15	15.82	1.79	8.80	3750		7.71		24.3
1:38	17.03							

Borehole Volume: 8.80 (gal) Total Volume Purge Water: 24 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: Depth to water at time of sampling (feet):

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015 TPHG, 8015 TPHD, 8260B BTEX, MTBE, Oxygenates
1		Amber		N		

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 13.64

Well Development

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: GSG-ES | Well No.: DE4
Project Number: | Date: 4/11/2016
Project Address:
Well GPS: Latitude: Longitude:
Sampled by: | Checked by: PH | License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD): 6 (8) 10 12 8
Casing Diameter (in.)(CD): 2 (4) 6 8 4
Total Well Depth (ft.) (WD): 20.09
Static Water Level (ft.) (SWL): 12.68
Water Column (ft.) (WC+WD-SWL): 7.41

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)
This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 9.23 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst
Purging Equipment/Method: Bladder Pump ___ Bailer X Centrifugal Pump ___ Other ___
pH/Temp/Conductivity Meter Type and ID: Hanna
Sampler Type: ___ Teflon Bailer X Disposable Bailer ___ Bladder Pump ___ Centrifugal Pump ___ Other: ___
Decontamination Method: ___ Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date an Date: Time:
Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
1:51	12.68	2.14	9.23	2501		7.04		23.8
2:14	14.82	1.53	9.30	2566		6.95		23.9
2:38	16.35	1.75	9.30	2609		6.88		24.2
2:56	18.10							

Borehole Volume: 9.23 (gal) | Total Volume Purge Water: 27 (gal) | Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled::
Depth to water at time of sampling (feet):

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015 TPHG, 8015 TPHD, 8260B BTEX, MTBE, Oxygenates
1		Amber		N		

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 14.17

DES

Well Development

MONITORING WELL GAUGING LOG

Site Name/Facility #: GOLDEN STATE GAS

Date: 6/3/2016

Project Number:

Field Representative: PU

Checked by:

Well Number	Previous QTR DTW	Gauging Time	Depth to Floating Product	Depth to Water (ft)	Floating Product Thickness	Total Casing Depth (ft)	Casing Elevation*	Groundwater Elevation*	Corrected Groundwater Elevation **	Comments
DE 5		10:29		13.08		18.70				
DE 6		10:31		13.24		19.31				

NOTES:

Measurable Product Indicated: If there is a change in signal from the interface probe, that indicates product, but thickness cannot be determined visually using the measurement marks on the interface probe cable, indicate 0.01 ft. product thhickness and F/P in the "Comments".

Sheen: Interface probe signal does not detect product but product sheen is visible on the interface probe tip or accumulating in the purge water containment.

* = Feet Above mean sea level unless noted otherwise

** = Elevation adjusted by adding (.75 x Product thickness) to measured water elevation

Well Development

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: GOLDEN STATE GAS	Well No.: DE5
Project Number:	Date: 6/3/2016
Project Address:	
Well GPS: Latitude: Longitude:	
Sampled by:	Checked by: License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 8 10 12 8

Casing Diameter (in.)(CD): 2 4 6 8 4

Total Well Depth (ft.) (WD): 18.70

Static Water Level (ft.) (SWL): 13.08

Water Column (ft.) (WC+WD-SWL): 5.62

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 7.00 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID:

Purging Equipment/Method: Bladder Pump____Bailer____ Centrifugal Pump___Other__

pH/Temp/Conductivity Meter Type and ID:

Sampler Type: ___Teflon Bailer ____Disposable Bailer ___Bladder Pump ____Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash ____3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date:_____ Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters				
				Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
12:08	13.08		7	3615		6.06		26.2
12:32	15.71		7	3674		6.09		26.4
12:56	17.12		7	3570		6.22		26.5
1:18	18.09							

Borehole Volume: (gal) Total Volume Purge Water: (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: Depth to water at time of sampling (feet):

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform

Well Development

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: Golden State Gas	Well No.: DE6
Project Number:	Date: 6/3/2016
Project Address:	
Well GPS: Latitude: Longitude:	
Sampled by:	Checked by: License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD): 6 8 10 12 8

Casing Diameter (in.)(CD): 2 4 6 8 2

Total Well Depth (ft.) (WD): 19.31

Static Water Level (ft.) (SWL): 13.24

Water Column (ft.) (WC+WD-SWL): 6.07

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 7.56 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID:

Purging Equipment/Method: Bladder Pump____Bailer____ Centrifugal Pump___Other__

pH/Temp/Conductivity Meter Type and ID:

Sampler Type: ___Teflon Bailer ____Disposable Bailer ___Bladder Pump ____Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash ____3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

___Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters				
				Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
10:35	13.24		7.5	3385		6.91		27.7°
10:58	16.82		7.5	3277		7.02		27.8°
11:23	18.09		7.5	3421		6.88		27.5°
11:47	19.00							

Borehole Volume: (gal) Total Volume Purge Water: (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: Depth to water at time of sampling (feet):

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform

MONITORING WELL GAUGING LOG

Site Name/Facility #: GSG-ES

Date: 4/25/16

Project Number:

Field Representative: PH

Checked by:

Well Number	Previous QTR DTW	Gauging Time	Depth to Floating Product	Depth to Water (ft)	Floating Product Thickness	Total Casing Depth (ft)	Casing Elevation*	Groundwater Elevation*	Corrected Groundwater Elevation **	Comments
DW10		9:06		12.04		19.41				
DW9		9:09		11.85		18.68				
DW8		9:13		11.44		19.92				
DW7		9:16		10.70		19.51				
DW14		9:21		11.09		15.04				
DW16		9:30		10.41		DRY				
DW15		9:38		15.43		20.68				
DW23		9:44		10.29		17.87				
DW24		9:52		14.87		19.48				
DW21		9:57		13.45		19.52				
DW18		10:05		15.29		19.41				

NOTES:

Measurable Product Indicated: If there is a change in signal from the interface probe, that indicates product, but thickness cannot be determined visually using the measurement marks on the interface probe cable, indicate 0.01 ft. product thhickness and F/P in the "Comments".

Sheen: Interface probe signal does not detect product but product sheen is visible on the interface probe tip or accumulating in the purge water containment.

* = Feet Above mean sea level unless noted otherwise

** = Elevation adjusted by adding (.75 x Product thickness) to measured water elevation

DES

MONITORING WELL GAUGING LOG

Site Name/Facility #: GSG-ES

Date: 4/25/16

Project Number:

Field Representative: PH

Checked by:

Well Number	Previous QTR DTW	Gauging Time	Depth to Floating Product	Depth to Water (ft)	Floating Product Thickness	Total Casing Depth (ft)	Casing Elevation*	Groundwater Elevation*	Corrected Groundwater Elevation **	Comments
DW19		10:12		13.93		20.22				
DW22		10:16		14.74		19.84				
DW20		10:21		14.22		19.89				
DE1		10:40		11.70		19.10				SHEEN
DE2		10:43		12.06		19.81				
DE3		10:46		13.51		19.39				
DE4		10:50		12.90		19.84				
MW5		10:55		12.06		21.89				SHEEN
MW4		10:59		12.18		22.49				SHEEN
MW3		11:03		11.41		20.13				SHEEN
MW6		11:08		11.01		22.35				SHEEN

NOTES:

Measurable Product Indicated: If there is a change in signal from the interface probe, that indicates product, but thickness cannot be determined visually using the measurement marks on the interface probe cable, indicate 0.01 ft. product thhickness and F/P in the "Comments".

Sheen: Interface probe signal does not detect product but product sheen is visible on the interface probe tip or accumulating in the purge water containment.

* = Feet Above mean sea level unless noted otherwise

** = Elevation adjusted by adding (.75 x Product thickness) to measured water elevation

DES

MONITORING WELL GAUGING LOG

Site Name/Facility #: GSG-ES

Date: 4/25/16

Project Number:

Field Representative: PM

Checked by:

Well Number	Previous QTR DTW	Gauging Time	Depth to Floating Product	Depth to Water (ft)	Floating Product Thickness	Total Casing Depth (ft)	Casing Elevation*	Groundwater Elevation*	Corrected Groundwater Elevation **	Comments
MW1		11:15		11.66		29.51				SHEEN
MW2		11:30		11.69		25.31				SHEEN
DW12		12:35		12.89		19.78				
DW11		12:40		12.78		15.11				SHEEN
DW17		12:45		11.06		20.44				SHEEN

NOTES:

Measurable Product Indicated: If there is a change in signal from the interface probe, that indicates product, but thickness cannot be determined visually using the measurement marks on the interface probe cable, indicate 0.01 ft. product thhickness and F/P in the "Comments".

Sheen: Interface probe signal does not detect product but product sheen is visible on the interface probe tip or accumulating in the purge water containment.

