

Appendix F

Groundwater Collection Records

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid Date: 3/15/12 Time: Start 1500 am/pm
 Project No: 600137361 Finish 1600 am/pm
 Site Location: Metropolitan - Pathmark
 Weather Conds: cloudy, nso Collector(s): KB/vp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 121 c. Length of Water Column 115.51
 Casing Diameter/Material 2" PVC
 b. Water Table Depth 5.49 d. Calculated System Volume (see back) 18.85

2. WELL PURGE DATA

a. Purge Method: Low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	10%
- pH	± 1.0 unit	- ORP	$\pm 10\text{mV}$
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used: Make Model Serial Number

Horiba U-52

La Motte 2020e

Geotech Pump - penstaltic

Time (24hr)	Volume (Liters)	Removed Temp. (°C)	pH	Spec. Cond. ($\mu\text{s/cm}$)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor			
											1505	1515	1520
1505	~5	13.13	6.51	32.7	3.83	-125	625	~250	5.11	dark brown			
1515	8	13.82	6.60	32.6	4.20	-123	30.3	~250	5.09	clear/none			
1520	9.5	13.71	6.63	32.6	3.90	-124	17.2	250	5.09	"			
1525	11	13.78	6.64	32.5	3.89	-124	13.6	250	5.12	"			
1530	12.5	13.81	6.65	32.5	4.02	-123	12.6	250	5.10	"			
1535	14	13.7	6.67	32.5	4.00	-123	12.1	250	5.09	"			

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed

Has required turbidity been reached

Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-4DI	Glass	3	HCl	VOC	1555
MW-4DI	Amber	2	Ice	SVOC	
MW-4DI	Plastic	1	HNO ₃	PCB metals	
MW-4DI	PLASTIC	1	NaOH	Total cyanide	

Comments _____

Signature Kate Burk

Date 3/15/12

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
 Project No: 60137361-330
 Site Location: Coves
 Weather Conds: sunny ~70, little wind

Date: 3/14/12

Time: Start: 5:47 am/pm
 Finish: 6:16 am/pm
 1630

Collector(s): NP KKB

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 44.94 c. Length of Water Column 41.08 (a-b)

Casing Diameter/Material
2" PVC

b. Water Table Depth 3.86 d. Calculated System Volume (see back) 6.7

2. WELL PURGE DATA

a. Purge Method: Low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	$\pm 10\text{mV}$
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	Horiba	U-52	
	LaMotte	2020e	

Time (24hr)	Volume (Liters)	Temp. (°C)	pH	geotech pump - peristaltic o/w interface probe					
				Spec. Cond. ($\mu\text{s}/\text{cm}$)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)
1550	1.5	17.79	6.96	2.33	0.04	-100	59.8	250	3.80
1555	3	16.81	6.95	2.72	0.28	-127	8.49	250	3.79
1600	6.45	16.67	6.92	2.73	0.70	-128	4.51	250	3.81
1605	6	16.55	6.91	2.74	0.65	-129	4.08	250	3.81
1610	7.5	16.51	6.91	2.73	0.62	-130	3.13	250	3.80
1615	9	16.48	6.90	2.73	0.59	-130	2.87	250	3.83

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed Has required turbidity been reached Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW 2585	plastic	3	HCl	VOC	16:00
MW-25I	JL Amber	2	ICP	SVOC	
MW-25I	plastic	1	HNO3	PCP/PA metals	
MW-25I	plastic	1	NaOH	Total Cyanide	16:30

Comments $\Delta h_w = 3.79$ $\Delta t_d = 44.91$ Signature  Date 3/14/12

Well ID: MW-19I

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
 Project No: 00137361
 Site Location: Metropolitan - Greco
 Weather Conds: Cloudy ~50°

Date: 3/18/12Time: Start 11:41 am/pm
Finish 12:41 am/pmCollector(s): KB/NP/JP

1. WATER LEVEL DATA: (measured from Top of Casing)

- a. Total Well Length 34.23 c. Length of Water Column 23.49 (a-b) Casing Diameter/Material 2"/PVC.
 b. Water Table Depth 10.74 d. Calculated System Volume (see back) 3.82 gal. one well volume.