* = Feet Above mean sea level unless noted otherwise

** = Elevation adjusted by adding (.75 x Product thickness) to measured water elevation

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: MW1
Project Number:	Date: 4/29/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 29.51

Static Water Level (ft.) (SWL): 11.66

Water Column (ft.) (WC+WD-SWL): 17.85

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 16.10 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

✓ Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
1:31	17.85							
	NO PURGE:	SHEEN						

Borehole Volume: 16.10 (gal) Total Volume Purge Water: (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/29/16 1:31 Depth to water at time of sampling (feet): 11.66

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 15.23

14.28

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: MW2
Project Number:	Date: 4/29/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 25.31

Static Water Level (ft.) (SWL): 11.69

Water Column (ft.) (WC+WD-SWL): 13.62

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 12.28 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

✓ Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
1:24	13.62							
	NO PURGE:	SHEEN						

Borehole Volume: 12.28 (gal) Total Volume Purge Water: (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/29/16 1:24 Depth to water at time of sampling (feet):

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 14.41

10.89

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: MW3
Project Number:	Date: 4/29/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 20.13

Static Water Level (ft.) (SWL): 11.41

Water Column (ft.) (WC+WD-SWL): 8.72

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 7.86 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

✓ Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
1:16	11.41							
	NO PURGE:	SHEEN						

Borehole Volume: 7.86 (gal) Total Volume Purge Water: (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/29/16 1:16 Depth to water at time of sampling (feet): 11.41

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 13.15

6.97

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: MW4
Project Number:	Date: 4/29/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by:	Checked by: License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 22.49

Static Water Level (ft.) (SWL): 12.18

Water Column (ft.) (WC+WD-SWL): 10.31

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 9.29 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

✓ Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
1:09	12.18							
	NO PURGE: SHEEN							

Borehole Volume: (gal) Total Volume Purge Water: (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/29/16 1:09 Depth to water at time of sampling (feet): 10.31

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 14.24

8.24

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: MW5
Project Number:	Date: 4/29/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 21.89

Static Water Level (ft.) (SWL): 12.06

Water Column (ft.) (WC+WD-SWL): 9.83

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 8.86 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

___Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

___Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

___Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

___Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

✓Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
12:57	12.06							
	NO PURGE:	SHEEN						

Borehole Volume: (gal) Total Volume Purge Water: (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/29/16 12:57 Depth to water at time of sampling (feet): 12.06

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 14.02

7.86

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: MW6
Project Number:	Date: 4/29/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 22.35

Static Water Level (ft.) (SWL): 11.01

Water Column (ft.) (WC+WD-SWL): 11.34

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD²+P (BD²-CD²)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 10.22 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

✓ Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
12:50	11.01							
	NO PURGE:	SHEEN						

Borehole Volume: 10.22 (gal) Total Volume Purge Water: (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/29/16 12:50 Depth to water at time of sampling (feet):

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 13.28

9.07

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW7
Project Number:	Date: 4/27/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude:	Longitude:
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 19.51

Static Water Level (ft.) (SWL): 10.70

Water Column (ft.) (WC+WD-SWL): 8.81

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 7.94 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
8:30	10.70	2.33	8	1761		7.96		21.8
9:01	13.03	3.19	8	1763		7.94		21.9
9:33	16.22	2.33	8	1781		7.96		22.3
10:00	18.55							

Borehole Volume: 7.94 (gal) Total Volume Purge Water: 24 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 10:15 4/27/16 Depth to water at time of sampling (feet): 11.98

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 12.46

7.04

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW8
Project Number:	Date: 4/27/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 8 10 12 8

Casing Diameter (in.)(CD): 2 4 6 8 2

Total Well Depth (ft.) (WD): 19.92

Static Water Level (ft.) (SWL): 11.94

Water Column (ft.) (WC+WD-SWL): 7.98

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 7.19 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
10:30	11.44	1.32	7.19	2541		7.53		24.8
11:02	12.76	0.25	7.19	2620		7.27		25.0
11:33	13.01	0.07	7.19	2389		7.30		24.5
12:16	12.94							

Borehole Volume: 7.19 (gal) Total Volume Purge Water: 21 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/27/16 12:20 Depth to water at time of sampling (feet): 12.94

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume

Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 13.04

6.38

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW9
Project Number:	Date: [redacted] 4/29/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude:	Longitude:
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 18.68

Static Water Level (ft.) (SWL): 11.85

Water Column (ft.) (WC+WD-SWL): 6.83

Borehole Volume (BV) Calculations

BV (gal)+0.041 $|CD^2+P(BD^2-CD^2)|(WC)$ 6.16

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 6.16 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
10:33	11.85	0.18	6	1671		6.71		21.4
10:51	13.67	1.61	6	1609		6.70		22.0
11:14	15.28	1.22	6	1615		6.68		22.1
11:30	16.50							

Borehole Volume: 6.16 (gal) Total Volume Purge Water: 18 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/29/16 11:45 Depth to water at time of sampling (feet): 12.90

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 13.22

5.46

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: GSG-ES	Well No.: DW10
Project Number:	Date: 4/29/16
Project Address:	
Well GPS: Latitude:	Longitude:
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD): 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 19.41

Static Water Level (ft.) (SWL): 12.04

Water Column (ft.) (WC+WD-SWL): 7.37

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 6.64 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
9:10	12.04	2.09	6.5	2213		7.63		22.3
9:34	14.13	3.06	6.5	2260		7.84		22.3
9:54	17.19	0.80	6.5	2070		7.80		22.3
10:16	17.99							

Borehole Volume: 6.64 (gal) Total Volume Purge Water: 19.5 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/29/16 10:25 Depth to water at time of sampling (feet): 13.20

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015 TPHG, 8015 TPHD, 8260B BTEX, MTBE, Oxygenates
1		Amber		N		

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 13.52

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: [redacted] GSG-ES	Well No.: DW11
Project Number:	Date: 4/27/16
Project Address: ~~135 South Quince Street, Escondido, California~~	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 15.11

Static Water Level (ft.) (SWL): 12.78

Water Column (ft.) (WC+WD-SWL): 2.33

Borehole Volume (BV) Calculations

BV (gal)+0.041 $[CD^2+P(BD^2-CD^2)](WC)$

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 2.10 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

X Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
1:36	12.78							
	NO PURGE	DUE TO	SHEEN					

Borehole Volume: 2.10 (gal) Total Volume Purge Water: (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 1:42 4/27/16 Depth to water at time of sampling (feet): 12.78

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015 TPHG, 8015 TPHD, 8260B BTEX, MTBE, Oxygenates
1		Amber		N		

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 13.25

1.86

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW12
Project Number:	Date: 4/27/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude:	Longitude:
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 19.78

Static Water Level (ft.) (SWL): 12.89

Water Column (ft.) (WC+WD-SWL): 6.89

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD²+P (BD²-CD²)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 6.21 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
2:05	12.89	1.72	6.3	1720		7.12		21.8
2:35	14.61	1.66	6.3	1731		7.10		21.8
3:07	16.27	1.61	6.3	1724		7.30		22.0
3:35	17.88							

Borehole Volume: 6.21 (gal) Total Volume Purge Water: 18.9 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 3:47 4/27/16 Depth to water at time of sampling (feet): 13.60

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume

Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 14.27

5.51

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW14
Project Number:	Date: 4/29/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude:	Longitude:
Sampled by: PH	Checked by: PH / License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 15.04

Static Water Level (ft.) (SWL): 11.09

Water Column (ft.) (WC+WD-SWL): 3.95

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD²+P (BD²-CD²)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 3.56 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
11:57	11.09	0.31	3.5	1672		7.51		21.0
12:11	11.40	0.05	3.5	1605		7.50		21.3
12:23	11.45	0.06	3.5	1721		7.51		21.3
12:38	11.51							

Borehole Volume: 3.56 (gal) Total Volume Purge Water: 10.5 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 12:40 Depth to water at time of sampling (feet): 11.51

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 11.88

3.16

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW15
Project Number:	Date: 4/26/2016
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD): 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 20.68

Static Water Level (ft.) (SWL): 15.43

Water Column (ft.) (WC+WD-SWL): 5.25

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 4.73 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
2:47	15.43	1.55	4.73	2197		6.93		24.6
3:17	16.98	0.61	4.73	2100		7.01		24.9
3:48	17.59	1.43	3	2238		7.00		24.9
4:13	19.02							

Borehole Volume: (gal) Total Volume Purge Water: 12.46 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/26/2016 4:28 Depth to water at time of sampling (feet): 16.37

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume

Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 16.48

4.20

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW17
Project Number:	Date: 4/27/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD): 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 20.44

Static Water Level (ft.) (SWL): 11.06

Water Column (ft.) (WC+WD-SWL): 9.38

Borehole Volume (BV) Calculations

BV (gal)+0.041 $[CD^2+P(BD^2-CD^2)](WC)$

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 8.46 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump____ Bailer_X_ Centrifugal Pump___ Other_

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer _X_Disposable Bailer ___Bladder Pump ____Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash _X_3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

(X) Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
1:03	11.06							
	NO PURGE	DUE TO	SHEEN					

Borehole Volume: (gal) Total Volume Purge Water: (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/27/16 1:05 Depth to water at time of sampling (feet):

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume

Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 12.94

7.50

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW18
Project Number:	Date: 4/26/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 19.41

Static Water Level (ft.) (SWL): 15.29

Water Column (ft.) (WC+WD-SWL): 4.12

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 3.71 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
11:32	15.29	0.18	3.7	1562		7.30		25.0
11:50	15.47	0.50	3.7	1627		7.31		25.6
12:16	15.97	0.55	3.7	1605		7.31		25.7
12:33	16.52							

Borehole Volume: (gal) Total Volume Purge Water: 11.1 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 12:45 4/26/2016 Depth to water at time of sampling (feet): 15.67

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume

Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 16.12

3.29

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW19
Project Number:	Date: 4/26/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 20.22

Static Water Level (ft.) (SWL): 13.93

Water Column (ft.) (WC+WD-SWL): 6.29

Borehole Volume (BV) Calculations

BV (gal)+0.041 $[CD^2+P(BD^2-CD^2)](WC)$ 5.67

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 5.67 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
10:15	13.93	0.51	5.6	1750		6.95		25.7
10:39	14.44	0.43	5.6	1733		6.95		26.1
10:58	14.87	0.74	5.6	1690		6.89		26.1
11:15	15.61							

Borehole Volume: 5.67 (gal) Total Volume Purge Water: 16.8 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 11:20 4/26/16 Depth to water at time of sampling (feet): 15.61

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 16.19

503

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW20
Project Number:	Date: 4/26/2016
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 19.89

Static Water Level (ft.) (SWL): 14.22

Water Column (ft.) (WC+WD-SWL): 5.67

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD²+P (BD²-CD²)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 5.11 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
1:14	14.22	0.32	5	1723		7.28		24.6
1:40	14.54	0.27	5	1735		7.27		24.6
2:05	14.81	0.20	5	1706		7.31		25.3
2:31	15.01							

Borehole Volume: 5.11 (gal) Total Volume Purge Water: 15 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 2:36 4/26/16 Depth to water at time of sampling (feet): 15.01

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 15.36

4.53

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW21
Project Number:	Date: 4/25/2016
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 19.52

Static Water Level (ft.) (SWL): 13.45

Water Column (ft.) (WC+WD-SWL): 6.07

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 5.47 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
2:56	13.45	2.34	5.5	1510		7.32		23.6
3:13	15.79	1.82	5.5	1533		7.61		24.1
3:28	17.61	0.42	5.5	1621		7.60		24.8
3:45	18.03							

Borehole Volume: 5.47 (gal) Total Volume Purge Water: 16.5 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/25/2016 4:04 Depth to water at time of sampling (feet): 14.30

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 14.67

4.85

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW22
Project Number:	Date: 4/26/2016
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 19.84

Static Water Level (ft.) (SWL): 14.74

Water Column (ft.) (WC+WD-SWL): 5.10

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 4.60 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
8:55	14.74	2.74	4.6	1524		7.30		24.9
9:22	17.48	0.90	4.6	1637		7.30		25.2
9:45	18.38	0.44	4.6	1635		7.27		25.3
9:58	18.82							

Borehole Volume: 4.60 (gal) Total Volume Purge Water: 13.8 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 10:13 4/26/16 Depth to water at time of sampling (feet): 15.66

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume

Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 15.76

4.08

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW23
Project Number:	Date: 4/25/2016
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD: 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 17.87

Static Water Level (ft.) (SWL): 10.29

Water Column (ft.) (WC+WD-SWL): 7.58

Borehole Volume (BV) Calculations

BV (gal)+0.041 $[CD^2+P(BD^2-CD^2)](WC)$

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 6.83 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
1:03pm	10.29	0.50	6.80	1492		7.84		24.8
1:27	10.79	1.22	7	1562		8.08		25.6
1:49	12.01	0.16	7	1523		7.98		25.9
2:18	12.17							

Borehole Volume: 6.83(gal) Total Volume Purge Water: 20.8 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 4/25/2016. 2:31 Depth to water at time of sampling (feet): 11.60

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 11.80

6.064

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DW24
Project Number:	Date: 4/28/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD): 6 (8) 10 12 8

Casing Diameter (in.)(CD): (2) 4 6 8 2

Total Well Depth (ft.) (WD): 19.98

Static Water Level (ft.) (SWL): 14.87

Water Column (ft.) (WC+WD-SWL): 5.11

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 4.60 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
9:12	14.87	1.83	5	1442		7.50		22.3
9:41	16.70	0.96	5	1461		7.52		22.4
10:10	17.66	0.28	5	1537		7.58		22.3
10:33	17.94							

Borehole Volume: 4.6 (gal) Total Volume Purge Water: 15 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 10:52 4/28/16 Depth to water at time of sampling (feet): 15.60

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume

Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 15.89

4.08

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DE 1
Project Number:	Date: 4/28/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD): 6 (8) 10 12 8

Casing Diameter (in.)(CD): 2 (4) 6 8 4

Total Well Depth (ft.) (WD): 19.10

Static Water Level (ft.) (SWL): 11.70

Water Column (ft.) (WC+WD-SWL): 7.40

Borehole Volume (BV) Calculations

BV (gal)+0.041 $[CD^2+P(BD^2-CD^2)](WC)$

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 9.22 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:_____

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

✓ Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
3:40	11.70	1.99	9					
4:03	13.69							
	ONE PURGE	AND VISIBLE	SHEEN	COllECTS				

Borehole Volume: 9.22 (gal) Total Volume Purge Water: 9 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 9:15 4/28/16 Depth to water at time of sampling (feet): 12.98

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 13.18

5.92

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DE2
Project Number:	Date: 4/28/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD): 6 (8) 10 12 8

Casing Diameter (in.)(CD): 2 (4) 6 8 4

Total Well Depth (ft.) (WD): 19.81

Static Water Level (ft.) (SWL): 12.06

Water Column (ft.) (WC+WD-SWL): 7.75

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 9.65 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
2:10	12.06	3.15	9.6	2521		7.32		23.2
2:34	15.21	1.14	9.6	2528		7.36		23.2
2:56	16.35	0.64	9.6	2571		7.44		23.2
3:17	16.99							

Borehole Volume: 9.65 (gal) Total Volume Purge Water: 28.8 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 3:28 4/28/16 Depth to water at time of sampling (feet): 2.86

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume

Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 13.61

6.20

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DE3
Project Number:	Date: 4/28/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD): 6 8 10 12 8

Casing Diameter (in.)(CD): 2 4 6 8 4

Total Well Depth (ft.) (WD): 19.39

Static Water Level (ft.) (SWL): 13.51

Water Column (ft.) (WC+WD-SWL): 5.88

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 7.32 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
1:00	13.51	0.39	7	2773		7.51		23.0
1:20	13.90	0.49	7	2681		7.49		23.1
1:36	14.39	0.28	7	2672		7.50		23.1
1:56	14.67							

Borehole Volume: 7.32(gal) Total Volume Purge Water: 21 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: 2:06 4/28/16 2:06 Depth to water at time of sampling (feet): 14.03

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume					
Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 14.68

4.70

Donan Environmental Services, Inc.

WELL PURGING/SAMPLING LOG

Project Name: JGSGES	Well No.: DE4
Project Number:	Date: 4/28/16
Project Address: 225 W. Washington Ave Escondido CA	
Well GPS: Latitude: Longitude:	
Sampled by: PH	Checked by: PH License #:

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) BD): 6 (8) 10 12 8

Casing Diameter (in.)(CD): 2 (4) 6 8 4

Total Well Depth (ft.) (WD): 19.89

Static Water Level (ft.) (SWL): 12.90

Water Column (ft.) (WC+WD-SWL): 6.99

Borehole Volume (BV) Calculations

BV (gal)+0.041 [CD^2+P (BD^2-CD^2)](WC)

This equation applies to wells construxcted straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal for. BV= 8.7 gallons

PURGING & SAMPLING EQUIPMENT

Water Level Meter type and ID: Solinst

Purging Equipment/Method: Bladder Pump___ Bailer X Centrifugal Pump___ Other___

pH/Temp/Conductivity Meter Type and ID: Hanna

Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:

Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) Other:

PURGING AND SAMPLING METHODOLOGIES

✓ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date an Date: Time:

Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

Method 5, non-purge method. Only with prior written approval from SAM.

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured parameters: Conductivity (umhos)	Dissolved Oxygen	pH	Tubidity	Temp (°C)
11:10	12.90	3.51	9	2464		8.25		21.6
11:38	16.41	1.57	9	2510		8.31		21.8
12:01	17.98	0.22	9	2521		8.30		22.7
12:28	18.20							

Borehole Volume: 8.7 (gal) Total Volume Purge Water: 27 (gal) Average pumping rate: (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled:: [redacted] 12:49 4/28/16 Depth to water at time of sampling (feet): 13.92

Quantity		Container Type		Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
3		VOA		N	HCL	8015m

BV Factor to Multiply by Water Column to get Bore Volume

Casin/ Bore Diameter	2/8	2/10	4/8	4/10	6/10
BV Factor	.902	1.345	1.246	1.689	2.263

Calculation for 80% recharge = Total well Depth - (Water Column x 0.80)= 14.29

5.59

Manifest

SOIL SAFE OF CA – TPST
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transport Truck #:	Facility #:	Approval Number:	Load #
/ /		65959	A07		

Generator and/or Consultant

Generator's Name and Billing Address: GOLDEN STATE GASOLINE, INC. ATTN: MR. SAMUEL BOYD 181 N. 2ND ST. EL CAJON, CA 92021	Generator's Phone #: 619-871-0512	
	Person to Contact:	
	FAX#:	Customer Account Number
Consultant's Name and Billing Address:	Consultant's Phone #:	
	Person to Contact:	
	FAX#:	Customer Account Number
Generation Site (Transport from): *(name & address)* GOLDEN STATE GASOLINE (ESCONDIDO) 225 W. WASHINGTON AVE. ESCONDIDO, CA 92025	Site Phone #: 760-432-9481	
	Person to Contact:	
	FAX#:	
Designated Facility (Transport to): *(name & address)* SOIL SAFE 12326 HIBISCUS AVENUE ADELANTO, CA 92301	Facility Phone #: (800) 862-8001	
	Person to Contact: JOE PROVANSAL	
	FAX#: (760) 246-8004	
Transporter Name and Mailing Address: BELSHIRE 25971 TOWNE CENTRE DRIVE FOOTHILL RANCH, CA 92610 BESI: 267560	Transporter's Phone #: 949-460-5200	CAR000183913
	Person to Contact: LARRY MOOTHART	450647
	FAX#: 949-460-5210	Customer Account Number

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐	14 DM	SOIL			
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					

List any exception to items listed above: Scale Ticket #

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils descried in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator ☐ Consultant ☑ GREG DAVISON

Signature and date: Month 5 Day 5 Year 16

Transporter

Transporter's certification: I/We acknowledge receipt of the soil referenced above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that the soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: PAUL DELGADO

Signature and date: Month 5 Day 5 Year 16

Recycling Facility

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: J. PROVANSAL

Signature and date:

Please print or type.