2. WELL PURGE DATA

a. Purge Method: low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	$\pm 10\text{mV}$
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
Honiba	U-52	
Lamotte	2020e	

Time (24hr)	Volume (Liters)	Temp. (°C)	pH	Spec. Cond. ($\mu\text{S}/\text{cm}$)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1118	~1	10.51	10.43	5.46	2.23	-15	62.8	125	11.55	CLEAR/NO ODOR
1123	~2	11.44	12.13	7.79	1.10	-30	88.2	200	12.44	CLEAR/NLO
1128	~3	11.75	12.30	8.816	0.75	-79	19.5	200	13.94	CLEAR/NLO
1133	~4	11.95	12.28	8.91	0.61	-29	15.4	200	15.24	CLEAR/NLO
1138	~5	12.02	12.04	8.25	0.67	-15	2.8	700	16.83	CLEAR/NLO
1143	~7	12.02	11.99	7.49	0.71	-12	106.3	200	18.1	CLEAR/NLO
1152	~8	12.22	11.97	7.16	0.85	11	40.8	200	19.49	CLEAR/NLO

d. Acceptance criteria pass/fail

Yes No N/A

Has required volume been removed

Has required turbidity been reached

Have parameters stabilized

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: low flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-19I	40ml glass	3	HCL	VOC	13:30
	1L glass/amber	2	none	SVOC	
	250ml plastic	1	Nitric Acid	PCB/metals	
	250ml plastic	1	Sodium Hydroxide	Total Cyanide	

Comments dtw @ end 25.18'1337 dtw 21.05', dtb 34.18'Signature KTB

Date

3/18/12

Well ID: MW/20I

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid Date: 3/18/2012 Time: Start 1058 am/pm
 Project No: 60137361 Finish 1130 am/pm
 Site Location: Metropolitan Grid
 Weather Conds: 44°F cloudy Collector(s): KB

1. WATER LEVEL DATA: (measured from Top of Casing)

- a. Total Well Length 39.95 c. Length of Water Column 30.42 (a-b) Casing Diameter/Material
2" /PV6 .
- b. Water Table Depth 9.53 d. Calculated System Volume (see back) 4.96 one well volume.

2. WELL PURGE DATA

- a. Purge Method: low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	$\pm 10\text{mV}$
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Time (24hr)	Removed Volume (Liters)	Temp. (°C)	pH	Spec. Cond. ($\mu\text{S}/\text{cm}$)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Model	Make	Serial Number
											<u>Geotek pump- peristaltic w/ interface probe</u>	
1103	1	13.22	5.91	3.85	0.61	-134	11.7	250	10.31	U-52	Horiba	20202
1108	2	13.11	5.89	3.84	0.58	-141	9.42	210	10.33		Lamotte	
1113	3	13.33	5.89	3.84	0.52	-146	9.22	280	10.38			
1118	4	13.37	5.89	3.83	0.49	-149	9.44	250	10.36			

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed Has required turbidity been reached Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: low flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-20I	40ml glass	3	HCl	VOC	1130
	1L glass amber	2	HMT	SVOC	
	250ml plastic	1	Nitric acid	ICP-MS	
	250ml plastic	1	Sodium Hypochlorite	Total Cyanide	

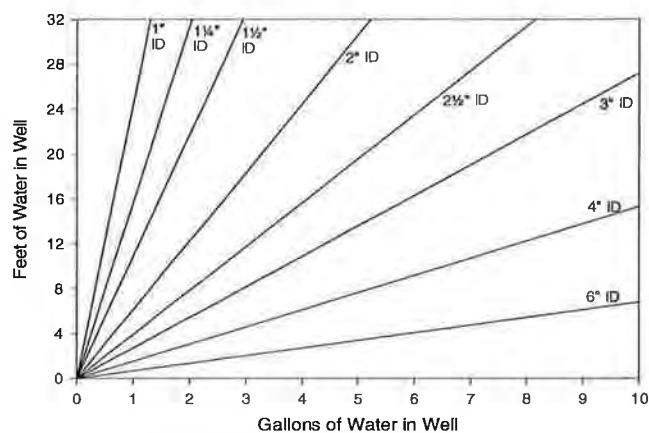
Comments _____

Signature _____

Date _____

Purge Volume Calculation

AECOM



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)