GENERATOR/CONSULTANTS COPY

NO. 725002

NON-HAZARDOUS WASTE DATA FORM

BESI # 267560

GENERATOR

Generator's Name and Mailing Address
GOLDEN STATE GASOLINE, INC.
ATTN: MR. SAMUEL BOYD
181 N. 2ND ST.
EL CAJON, CA 92021

Generator's Site Address (if different than mailing address)
GOLDEN STATE GASOLINE (ESCONDIDO)
225 W. WASHINGTON AVE.
ESCONDIDO, CA 92025

Generator's Phone: 619-871-0512

Container type removed from site:
☒ Drums ☐ Vacuum Truck ☐ Roll-off Truck ☐ Dump Truck
☐ Other _____
Quantity 11

Container type transported to receiving facility:
☐ Drums ☒ Vacuum Truck ☐ Roll-off Truck ☐ Dump Truck
☐ Other _____
Quantity _____ Volume 585 (G)

WASTE DESCRIPTION NON-HAZARDOUS WATER
GENERATING PROCESS WELL PURGING / DECON WATER

COMPONENTS OF WASTE	PPM	%	COMPONENTS OF WASTE	PPM	%
1. WATER		99-100%	3.		
2. TPH		<1%	4.		

Waste Profile _____ PROPERTIES: pH 7-10 ☐ SOLID ☒ LIQUID ☐ SLUDGE ☐ SLURRY ☐ OTHER _____

HANDLING INSTRUCTIONS: _____

Generator Printed/Typed Name: Gary Dolson (OES) | Signature: [signature] | Month 5 Day 5 Year 16

The Generator certifies that the waste as described is 100% non-hazardous

TRANSPORTER

Transporter 1 Company Name: BELSHIRE | Phone#: 949-460-5200

Transporter 1 Printed/Typed Name: Paul Deleon | Signature: [signature] | Month 5 Day 5 Year 16

Transporter Acknowledgment of Receipt of Materials

Transporter 2 Company Name: NIETO & SONS TRUCKING, INC. | Phone#: 714-990-6855

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

Transporter Acknowledgment of Receipt of Materials

RECEIVING FACILITY

Designated Facility Name and Site Address
DEMENNO KERDOON
2000 N. ALAMEDA ST.
COMPTON, CA 90222

Phone#: 310-537-7100

Printed/Typed Name | Signature | Month | Day | Year

Designated Facility Owner or Operator: Certification of receipt of materials covered by this data form.

County of San Diego

ELIZABETH A. POZZEBON
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
Phone: (858) 505-6700 or (800) 253-9933 Fax: (858) 505-6786
www.sdcdeh.org

AMY HARBERT
ASSISTANT DIRECTOR

May 11, 2015

Mr. Samuel Boyd
Golden State Gasoline, Inc.
181 N. 2nd Street
El Cajon, CA 92021

Dear Mr. Boyd:

UNAUTHORIZED RELEASE #H03089-001
GOLDEN STATE GASOLINE, INC.
225 W. WASHINGTON AVENUE, ESCONDIDO, CA 92025
RESPONSE LETTER

Staff of the Department of Environmental Health (DEH), Site Assessment and Mitigation Program, reviewed the following reports: *Third Quarter 2014 Groundwater Assessment*, dated and received by DEH on March 19, 2015, and *Fourth Quarter 2014 Groundwater Assessment*, dated and received by DEH on March 24, 2015. Both reports were prepared by Donan Environmental Services, Inc. (DES).

The reports summarize the results of groundwater monitoring during the third and fourth quarters of 2014. Monitoring wells MW1, MW2, MW3, MW4, MW5, MW6, DW9, DW10, and DW18 were not sampled during the third quarter due to the presence of free product in these wells. Monitoring wells MW1, MW2, MW3, MW4, MW5, and MW6 contained free product during the fourth quarter, but were sampled without purging to provide baseline data for the upcoming high vacuum dual-phase extraction (HVDPE) event. Groundwater levels generally decreased in the third quarter and increased in the fourth quarter.

DES concludes that the dissolved-phase plume is not stable or assessed, and that there is insufficient data to determine trends. DES also concludes that submerged product in monitoring wells MW1, MW2, and MW5 is a continuing source of dissolved-phase impacts. DES states that gauging free product on the static water table is not suitable to evaluate whether submerged product-bearing zones have been remediated by previous HVDPE events. DES proposes to complete a two week HVDPE event in April 2015 to determine if product rebound occurs. DES also proposes to prepare a Site Assessment Report detailing the installation and sampling of monitoring wells DW21, DW22, and DW23. DES further proposes to install a monitoring well (DW24) down-gradient of monitoring well DW21 to evaluate potential dissolved-phase contamination migration onto the Classical Academy High School Property. Should analytical data from DW24 indicate groundwater contamination under the property, DES proposes to prepare a soil-gas risk assessment Work Plan to evaluate exposure risk for students and workers at the school.

DEH concurs with DES's conclusions and recommendations. As per the previous DEH response letter dated January 23, 2015, DEH would like DES to proceed with the design of an on-site remediation

system to mitigate the potential health risk to occupants of the E & L Supply Company Building as soon as the two week HVDPE event has been completed. The report must include a discussion of radius of influence from the HVDPE events as required in the DEH response letter dated September 12, 2014.

The well purging/sampling logs indicate that fast recovering monitoring wells were sampled prior to 80 percent recovery. In future monitoring reports ensure that the depth to groundwater at 80 percent recovery is recorded on the well purging/sampling logs and that fast-recovering monitoring wells are not sampled until they reach 80 percent recovery.

If you have any questions, please contact me at (858) 505-6874.

Sincerely,

Colleen Hines, Environmental Health Specialist II
Site Assessment and Mitigation Program

cc: Mr. Anderson Donan, Donan Environmental Services, Inc.
Mr. Greg Delson, Donan Environmental Services, Inc.

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_MAP FILE

SUCCESS

Your GEO_MAP file has been successfully submitted!

Submittal Type:	GEO_MAP
Facility Global ID:	T0607302617
Facility Name:	GOLDEN STATE GASOLINE
File Name:	GSGES.pdf
Organization Name:	Donan Environmental Services, Inc.
Username:	DES
IP Address:	184.191.166.149
Submittal Date/Time:	6/30/2016 3:19:58 PM
Confirmation Number:	2126082003

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GEOTRACKER ESI

UPLOADING A GEO_BORE FILE

SUCCESS

Your GEO_BORE file has been successfully submitted!

Submittal Type:	GEO_BORE
Facility Global ID:	T0607302617
Field Point:	DW24
Facility Name:	GOLDEN STATE GASOLINE
File Name:	DW24.pdf
Organization Name:	Donan Environmental Services, Inc.
Username:	DES
IP Address:	184.191.166.149
Submittal Date/Time:	6/30/2016 3:24:51 PM
Confirmation Number:	8556940436

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GEOTRACKER ESI

UPLOADING A GEO_BORE FILE

SUCCESS

Your GEO_BORE file has been successfully submitted!

Submittal Type:	GEO_BORE
Facility Global ID:	T0607302617
Field Point:	DE1
Facility Name:	GOLDEN STATE GASOLINE
File Name:	DE1.pdf
Organization Name:	Donan Environmental Services, Inc.
Username:	DES
IP Address:	184.191.166.149
Submittal Date/Time:	6/30/2016 3:21:31 PM
Confirmation Number:	6937967658

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Your GEO_BORE file has been successfully submitted!

Submittal Type:	GEO_BORE
Facility Global ID:	T0607302617
Field Point:	DE2
Facility Name:	GOLDEN STATE GASOLINE
File Name:	DE2.pdf
Organization Name:	Donan Environmental Services, Inc.
Username:	DES
IP Address:	184.191.166.149
Submittal Date/Time:	6/30/2016 3:22:18 PM
Confirmation Number:	6304731905

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Submittal Type:	GEO_BORE
Facility Global ID:	T0607302617
Field Point:	DE3
Facility Name:	GOLDEN STATE GASOLINE
File Name:	DE3.pdf
Organization Name:	Donan Environmental Services, Inc.
Username:	DES
IP Address:	184.191.166.149
Submittal Date/Time:	6/30/2016 3:23:05 PM
Confirmation Number:	8924043655

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Your GEO_BORE file has been successfully submitted!

Submittal Type:	GEO_BORE
Facility Global ID:	T0607302617
Field Point:	DE4
Facility Name:	GOLDEN STATE GASOLINE
File Name:	DE4.pdf
Organization Name:	Donan Environmental Services, Inc.
Username:	DES
IP Address:	184.191.166.149
Submittal Date/Time:	6/30/2016 3:24:08 PM
Confirmation Number:	2037374913

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Your GEO_BORE file has been successfully submitted!

Submittal Type:	GEO_BORE
Facility Global ID:	T0607302617
Field Point:	DE5
Facility Name:	GOLDEN STATE GASOLINE
File Name:	DE5.pdf
Organization Name:	Donan Environmental Services, Inc.
Username:	DES
IP Address:	184.191.166.149
Submittal Date/Time:	6/30/2016 3:28:07 PM
Confirmation Number:	7899705886

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SUCCESS

Your GEO_BORE file has been successfully submitted!

Submittal Type:	GEO_BORE
Facility Global ID:	T0607302617
Field Point:	DE6
Facility Name:	GOLDEN STATE GASOLINE
File Name:	DE6.pdf
Organization Name:	Donan Environmental Services, Inc.
Username:	DES
IP Address:	184.191.166.149
Submittal Date/Time:	6/30/2016 3:28:29 PM
Confirmation Number:	9522627413

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UPLOADING A GEO_WELL FILE

SUCCESS

Processing is complete. No errors were found!
Your file has been successfully submitted!