Low Flow Ground Water Sample Collection Record

Client: National Grid	Date: 3/15/2012	Time: Start N/M am/pm
Project No: 60137361		Finish N/M am/pm
Site Location: Metropolitan - Lowe's Parking Lot		
Weather Conds: Not documented	Collector(s):	Not documented

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 72.3	c. Length of Water Column 65.21 (a-b)	Casing Diameter/Material 2-inch/PVC
b. Water Table Depth 7.09	d. Calculated System Volume (see back) 10.6g. (1 wv)	

2. WELL PURGE DATA

a. Purge Method: peristaltic pump with dedicated poly tubing

b. Acceptance Criteria defined (see workplan)

- Temperature 3%	- D.O. 10%
- pH ± 1.0 unit	- ORP ± 10mV
- Sp. Cond. 3%	- Drawdown < 0.3'

c. Field Testing Equipment used: Make Model Serial Number

Horiba U-52

LaMotte 2020e

Time (24hr)	Volume			Geotech Pump			Peristaltic pump			Color/Odor
	Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	
N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M
N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M
N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed

Has required turbidity been reached

Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: _____

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-21D	glass/voa	3	HCL	VOC	1205
MW-21D	1L amber	2	ice	SVOC	1205
MW-21D	plastic	1	HNO3	RCRA Metals	1205
MW-21D	plastic	1	NaOH	Total Cyanide	1205

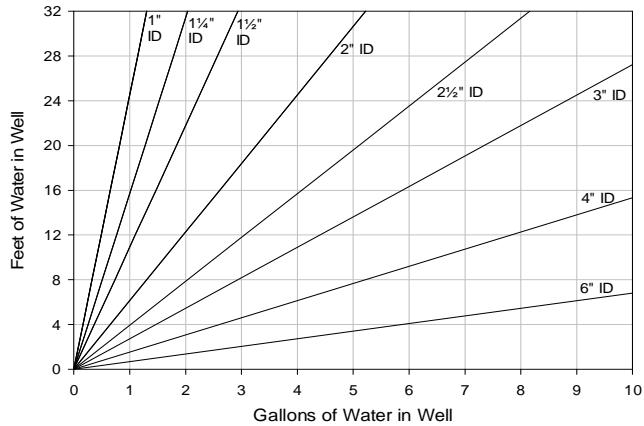
Comments

water quality parameters not documented. Notes provided on form from field book and laboratory report.

Signature _____ Date 3/15/2014

Purge Volume Calculation

AECOM



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)



Low Flow Ground Water Sample Collection Record

Client: National Grid	Date: 3/15/2012	Time: Start N/M am/pm
Project No: 60137361		Finish N/M am/pm
Site Location: Metropolitan - Lowe's Parking Lot		
Weather Conds: Not documented	Collector(s):	Not documented

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 71.7	c. Length of Water Column 66.19 (a-b)	Casing Diameter/Material 2-inch/PVC
b. Water Table Depth 5.51	d. Calculated System Volume (see back) 10.8g. (1 wv)	

2. WELL PURGE DATA

a. Purge Method: peristaltic pump with dedicated poly tubing

b. Acceptance Criteria defined (see workplan)

- Temperature 3%	-D.O. 10%
- pH ± 1.0 unit	- ORP ± 10mV
- Sp. Cond. 3%	- Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
Horiba	U-52	
LaMotte	2020e	

Time (24hr)	Volume			Geotech Pump			Peristaltic pump			Color/Odor
	Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	
N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M
N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M
N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed

Has required turbidity been reached

Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: _____

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-22D	glass/voa	3	HCL	VOC	1015
MW-22D	1L amber	2	ice	SVOC	1015
MW-22D	plastic	1	HNO3	RCRA Metals	1015
MW-22D	plastic	1	NaOH	Total Cyanide	1015

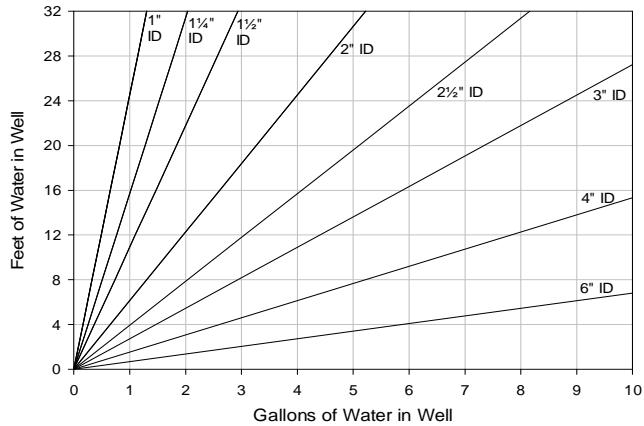
Comments

water quality parameters not documented. Notes provided on form from field book and laboratory report.