Submittal Type:	GEO_WELL
Report Title:	Q2 2016 GSG-ES Geo_Well
Facility Global ID:	T0607302617
Facility Name:	GOLDEN STATE GASOLINE
File Name:	GEO_WELL.txt.zip
Organization Name:	Donan Environmental Services, Inc.
Username:	DES
IP Address:	184.191.166.149
Submittal Date/Time:	6/29/2016 2:16:52 PM
Confirmation Number:	9906195104

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LABORATORY REPORTS

Chemtek Environmental Laboratories Report of October 15, 2015
Chemtek Environmental Laboratories Report of April 18, 2016
Chemtek Environmental Laboratories Report of June 2, 2016
Chemtek Environmental Laboratories Report of May 20, 2016

CHEMTEK
environmental laboratories

ELAP: 1435
LACSD: 10167

13554 Larwin Cir., Santa Fe Springs, CA 90670
T 562.926.9848
F 562.926.8324

Certificate of Analysis

Client: Donan Environmental Services
PO BOX 1839
Vista, CA 92085

Attention:

Project No.
Project Site: Golden State Gasoline Escondido
225 W. Washington Ave
Escondido, CA

Job No: 510038
Report Date: 10/15/15
Date Received: 10/08/15
Number of Samples: 4
Sample Matrix: Soil

This is the Certificate of Analysis for the following samples:

SAMPLE IDENTIFICATION	DATE OF SAMPLE	LABORATORY IDENTIFICATION
DW24-5	10/06/15	510038-01A
DW24-10	10/06/15	510038-02A
DW24-15	10/06/15	510038-03A
DW24-20	10/06/15	510038-04A

Reviewed and Approved:

For **Michael C.C. Lu**
Laboratory Director

CHEMTEK
environmental laboratories

13554 Larwin Cir., Santa Fe Springs, CA 90670
T 562.926.9848
F 562.926.8324

Certificate of Analysis

Client: Donan Environmental Services
PO BOX 1839
Vista, CA 92085

Attention:

EPA Method: 8260B
Project Site: Golden State Gasoline Escondido
225 W. Washington Ave
Escondido, CA
Units: ppb or µg/kg

Job No: 510038
Report Date: 10/15/15
Date of Sample: 10/06/15
Date Received: 10/08/15
Sample Matrix: Soil

Client Sample ID:	DW24-5	DW24-10	DW24-15	DW24-20	Detection
Dilution Factor:	1	1	1	1	Limit
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
Benzene	ND	ND	ND	ND	1
Toluene	ND	ND	ND	ND	1
Ethylbenzene	ND	ND	ND	ND	1
Total Xylenes	ND	ND	ND	ND	2
MTBE	ND	ND	ND	ND	1
ETBE	ND	ND	ND	ND	1
DIPE	ND	ND	ND	ND	1
TAME	ND	ND	ND	ND	1
TBA	ND	ND	ND	ND	20

Additional Run

Analysis Date:	10/9/15	10/9/15	10/9/15	10/9/15

ND: Not Detected Below (DF x Detection Limit)
DF: Dilution Factor

CHEMTEK
environmental laboratories

13554 Larwin Cir., Santa Fe Springs, CA 90670
T 562.926.9848
F 562.926.8324

Certificate of Analysis

Client: Donan Environmental Services
Project Site: Golden State Gasoline Escondido
225 W. Washington Ave

EPA Method: 8015M TPH Gas
units: ppm or mg/kg

Job No: 510038
Report Date: 10/15/15
Date of Sample: 10/06/15
Date Received: 10/08/15
Sample Matrix: Soil

Sample ID	UNITS	TPH Gas	DF	DL	Sample Date	Analysis Date
DW24-5	ppm	ND	1	0.2	10/06/15	10/09/15
DW24-10	ppm	0.89	1	0.2	10/06/15	10/09/15
DW24-15	ppm	ND	1	0.2	10/06/15	10/09/15
DW24-20	ppm	ND	1	0.2	10/06/15	10/09/15
Method Blank	ppm	ND	1	0.2		10/9/2015

ND: Not Detected Below (DF x Detection Limit)
DF: Dilution Factor

CHEMTEK
environmental laboratories

13554 Larwin Cir., Santa Fe Springs, CA 90670
T 562.926.9848
F 562.926.8324

Certificate of Analysis

Client: Donan Environmental Services
Project Site: Golden State Gasoline Escondido
225 W. Washington Ave

EPA Method: 8015M TPH Gas
units: ppm or mg/kg

Job No: 510038
Report Date: 10/15/15
Date of Sample: 10/06/15
Date Received: 10/08/15
Sample Matrix: Soil

Sample ID	UNITS	TPH Diesel	DF	DL	Sample Date	Analysis Date
DW24-5	ppm	ND	1	1	10/06/15	10/14/15
DW24-10	ppm	ND	1	1	10/06/15	10/14/15
DW24-15	ppm	ND	1	1	10/06/15	10/14/15
DW24-20	ppm	ND	1	1	10/06/15	10/14/15
Method Blank	ppm	ND	1	1		10/14/15

ND: Not Detected Below (DF x Detection Limit)
DF: Dilution Factor

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T 562.926.9848
F 562.926.8324

Certificate of Analysis

QC Analysis Date: 10/09/15
QC Lab ID: 510038-1A
Units: ppb

Job No: 510038

QUALITY CONTROL DATA
EPA METHOD: 8260B(VOC's)

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
1,1-Dichloroethene	ND	25	104.2	103.8	0.4%	30	70-130
Benzene	ND	25	100.1	95.0	5.2%	30	70-130
Trichloroethylene	ND	25	113.3	104.6	8.0%	30	70-130
Toluene	ND	25	92.0	87.2	5.4%	30	70-130
Chlorobenzene	ND	25	101.6	91.6	10.4%	30	70-130

QC Analysis Date: 10/09/15
QC Lab ID: 510038-4A
Units: ppm

QUALITY CONTROL DATA
EPA METHOD: 8015M(TPH Gas)

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
GAS (TPH)	ND	0.5	119.5	104.4	13.5%	30	70-130

QC Analysis Date: 10/14/15
QC Lab ID: 510038-1A
Units: ppm

QUALITY CONTROL DATA
EPA METHOD: 8015M(TPH Diesel)

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
Diesel (TPH)	ND	0.5	91.0	100.6	10.0%	30	70-130

CHEMTEK Environmental Laboratories Inc.
13554 Larwin Circle, Santa Fe Springs, CA 90670
Tel. (562) 926-9848 FAX (562) 926-8324 Email: ChemtekLabs@hotmail.com
CA Dept of Health Accredited. (ELAP No. 1435) & Mobile Lab (ELAP No. 2629)

CHAIN OF CUSTODY RECORD

Job No.: _____

Page: of

CUSTOMER INFORMATION

COMPANY NAME:
PROJECT CONTACT:
ADDRESS:
CITY, STATE, ZIP
PHONE: FAX:
EMAIL:

PROJECT INFORMATION

PROJECT NAME
SITE ADDRESS:
SAMPLED BY: ☐ EDF TAT ☐ NORM ☐ 24 hr ☐ 48 hr ☐ Other _____

ANALYSIS REQUIRED

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	TYPE *	REMARKS	NO. OF CONT	8015M TPH G	8015M TPH D	BTEX/MTBE (8021 B)	VOCs (8260 B) FULL	OXYGENATES (8260 B) SHORT	TRPH (418.1)	COD / TSS	pH, Conductivity, Turbidity	Sulfide, Cyanide, O&G	CAM 17 Metals				

	SIGNATURE	PRINT NAME	COMPANY NAME	DATE	TIME
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED FOR LABORATORY BY:					

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made.

*Type: SO Soil, GW Groundwater, WW Wastewater

Distribution : WHITE with report / YELLOW to CHEMTEK / PINK to courier

CHEMTEK
environmental laboratories

ELAP: 1435
LACSD: 10167

13554 Larwin Cir., Santa Fe Springs, CA 90670
T 562.926.9848
F 562.926.8324

Certificate of Analysis

Client: Donan Environmental Services
PO BOX 1839
Vista, CA 92085

Attention:

Project No.
Project Site: Golden State Gasoline Escondido
225 W. Washington Ave
Escondido, CA

Job No: 604038
Report Date: 04/18/16
Date Received: 04/11/16
Number of Samples: 16
Sample Matrix: Soil

This is the Certificate of Analysis for the following samples:

SAMPLE IDENTIFICATION	DATE OF SAMPLE	LABORATORY IDENTIFICATION
DE2-5	04/07/16	604038-01A
DE2-10	04/07/16	604038-02A
DE2-15	04/07/16	604038-03A
DE2-20	04/07/16	604038-04A
DE3-5	04/07/16	604038-05A
DE3-10	04/07/16	604038-06A
DE3-15	04/07/16	604038-07A
DE3-20	04/07/16	604038-08A
DE4-5	04/08/16	604038-09A
DE4-10	04/08/16	604038-10A
DE4-15	04/08/16	604038-11A
DE4-20	04/08/16	604038-12A
DE1-5	04/08/16	604038-13A
DE1-10	04/08/16	604038-14A
DE1-15	04/08/16	604038-15A
DE1-20	04/08/16	604038-16A

Reviewed and Approved:

For Michael C.C. Lu
Laboratory Director

CHEMTEK
environmental laboratories

13554 Larwin Cir., Santa Fe Springs, CA 90670
T 562.926.9848
F 562.926.8324

Certificate of Analysis

Client: Donan Environmental Services
PO BOX 1839
Vista, CA 92085

Attention:

EPA Method: 8260B
Project Site: Golden State Gasoline Escondido
225 W. Washington Ave
Escondido, CA
Units: ppb or µg/kg

Job No: 604038
Report Date: 04/18/16
Date of Sample: 04/07-08/16
Date Received: 04/11/16
Sample Matrix: Soil