Signature _____ Date 3/15/2014

Purge Volume Calculation

AECOM



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
 Project No: 6001313601
 Site Location: Metropolitan
 Weather Conds: ~70°F (clear)

Date: 3/15/12Time: Start 1420 am/pm
Finish 1530 am/pmCollector(s): K. Barber

1. WATER LEVEL DATA: (measured from Top of Casing)

- a. Total Well Length 71.57 c. Length of Water Column 108.98 (a-b) Casing Diameter/Material 2" PVC
 b. Water Table Depth 2.59 d. Calculated System Volume (see back) 11.86

2. WELL PURGE DATA

a. Purge Method: Peristaltic Pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	10%
- pH	± 1.0 unit	- ORP	$\pm 10\text{mV}$
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Volume	Make	Model	Serial Number
	Horiiba	U-52	
	La Motte	2020e	
	Eutech pump	peristaltic pump	

Time (24hr)	Removed (Liters)	Temp. (°C)	pH	Spec. Cond. ($\mu\text{s/cm}$)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1425	1	20.72	6.59	1.09	3.96	85	8.88	~200mL	2.41	clear/no odor
1435	2.5	21.87	6.63	1.44	2.85	-33	8.56	~200mL	2.39	" "
1440	~3.5	21.66	6.48	1.52	2.30	-53	9.80	~200mL	2.40	" "
1447	~4.5	21.26	6.65	1.75	2.19	-72	6.12	~200mL	2.39	" "
1452	~6.0	20.96	6.75	2.22	2.14	-93	5.98	~200mL	2.42	" "
1457	7.0	20.71	6.63	2.27	2.15	-84	7.97	~200mL	2.40	" "
1502	8.0	20.61	6.68	2.43	2.14	-91	6.16	~200mL	2.43	

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed

Has required turbidity been reached

Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method:

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-23D	50mL Plastic	1	HNO ₃	10010B	1530
MW-23D	50mL Plastic	1	NaOH	Total cyanide	
MW-23D	1 Liter Amber	2	HCl	8270C	
MW-23D	Vials	3	HCl	8260B	

Comments

Signature

Kira Ba

Date

3/14/12

Well ID: MW-4DD

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
 Project No: 60137361
 Site Location: Metropolitan Pathmark
 Weather Conds: Cloudy ~50°F

Date: 3/15/12Time: Start 1500 am/pm
Finish 1645 am/pmCollector(s): NP/KB

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 146 c. Length of Water Column 143.8 (a-b) Casing Diameter/Material 2"/PVC
 b. Water Table Depth 2.20 d. Calculated System Volume (see back) 23.7

2. WELL PURGE DATA

a. Purge Method: low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	$\pm 10\text{mV}$
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make Honka Model U-52 Serial NumberMake LaMotte Model 2020e Serial NumberMake Fleetechpump Model peristaltic Serial Number

Time (24hr)	Removed Gallons (Liters)	Temp. (°C)	pH	Spec. Cond. ($\mu\text{S}/\text{cm}$)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1510	~1	13.55	7.95	1.43	1.30	106	—	250	2.41	Brown / none
1520	~8	13.60	7.99	1.43	0.84	113	—	250	2.45	Brown / none
1525	~8.5	13.40	7.99	1.44	1.72	120	—	250	2.45	Brown / none
1604	9.0	13.44	7.92	1.42	1.05	91	98	250	2.45	Brown / none
1618	9.5	13.41	7.93	1.42	0.90	89	73	250	2.45	Brown / none
1628	~9.5	13.35	7.91	1.43	0.68	89	52	250	2.45	lt brown / none
1633	~9.6	13.36	7.93	1.43	0.65	84	74	250	2.45	lt brown / none

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed Has required turbidity been reached Have parameters stabilized

If no or N/A - Explain below.

1000ft/min3. SAMPLE COLLECTION: Method: low flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-4DD	plastic	1	HNO ₃	RCRA metals	1630
MW-4DD	1L Amber	2	10C	SRM	
MW-4DD	Glass	3	HCl	VOC	
MW-4DD	plastic	1	NaOH	Total cyanide	

Comments after pumping DTW 2.41
DTB 146.1Signature Kurt Boh Date 3/15/12

Well ID: MW-195

AECOM

Low Flow Ground Water Sample Collection Record

Client:	National Grid	Date:	3/18/2012	Time: Start	0915	am/pm
Project No:	60137361			Finish	1010	am/pm
Site Location:	Metropolitan Grid					
Weather Conds:	Cloudy, SD			Collector(s):	NP	

1. WATER LEVEL DATA: (measured from Top of Casing)

- a. Total Well Length 15.70 c. Length of Water Column 5.27 (a-b) Casing Diameter/Material 2" / PVC
 b. Water Table Depth 10.43 d. Calculated System Volume (see back) 0.85 gal

2. WELL PURGE DATA

- a. Purge Method: low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	10%
- pH	± 1.0 unit	- ORP	$\pm 10\text{mV}$
- Sp. Cond.	3%	- Drawdown	< 0.3'

- c. Field Testing Equipment used: Make Horiba Model U-52 Serial Number

Geotek pump w/piston
Lynette 2020c and O/W interface probe

Time (24hr)	Volume (Liters)	Temp. (°C)	pH	Spec. Cond. ($\mu\text{s/cm}$)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor	
										Yes	No
0930	~1	4.72	4.37	0.008	10.40	174	N/M	125	see comments	brown/no	
0935	~2	4.92	5.94	31.2	2.40	118	420	125	11.18'	clear/no	
0940	~3	9.80	6.11	30.0	2.65	110	63.9	125	11.30'	clear/no	
0945	~4	9.72	6.27	29.1	2.14	61	12.0	150	11.43'	clear/no	
0950	~5	9.75	6.35	28.9	1.48	40	59.4	150	11.58'	clear/no	
0955	~6	9.78	6.42	28.6	1.17	17	5.64	150	11.72	clear/no	
1000	~7	9.80	6.48	28.5	0.95	8	10.10	150	11.88	clear/no	

d. Acceptance criteria pass/fail

- Has required volume been removed
 Has required turbidity been reached
 Have parameters stabilized

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: low flow

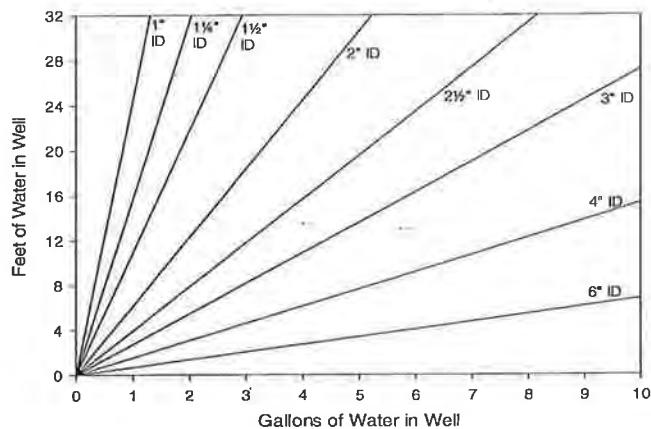
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-195	40mL glass	3	HCl	VOC	1010
	1L glass amber	2	none	SVOC	
	250mL plastic	1	Nitric Acid	RCRA metals	
	250mL plastic	1	Sodium Hydroxide	TOTAL cyanide	

Comments N/M: not measured. At start DTW = 10.65', clogged tube, turned pump back in 0926 ~ 0926 - 10.23' dtw, 0929 - 10.88' dtw, 0930 - 10.43' dtw, 0931 - 11.05' dtw, 0932 - 11.10' dtw, 0933 - 11.15' dtw, 0934 - 11.16' dtw, 0935 - 11.18' dtw.
Final dtw 12.12', at 15.69', hard bottom

Signature _____ Date _____

Purge Volume Calculation

AECOM



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

AECOM

Well ID: MW-19B I

Low Flow Ground Water Sample Collection Record

Client: National Grid
 Project No: C00137361
 Site Location: Metro-Greco
 Weather Conds: ~48°F Cloudy