Client Sample ID:	DE2-15	DE3-15	DE4-15	DE1-15	Detection Limit (ppb)
Dilution Factor:	200	100	100	50	
	(ppb)	(ppb)	(ppb)	(ppb)	
Benzene	2,300	11,700	4,760	4,420	1
Toluene	9,300	35,000	9,300	15,200	1
Ethylbenzene	5,230	15,200	9,200	5,480	1
Total Xylenes	35,500	96,000	56,700	30,300	2
MTBE	ND	385	ND	14,200	1
ETBE	ND	ND	ND	ND	1
DIPE	ND	ND	ND	ND	1
TAME	ND	ND	ND	ND	1
TBA	ND	ND	ND	ND	20
Napthalene	291	803	566	405	1

Additional Run

Analysis Date:	3/14/16	3/14/16	3/14/16	3/14/16

ND: Not Detected Below (DF x Detection Limit)
DF: Dilution Factor

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Certificate of Analysis

Client: Donan Environmental Services
Project Site: Golden State Gasoline Escondido
225 W. Washington Ave

EPA Method: 8015M TPH Gas
units: ppm or mg/kg

Job No: 604038
Report Date: 04/18/16
Date of Sample: 04/07-08/16
Date Received: 04/11/16
Sample Matrix: Soil

Sample ID	UNITS	TPH Gas	DF	DL	Sample Date	Analysis Date
DE2-5	ppm	ND	1	0.20	04/07/16	04/12/16
DE2-10	ppm	46.4	50	0.20	04/07/16	04/14/16
DE2-15	ppm	490	200	0.20	04/07/16	04/14/16
DE2-20	ppm	ND	1	0.20	04/07/16	04/12/16
DE3-5	ppm	ND	1	0.20	04/07/16	04/12/16
DE3-10	ppm	144	50	0.20	04/07/16	04/14/16
DE3-15	ppm	1,770	100	0.20	04/07/16	04/14/16
DE3-20	ppm	0.22	1	0.20	04/07/16	04/12/16
DE4-5	ppm	ND	1	0.20	04/08/16	04/12/16
DE4-10	ppm	ND	1	0.20	04/08/16	04/12/16
DE4-15	ppm	929	100	0.20	04/08/16	04/14/16
DE4-20	ppm	ND	1	0.20	04/08/16	04/12/16
DE1-5	ppm	0.23	1	0.20	04/08/16	04/12/16
DE1-10	ppm	118	50	0.20	04/08/16	04/14/16
DE1-15	ppm	579	50	0.20	04/08/16	04/14/16
DE1-20	ppm	3.45	2	0.20	04/08/16	04/14/16
Method Blank	ppm	ND	1	0.20		04/12/16

ND: Not Detected Below (DF x Detection Limit)
DF: Dilution Factor

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Certificate of Analysis

QC Analysis Date: 04/12/16
QC Lab ID: 604038-1A
Units: ppb

Job No: 604038

QUALITY CONTROL DATA
EPA METHOD: 8260B(VOC's)

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
1,1-Dichloroethene	ND	25	87.5	89.4	2.1%	30	70-130
Benzene	ND	25	95.6	98.2	2.7%	30	70-130
Trichloroethylene	ND	25	96.6	97.9	1.3%	30	70-130
Toluene	ND	25	97.4	102.0	4.6%	30	70-130
Chlorobenzene	ND	25	92.8	95.2	2.6%	30	70-130

QC Analysis Date: 04/12/16
QC Lab ID: 604038-1A
Units: ppm

QUALITY CONTROL DATA
EPA METHOD: 8015M(TPH Gas)

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
GAS (TPH)	ND	0.5	105.7	93.7	12.0%	30	70-130

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CHAIN OF CUSTODY RECORD

Job No.: 604038

Page: 1 of

CUSTOMER INFORMATION

COMPANY NAME: Donan Environmental Services, Inc.
PROJECT CONTACT: Greg Delson Email: GD@DESxyz.com
ADDRESS: P.O. Box 1839 Vista CA 92085
PHONE: 760-639-3600 FAX: 760-639-3603

PROJECT INFORMATION

PROJECT NAME: GSG ES P.O. No.
SITE ADDRESS: 225 W. Washington Ave Escondido CA
SAMPLED BY: Brandon Ginos ☐ EDF Turn Around Time: NORM ☐ 24 hr ☐ 48 hr ☐ Other ☐

ANALYSIS REQUIRED

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	TYPE*	pH/Time REMARKS	Preserved	NO. OF CONT.	8015M TPH G or GRO	8015M TPH D or DRO	CARBON CHAIN	VOCs (8260 B) FULL	OXYGENATES (8260 B) SHORT Btex, MTBE, Naphthalene	COD / TSS / BOD / TDS	pH, Conductivity, Turbidity	Sulfide, Cyanide, O&G	CAM 17 Metals
1	DE2-5	4/7/16	9:30		highest Tphg gets 8260 DE2			✓				✓				
2	DE2-10		9:40									↑				
3	DE2-15		10:00													
4	DE2-20		10:07													
5	DE3-5		11:55		highest Tphg gets 8260 DE3							highest Tphg gets				
6	DE3-10		12:03													
7	DE3-15		12:32													
8	DE3-20		12:55													
9	DE4-5	4/8/16	9:38		highest Tphg gets 8260 DE4											
10	DE4-10		9:49													
11	DE4-15		10:04													
12	DE4-20		10:16													
13	DE1-5		12:06		Highest Tphg gets 8260 DE1											
14	DE1-10		12:14													
15	DE1-15		1:00													
16	DE1-20		1:15													

	SIGNATURE	PRINT NAME	COMPANY NAME	DATE	TIME
RELINQUISHED BY:	Brandon G.	Brandon Ginos	Donan Environmental Services, Inc.	4/11/16	11:15
RECEIVED BY:	[illegible]	David Sveum	Chemtek	4/11/16	11:15
RELINQUISHED BY:					
RECEIVED FOR LABORATORY BY:	[illegible]	Murin	Chmt	4/11/16	1pm

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made.

Distribution: WHITE - with report; YELLOW - to CHEMTEK; PINK - retained

*Type: SO-Soil, GW-Groundwater, WW-Wastewater, AQ-Aqueous, A-Air, O-Other

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ELAP: 1435
LACSD: 10167

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Certificate of Analysis

Client: Donan Environmental Services
PO BOX 1839
Vista, CA 92085

Attention:

Project No.
Project Site: Golden State Gasoline Escondido
225 W. Washington Ave
Escondido, CA

Job No: 605150
Report Date: 06/02/16
Date Received: 05/27/16
Number of Samples: 8
Sample Matrix: Soil

This is the Certificate of Analysis for the following samples:

SAMPLE IDENTIFICATION	DATE OF SAMPLE	LABORATORY IDENTIFICATION
DE6-5	05/20/16	605150-01A
DE6-10	05/20/16	605150-02A
DE6-15	05/20/16	605150-03A
DE6-20	05/20/16	605150-04A
DE5-5	05/20/16	605150-05A
DE5-10	05/20/16	605150-06A
DE5-15	05/20/16	605150-07A
DE5-20	05/20/16	605150-08A

Reviewed and Approved:

For **Michael C.C. Lu**
Laboratory Director

CHEMTEK
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Certificate of Analysis

Client: Donan Environmental Services
PO BOX 1839
Vista, CA 92085

Attention:

EPA Method: 8260B
Project Site: Golden State Gasoline Escondido
225 W. Washington Ave
Escondido, CA
Units: ppb or µg/kg

Job No: 605150
Report Date: 06/02/16
Date of Sample: 05/20/16
Date Received: 05/27/16
Sample Matrix: Soil

Client Sample ID:	DE6-5	DE6-10	DE6-15	DE6-20	DE5-5	DE5-10	DE5-15	DE5-20	Detection
Dilution Factor:	1	1	2	1	1	1	50	1	Limit
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
Benzene	ND	35	453	ND	ND	47	2,040	18	1
Toluene	ND	2	795	ND	ND	4	5,020	23	1
Ethylbenzene	ND	1	302	ND	ND	2	4,030	6	1
Total Xylenes	ND	137	2,570	ND	ND	94	28,600	82	2
MTBE	ND	ND	ND	ND	ND	ND	ND	ND	1
ETBE	ND	ND	ND	ND	ND	ND	ND	ND	1
DIPE	ND	ND	ND	ND	ND	ND	ND	ND	1
TAME	ND	ND	ND	ND	ND	ND	ND	ND	1
TBA	ND	ND	ND	ND	ND	ND	ND	ND	20
Napthalene	ND	89	196	ND	ND	119	5,820	23	1
Analysis Date:	5/27/16	5/27/16	5/31/16	5/27/16	5/27/16	5/27/16	5/31/16	5/27/16	

ND: Not Detected Below (DF x Detection Limit)
DF: Dilution Factor

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Certificate of Analysis

Client: Donan Environmental Services
Project Site: Golden State Gasoline Escondido
225 W. Washington Ave

EPA Method: 8015M TPH Gas
units: ppm or mg/kg

Job No: 605150
Report Date: 06/02/16
Date of Sample: 05/20/16
Date Received: 05/27/16
Sample Matrix: Soil

Sample ID	UNITS	TPH Gas	DF	DL	Sample Date	Analysis Date
DE6-5	ppm	ND	1	0.20	05/20/16	05/27/16
DE6-10	ppm	6.67	1	0.20	05/20/16	05/27/16
DE6-15	ppm	15.8	2	0.20	05/20/16	05/31/16
DE6-20	ppm	ND	1	0.20	05/20/16	05/27/16
DE5-5	ppm	ND	1	0.20	05/20/16	05/27/16
DE5-10	ppm	7.00	1	0.20	05/20/16	05/27/16
DE5-15	ppm	302	500	0.20	05/20/16	05/27/16
DE5-20	ppm	0.58	1	0.20	05/20/16	05/27/16
Method Blank	ppm	ND	1	0.20		05/27/16