Date: 3/18/12

Time: Start 10:58 am/pm
 Finish _____ am/pm

Collector(s): _____

1. WATER LEVEL DATA: (measured from Top of Casing)

- a. Total Well Length 39.95 c. Length of Water Column 30.42 (a-b) Casing Diameter/Material 2"
- b. Water Table Depth 9.53 d. Calculated System Volume (see back) 4.96

2. WELL PURGE DATA

- a. Purge Method: Peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

- c. Field Testing Equipment used: Make Model Serial Number

SCHMIDT

GROTECH

HANDBOOK-52

Time (24hr)	Removed Volume (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor	Volume
											10:03
11:08	2.0	13.31	5.89	3.84	0.58	-141	9.42	"	10.33	"	
11:13	3.0	13.33	5.89	3.84	0.52	-140	9.32	"	10.38	"	
11:18	4.0	13.31	5.89	3.83	0.49	-149	9.44	"	10.36	"	

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed Has required turbidity been reached Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low Flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time

Comments: NW after pumping 10.16 ft DTB after 31.90'

Signature _____ Date _____

Well ID: MW-20S

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid
 Project No: 00131361
 Site Location: METROPOLITAN AREA
 Weather Conds: Cloudy, 50°

Date: 3/18/2012Time: Start 0906 am/pm
Finish 1258 am/pmCollector(s): KP

1. WATER LEVEL DATA: (measured from Top of Casing)

- a. Total Well Length 15.48 c. Length of Water Column 6.63 (a-b) Casing Diameter/Material
2" / PVC.
 b. Water Table Depth 8.85 d. Calculated System Volume (see back) 1.08

2. WELL PURGE DATA

- a. Purge Method: low Flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	10%
- pH	± 1.0 unit	- ORP	$\pm 10\text{mV}$
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
<u>Hanna</u>	<u>61-52</u>	
<u>Lamotte</u>	<u>2020C</u>	

Time (24hr)	Volume (Liters)	Temp. (°C)	pH	Spec. Cond. ($\mu\text{S}/\text{cm}$)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0908	~2.25	10.73	4.84	1.30	1.74	95	923	250	9.12	gray / PLO
0910	~1	11.43	5.59	1.27	1.20	-66	35	250	4.78	gray / PLO
0911	~2	11.52	5.18	1.28	0.98	-115	202	250	7.94	Electric / PLO
0913	~2.5	11.53	5.82	1.25	0.43	-123	17.1	250	10.04	clear / PLO
0914	~2.5	11.53	5.80	1.26	0.68	-130	13.8	280	10.57	clear / PLO
0932	~3	11.74	6.15	1.17	0.75	-141	31.2	250	12.11	clear / PLO
0937	~3.5	11.89	6.23	1.15	0.63	-176	26.8	250	12.91	clear / PLO

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed

Has required turbidity been reached

Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low Flow

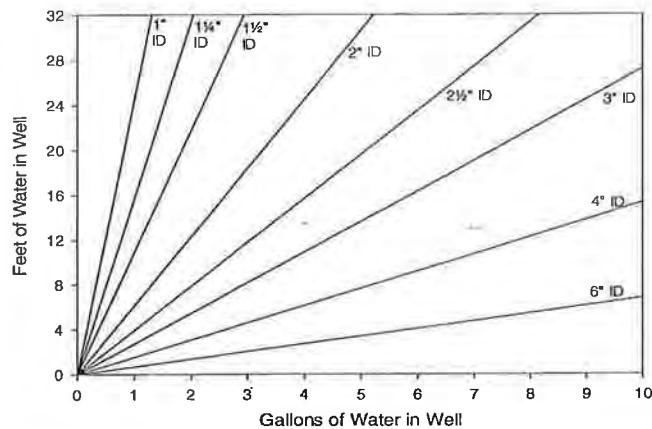
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW20S	40ml glass	3	HCl	VOC	1030AM
	1L glass, amber	2	None	SVOC	1215
	250ml plastic	1	Nitric Acid -	RCRA metals	
	250ml plastic	1	Sodium Hydroxide	Total Cyanide	

Comments: altw after pump 11.90', dtb 15.46'
12.58' altw : 13.49', dtb 15.50'

Signature _____ Date _____

Purge Volume Calculation

AECOM



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

AECOM

Low Flow Ground Water Sample Collection Record

Client: National Grid Date: 3/15/12 Time: Start 815 am/pm
 Project No: 60137361 - 330 Finish 846 am/pm
 Site Location: Lawes
 Weather Conds: ~ 50°, cloudy, slight wind Collector(s): NP/KB

1. WATER LEVEL DATA: (measured from Top of Casing)

- a. Total Well Length 36.71 c. Length of Water Column 31.41 (a-b) Casing Diameter/Material
2" PVC
 b. Water Table Depth 5.30 d. Calculated System Volume (see back) 5.13 gal

2. WELL PURGE DATA

- a. Purge Method: Low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	$\pm 10\text{mV}$
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make

Model

Serial Number

HoribaU-52LaMotte2020eEutech Pump-penetralicD/W Interface probe

Time (24hr)	Volume (Liters)	Removed Temp. (°C)	pH	Spec. Cond. ($\mu\text{S}/\text{cm}$)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
820	1.5	15.48	6.95	4.80	1.44	-129	62.4	250	5.41	clear/wate
825	3	15.65	6.92	4.82	1.12	-131	9.02	250	5.35	"
830	4.5	15.56	6.92	4.85	0.46	-131	2.72	250	5.33	"
835	6	15.49	6.92	4.87	0.43	-132	2.98	250	5.34	"
840	7.5	15.44	6.92	4.88	0.41	-133	2.20	250	5.35	"
845	9	15.45	5	4.88	0.41	-133	1.16	250	5.32	"
850										

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed

Has required turbidity been reached

Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: low flow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW22I	5 (45) plastic	3	Hg, HCl, NaOH, VOC	VOC	830
MW22I	1 L Amber	2	ICP	SVOC	
MW22I	plastic	1	HNO ₃	RRA metals	
MW22I	plastic	1	NaOH	Total cyanide	
Comments	end, DFW = 5.3				
	TD = 36.61				

Signature _____ Date _____

AECOM

Well ID: MW-155

Low Flow Ground Water Sample Collection Record

Client: National Grid
 Project No: 60731361-330
 Site Location: Wellesley
 Weather Conds: Temp 40°F, Wind 5 mph

Date: 3/14/12Time: Start 1428 am/pm
Finish 1509 am/pmCollector(s): N. Dated - KB

1. WATER LEVEL DATA: (measured from Top of Casing)

25.99

a. Total Well Length 29.84 c. Length of Water Column 2.84 (a-b) 4.2 Casing Diameter/Material
 b. Water Table Depth 3.805 d. Calculated System Volume (see back) 6.7 (1WV)
90.1 BUV

2. WELL PURGE DATA

a. Purge Method: 10 W - 1/2 min

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	$\pm 10\text{mV}$
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make

Model

Serial Number

HoribaU-52La Motte2030eDW

Time (24hr)	Volume (Liters)	Spec. Cond.		DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
		Removed	Temp. (°C)	pH					
1443	1.5	18.41	6.72	3.56	-0.76	-91	200	250	4.10 Clear/none
1444	3	18.47	6.70	3.57	0.96	-93	8.71	250	4.11 Clear/none
1453	4.5	18.54	6.71	3.56	0.92	-48	4.69	250	4.15 //
1458	6	18.49	6.71	3.54	0.85	-100	5.33	250	4.14 //
1503	7.5	18.55	6.71	3.55	0.80	-102	8.76	250	4.17 //
1508	9	18.52	6.71	3.54	0.72	-104	5.08	250	4.15 //
1513									

d. Acceptance criteria pass/fail

Yes	No	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(continued on back)

Has required volume been removed

Has required turbidity been reached

Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Lowflow

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-255	glass	3	HCl, soil photo	VOC	1458
MW-255	1L Amber	2	ice	SVOC	
MW-255	plastic	1			
MW-255	plastic	1			

Comments: dtw: 3.70 @ 1428.