ND: Not Detected Below (DF x Detection Limit)
DF: Dilution Factor

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Certificate of Analysis

QC Analysis Date: 05/27/16
QC Lab ID: 605150-1A
Units: ppb

Job No: 605150

QUALITY CONTROL DATA
EPA METHOD: 8260B(VOC's)

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
1,1-Dichloroethene	ND	25	114.6	116.2	1.4%	30	70-130
Benzene	ND	25	89.9	92.4	2.7%	30	70-130
Trichloroethylene	ND	25	97.5	102.2	4.7%	30	70-130
Toluene	ND	25	83.5	89.8	7.3%	30	70-130
Chlorobenzene	ND	25	87.0	90.9	4.4%	30	70-130

QC Analysis Date: 05/27/16
QC Lab ID: 605150-1A
Units: ppm

QUALITY CONTROL DATA
EPA METHOD: 8015M(TPH Gas)

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
GAS (TPH)	ND	0.5	101.9	95.7	6.3%	30	70-130

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CHAIN OF CUSTODY RECORD

Job No.: 605150

Page: of

CUSTOMER INFORMATION

COMPANY NAME: Dovan Environmental Services Inc.
PROJECT CONTACT: Greg Delson Email: GD@DESXY2.com
ADDRESS: P.O. Box 1339 Vista CA 92085
PHONE: 760 639-3000 FAX: 760-639-3603

PROJECT INFORMATION

PROJECT NAME: Golden State Gas Inc. P.O. No.
SITE ADDRESS: 225 W. Washington Ave, Escondido Ca
SAMPLED BY: Brandon EDF
Turn Around Time: NORM X 24 hr 48 hr Other

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	TYPE*	pH/Time	REMARKS	Preserved	NO. OF CONT	8015M TPH G or GRO	8015M TPH D or DRO	CARBON CHAIN	VOCs (8260 B) FULL	OXYGENATES (8260 B) SHORT	COD / TSS / BOD / TDS	pH, Conductivity, Turbidity	Sulfide, Cyanide, O&G	CAM 17 Metals	Naphthalene			
1	DE6-5	5/20/16	8:15						✓				✓					✓			
2	DE6-10	5/20/16	8:40																		
3	DE6-15	5/20/16	8:46																		
4	DE6-20		8:57																		
5	DE5-5		10:21																		
6	DE5-10		10:31																		
7	DE5-15		10:35																		
8	DE5-20		10:45																		
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					

	SIGNATURE	PRINT NAME	COMPANY NAME	DATE	TIME
RELINQUISHED BY:	Brandon A.	Brandon Gross	Dovan Environmental Services Inc	5/27/16	12:00
RECEIVED BY:	[illegible]	David Suen	Chemtek	5/27/16	12:00pm
RELINQUISHED BY:	[illegible]	David Suen	Chemtek		
RECEIVED FOR LABORATORY BY:	[illegible]	David Suen	Chemtek	5/27/16	1:35pm

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made.

Distribution: WHITE with report / YELLOW to CHEMTEK / PINK to COURIER

*Type: SO-Soil GW-Groundwater WW-Waste Water AQ-Aqueous AIR-Air OIL-Oil

CHEMTEK
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ELAP: 1435
LACSD: 10167

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Certificate of Analysis

Client: Donan Environmental Services
PO BOX 1839
Vista, CA 92085

Attention:

Project No.

Project Site: Golden State Gasoline Escondido
225 W. Washington Ave
Escondido, CA

Job No: 605003
Report Date: 05/20/16
Date Received: 05/02,06/16
Number of Samples: 26
Sample Matrix: Groundwater

This is the Certificate of Analysis for the following samples:

SAMPLE IDENTIFICATION	DATE OF SAMPLE	LABORATORY IDENTIFICATION
DW23	04/25/16	605003-01A
DW21	04/25/16	605003-02A
DW22	04/26/16	605003-03A
DW19	04/26/16	605003-04A
DW18	04/26/16	605003-05A
DW20	04/26/16	605003-06A
DW15	04/26/16	605003-07A
DW7	04/27/16	605003-08A
DW8	04/27/16	605003-09A
DW17	04/27/16	605003-10A
DW11	04/27/16	605003-11A
DW12	04/27/16	605003-12A
DW24	04/28/16	605003-13A
DE4	04/28/16	605003-14A
DE3	04/28/16	605003-15A
DE2	04/28/16	605003-16A
DE1	04/28/16	605003-17A
DW10	04/29/16	605003-18A
DW9	04/29/16	605003-19A
MW5	04/29/16	605003-20A
MW4	04/29/16	605003-21A
MW3	04/29/16	605003-22A
MW2	04/29/16	605003-23A
MW1	04/29/16	605003-24A
DW14	05/03/16	605003-25A
MW6	05/03/16	605003-26A

Reviewed and Approved:

For Michael C.C. Lu
Laboratory Director

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Certificate of Analysis

Client: Donan Environmental Services
PO BOX 1839
Vista, CA 92085

Attention:

EPA Method: 8260B
Project Site: Golden State Gasoline Escondido
225 W. Washington Ave
Escondido, CA
Units: ppb or µg/L

Job No: 605003
Report Date: 05/20/16
Date of Sample: 04/25-05/06-16
Date Received: 05/02,06/16
Sample Matrix: Groundwater

Client Sample ID:	DW23	DW21	DW22	DW19	DW18	DW20	DW15	DW7	DW8	DW17	Detection
Dilution Factor:	1	1	1	25	20	1	1	20	20	1	Limit
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
Benzene	ND	64	ND	1,920	1,090	ND	ND	950	ND	ND	1
Toluene	ND	9	ND	ND	40	ND	ND	ND	ND	ND	1
Ethylbenzene	ND	ND	ND	146	ND	ND	ND	ND	ND	ND	1
Total Xylenes	ND	ND	ND	90	75	ND	ND	88	ND	ND	2
MTBE	ND	ND	ND	ND	ND	ND	ND	ND	38	ND	1
ETBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
DIPE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
TAME	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
TBA	ND	ND	ND	ND	ND	ND	ND	ND	10,700	ND	20
Napthalene	ND	ND	ND	63	56	ND	ND	42	ND	ND	1
Analysis Date:	5/3/16	5/3/16	5/3/16	5/3/16	5/3/16	5/3/16	5/6/16	5/12/16	5/12/16	5/12/16	

Client Sample ID:	DW11	DW12	DW24	DE4	DE3	DE2	DE1	DW10	DW9	MW5	Detection
Dilution Factor:	40	25	1	1	1	20	250	1	1	100	Limit
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
Benzene	10,900	7,380	44	404	94	944	22,300	ND	ND	2,930	1
Toluene	1,300	2,260	89	4	ND	95	19,500	ND	ND	418	1
Ethylbenzene	249	170	110	ND	ND	2,000	670	ND	ND	180	1
Total Xylenes	4,000	2,150	700	387	384	ND	12,600	ND	ND	9,300	2
MTBE	ND	ND	ND	88	268	160	108,000	ND	18	28,400	1
ETBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
DIPE	ND	ND	ND	2	3	ND	ND	ND	ND	ND	1
TAME	ND	ND	ND	ND	ND	ND	1,580	ND	ND	ND	1
TBA	ND	ND	ND	257	ND	ND	44,300	ND	ND	17,000	20
Napthalene	713	516	49	ND	6	157	2,300	ND	ND	2,950	1
Analysis Date:	5/3/16	5/3/16	5/3/16	5/3/16	5/3/16	5/9/16	5/6/16	5/6/16	5/6/16	5/6/16	

Client Sample ID:	MW4	MW3	MW2	MW1	DW14	MW6	Detection
Dilution Factor:	200	200	2500	10	1	20	Limit
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
Benzene	3,020	16,000	19,200	6,070*	2	532	1
Toluene	684	ND	25,700	67	ND	101	1
Ethylbenzene	302	ND	5,710	115	ND	564	1
Total Xylenes	2,700	470	35,600	420	ND	400	2
MTBE	354	1,130	102,000	2,400	16	87	1
ETBE	ND	ND	ND	ND	ND	ND	1
DIPE	ND	ND	ND	ND	ND	ND	1
TAME	ND	ND	2,770	ND	ND	ND	1
TBA	ND	30,400	75,000	27,700	128	ND	20
Napthalene	8,860	ND	100,000	975	ND	606	1
Additional Run				*100x			
Analysis Date:	5/6/16	5/12/16	5/3/16	5/9/16	5/16/16	5/16/16	

ND: Not Detected Below (DF x Detection Limit)

DF: Dilution Factor

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Certificate of Analysis

Client: Donan Environmental Services
Project Site: Golden State Gasoline Escondido
225 W. Washington Ave

EPA Method: 8015M TPH Gas
units: ppm or mg/l

Job No: 605003
Report Date: 05/20/16
Date of Sample: 04/25-05/06-16
Date Received: 05/02,06/16
Sample Matrix: Groundwater

Sample ID	UNITS	TPH Gas	DF	DL	Sample Date	Analysis Date
DW23	ppm	ND	1	0.10	04/25/16	05/03/16
DW21	ppm	4.38	1	0.10	04/25/16	05/03/16
DW22	ppm	ND	1	0.10	04/26/16	05/03/16
DW19	ppm	10.9	25	0.10	04/26/16	05/03/16
DW18	ppm	2.51	20	0.10	04/26/16	05/03/16
DW20	ppm	ND	1	0.10	04/26/16	05/03/16
DW15	ppm	ND	1	0.10	04/26/16	05/06/16
DW7	ppm	4.91	20	0.10	04/27/16	05/03/16
DW8	ppm	0.54	1	0.10	04/27/16	05/06/16
DW17	ppm	ND	1	0.10	04/27/16	05/06/16
DW11	ppm	50.3	40	0.10	04/27/16	05/03/16
DW12	ppm	38.8	25	0.10	04/27/16	05/03/16
DW24	ppm	12.7	20	0.10	04/28/16	05/03/16
DE4	ppm	5.31	1	0.10	04/28/16	05/03/16
DE3	ppm	4.19	1	0.10	04/28/16	05/03/16
DE2	ppm	14.7	1	0.10	04/28/16	05/03/16
DE1	ppm	219	250	0.10	04/28/16	05/06/16
DW10	ppm	ND	1	0.10	04/29/16	05/06/16
DW9	ppm	ND	1	0.10	04/29/16	05/06/16
MW5	ppm	148	100	0.10	04/29/16	05/06/16
MW4	ppm	13.3	1	0.10	04/29/16	05/12/16
MW3	ppm	16.2	25	0.10	04/29/16	05/06/16
MW2	ppm	489	2500	0.10	04/29/16	05/03/16
MW1	ppm	15.0	10	0.10	04/29/16	05/09/16
DW14	ppm	ND	1	0.10	05/03/16	05/16/16
MW6	ppm	9.50	20	0.10	05/03/16	05/16/16
Method Blank	ppm	ND	1	0.10		05/03/16

ND: Not Detected Below (DF x Detection Limit)
DF: Dilution Factor

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Certificate of Analysis

QC Analysis Date: 05/03/16
QC Lab ID: 605003-1A
Units: ppb

Job No: 605003

QUALITY CONTROL DATA
EPA METHOD: 8260B(VOC's)

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
1,1-Dichloroethene	ND	25	105.2	107.1	1.8%	30	70-130
Benzene	ND	25	92.5	93.2	0.8%	30	70-130
Trichloroethylene	ND	25	93.0	95.2	2.3%	30	70-130
Toluene	ND	25	90.0	88.4	1.8%	30	70-130
Chlorobenzene	ND	25	83.3	83.4	0.1%	30	70-130

QC Analysis Date: 05/03/16
QC Lab ID: 605003-6A
Units: ppm

QUALITY CONTROL DATA
EPA METHOD: 8015M(TPH Gas)

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
GAS (TPH)	ND	0.5	95.7	85.2	11.6%	30	70-130

CHEMTEK Environmental Laboratories Inc.
13554 Lorwin Circle, Santa Fe Springs, CA 90670
Tel. (562) 926-9848 FAX (562) 926-8324 Email: ChemtekLabs@hotmail.com
CA Dept of Health Accredited. (ELAP No. 1435) & Mobile Lab (ELAP No. 2629)

CHAIN OF CUSTODY RECORD

Job No.: 605003

CUSTOMER INFORMATION

COMPANY NAME: Donan Environmental Services, Inc.
PROJECT CONTACT: Greg Delson Email: GD@DESXYZ.com
ADDRESS: P.O. Box 1839 Vista CA 92085
PHONE: 760-639-3600 FAX: 760-639-3600

PROJECT INFORMATION

PROJECT NAME: GSG ES P.O. No.
SITE ADDRESS: 225 W. Washington Ave. Escondido
SAMPLED BY: Patrick EDF
Turn Around Time: NORM ☒ 24 hr 48 hr Other

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	TYPE *	pH/Time REMARKS Preserved	NO. OF CONT	8015M TPH G or GRO	8015M TPH D or DRO	CARBON CHAIN	VOCs (8260 B) FULL	OXYGENATES (8260 B) SHORT (BTEX, MTBE)	COD / TSS / BOD / TDS	pH, Conductivity, Turbidity	Sulfide, Cyanide, O&G	CAM 17 Metals	Naphthalene
1	4/25/16	DW23	2:31	W	2x 40 ml, VOAS, HCL	2	✓				✓					✓
2	DW21	4/25/16	4:04	W												
3	DW22	4/26/16	10:13	W												
4	DW19	4/26	11:20	W												
5	DW18	4/26	12:45	W												
6	DW20	4/26	2:36	W												
7	DW15	4/26	4:28	W												
8	DW7	4/27	10:15	W												
9	DW8	4/27	12:20	W												
10	DW17	4/27	1:05	W												
11	DW11	4/27	1:42	W												
12	DW12	4/27	3:47	W												
13	DW24	4/28	10:52	W												
14	DE4	4/28	12:49	W												
15	DE3	4/28	2:06	W												
16	DE2	4/28	3:28	W												

	SIGNATURE	PRINT NAME	COMPANY NAME	DATE	TIME
RELINQUISHED BY:	Hutton	PATRICK HUTTON	DONAN ENVIRONMENTAL SERVICES	5/2/16	11:40
RECEIVED BY:		David Suen	Chemtek	5/2/16	11:40am
RELINQUISHED BY:		David Suen	Chemtek	5/2/16	1:30pm
RECEIVED FOR LABORATORY BY:		Martin	Chemtek	5/2/16	1:30pm

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made.

Distribution : WHITE with report / YELLOW to CHEMTEK / PINK to courier

*Type: SO-Soil GW-Ground Water WW-Waste Water AQ-Aqueous A-Air OT-Other

CHEMTEK Environmental Laboratories Inc.
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CA Dept of Health Accredited. (ELAP No. 1435) & Mobile Lab (ELAP No. 2629)

CHAIN OF CUSTODY RECORD

Job No.: 605003

CUSTOMER INFORMATION

COMPANY NAME: Donan Environmental Services, Inc.
PROJECT CONTACT: Greg Delson Email: GDe@DESxr2.com
ADDRESS: P.O. Box 1839 Vista CA 92085
PHONE: 760-639-3600 FAX: 760-639-3603

PROJECT INFORMATION

PROJECT NAME: GSG ES P.O. No.
SITE ADDRESS: 225 W. Washington Ave Escondido
SAMPLED BY: Patrick EDF
Turn Around Time: NORM X 24 hr 48 hr Other

ANALYSIS REQUIRED

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	TYPE*	pH/Time	REMARKS	Preserved	NO. OF CONT	8015M TPH G or GRO	8015M TPH D or DRO	CARBON CHAIN	VOCs (8260 B) FULL	OXYGENATES (8260 B) SHORT BTEX, MTBE,	COD / TSS / BOD / TDS	pH, Conductivity, Turbidity	Sulfide, Cyanide, O&G	CAM 17 Metals	Naphthalene				
1	DE1	4/28/16	4:15	W	2x 40ml, VOAs, HCL			2	✓				✓					✓				
2	DW10	4/29/16	10:25	W																		
3	DW9	4/29	11:45	W																		
4	DW14	4/29	12:40	W																		
5	MW6	4/29	12:50	W																		
6	MW5	4/29	12:57	W																		
7	MW4	4/29	1:04	W																		
8	MW3	4/29	1:16	W																		
9	MW2	4/29	1:24	W																		
10	MW1	4/29	1:31	W																		
11																						
12																						
13																						
14																						
15																						
16																						

	SIGNATURE	PRINT NAME	COMPANY NAME	DATE	TIME
RELINQUISHED BY:	Hutton	PATRICK HUTTON	DONAN ENVIRONMENTAL SERVICES	5/2/16	11:40
RECEIVED BY:		David Suen	Chemtek	5/2/16	11:40
RELINQUISHED BY:		David Suen	Chemtek	5/2/16	1:30pm
RECEIVED FOR LABORATORY BY:		Mirlah	Chemtek	5/2/16	1:30pm

NOTE: Samples are disposed 30 days after results are reported unless other arrangements are made.

Distribution: WHITE with report / YELLOW to CHEMTEK / PINK to courier

*Type: SO-Soil, SW-Saltwater, WW-Wastewater, WD-Potable Water, AQ-Aqueous, Acid, OT-Other

CHEMTEK Environmental Laboratories Inc.

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CA Dept of Health Accredited, (ELAP No. 1435) & Mobile Lab (ELAP No. 2629)

CHAIN OF CUSTODY RECORD

Job No.: 605003

Page: of

CUSTOMER INFORMATION

COMPANY NAME: DONAN ENVIRONMENTAL SERVICES

PROJECT CONTACT: GREG DELSON

ADDRESS: P.O. BOX 1839

CITY, STATE, ZIP: Vista CA 92085

PHONE: 760-629-3600 FAX: 760-639-3603

EMAIL: gd@delsxy2.com

PROJECT INFORMATION

PROJECT NAME: GSG-ES

SITE ADDRESS: 225 W. Washington Ave, Escondido CA 92025

SAMPLED BY: P. Hutton

EDF

TAT: NORM 24 hr 48 hr Other

ANALYSIS REQUIRED

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	TYPE*	REMARKS	NO. OF CONT.	8015A TPH G	8015M TPH D	BTEX/MTBE (8021 B)	VOC (8260 B) PURGEABLE AROMATICS	BTEX, MTBE, 8260 B	TRPH (4.1 B.1)	COD / TOC	pH, Conductivity, Turbidity	Sulfide, Cyanide, O&G	CAM 17 Metals	Alkylbenzene-Naphthalene		
DW14	5/3/16	10:30	W	2 x 40 ml VOAs w HCL	2	✓				✓						✓		
MW6	5/3/16	10:35	W		2	✓				✓								

	SIGNATURE	PRINT NAME	COMPANY NAME	DATE	TIME
RELINQUISHED BY:	Hutton	PATRICK HUTTON	DONAN ENVIRONMENTAL SERVICES	5/6/16	11:20
RECEIVED BY:	[illegible]	David Shen	Chemtek	5/6/16	11:20
RELINQUISHED BY:					
RECEIVED FOR LABORATORY BY:	[illegible]	Martinez	Chemtek	5/6/16	1:26pm

DISTRIBUTION: WHITE - [illegible] YELLOW - CHEMTEK / PINK - [illegible]

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made.

*TYPE: AIR - [illegible] SOIL - [illegible] WATER - [illegible] OIL - [illegible] OTHER - [illegible]