Stopped at 1428 and restarted at 1430, between 1430 - 1441, water was dark brown and silty
volume removed ~ 3 gallons

Signature Kathie BohrDate 3/14/12

Final

1513 dtw: 3.73

1513 dtb: 19.84

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number:
Project Name:
Date:
Weather:

60(3)361
Metropolitan
10/4/10
50's; Rain

Well ID: MN-1S
Sample ID: MN-1S
Permit Number: N/A
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	<u>8inSteel</u>
Inner Casing Diameter (inch):	<u>2in</u>
Inner Casing Material:	<u>PVC</u>
Purge/Sample Method:	<u>Low Flow</u>
Pump Intake Setting* (feet):	<u>10.0 ft</u>
PID/FID Reading of Well Headspace (ppm)	
Before Cap Removal:	<u>0.0</u>
After Cap Removal:	<u>34.9</u>

Depth to Product* (feet):	ND
Initial Depth to Water* (feet):	4.60
Product Thickness (feet):	ND
Depth to Top of Screen* (feet):	3'
Total Depth* (feet):	14.71
Water Column (feet):	10.11
Casing Volume (gal):	1,65
DTW After Pump Installed:	NA

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 1110
End Purge Date/Time: 1210
Total Volume Purged (gal): 3 gallons
Depth to Water After Purge* (feet): 5.60

Pre-Sample Depth to Water* (feet): 5.66
Start Sample Date/Time: 12/15
End Sample Date/Time: 12/11
Sampler Names: M. Mardner

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheep, PID/EID readings):

Slight sheen on water, strong MGP-like odor.

PNW after sample - 5.40

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: metropolitan
Date: 10/4/10
Weather: 55°F, cloudy, drizzle

Well ID: II
Sample ID: MW-II
Permit Number: NA
Well Condition: green

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" Steel
Inner Casing Diameter (inch): 2"
Inner Casing Material: PVC
Purge/Sample Method: Low flow
Pump Intake Setting* (feet): 10'
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0
After Cap Removal: 22.7

Depth to Product* (feet): _____
Initial Depth to Water* (feet): 7.88'
Product Thickness (feet): _____
Depth to Top of Screen* (feet): 30'
Total Depth* (feet): 42.25'
Water Column (feet): 34.37
Casing Volume (gal): 5.60
DTW After Pump Installed: N/A

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 10/4/10 12:55
End Purge Date/Time: 10/4/10 14:12
Total Volume Purged (gal): 3.991003
Depth to Water After Purge* (feet): 11.185

Pre-Sample Depth to Water* (feet): 1116
Start Sample Date/Time: 1400 10/4/10
End Sample Date/Time: 1411 10/4/10
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan
Date: 10/4/10
Weather: cloudy, drizzle, ~55°F

Well ID: MW-1D
Sample ID: MW-1D
Permit Number: NA
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" Steel
 Inner Casing Diameter (inch): 2"
 Inner Casing Material: PVC
 Purge/Sample Method: Low flow
 Pump Intake Setting* (feet): 10'
 PID/FID Reading of Well Headspace (ppm)
 Before Cap Removal: 0-0
 After Cap Removal: 19.9

Depth to Product* (feet):	<u> </u>
Initial Depth to Water* (feet):	<u> 7.55 </u>
Product Thickness (feet):	<u> </u>
Depth to Top of Screen* (feet):	<u> </u>
Total Depth* (feet):	<u> 60.0 </u>
Water Column (feet):	<u> 72.1 </u>
Casing Volume (gal):	<u> 64.56 </u>
DTW After Pump Installed:	<u> 10.52 </u>
	<u> N/A </u>

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 10/4/10 11:01
End Purge Date/Time: 10/4/10 12:36
Total Volume Purged (gal): 4.5 gal
Depth to Water After Purge* (feet): 10.32'

Pre-Sample Depth to Water* (feet):
Start Sample Date/Time: 10/4/10 12:15
End Sample Date/Time: 10/4/10 12:33
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, shear, RIDE/FID reading)

No odors, Sheen, pid 19.9 ppm, turbidity good

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number:
Project Name:
Date:
Weather:

60137361 . 300
Metropoliten-Net Grid
10/5/10
60°, Overcast/Precip

Well ID:
Sample ID:
Permit Number:
Well Condition:

MW-2D
MW-2D (100516)
N/A
6000

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
Inner Casing Diameter (inch): 2in
Inner Casing Material: PVC
Purge/Sample Method: Low flow
Pump Intake Setting* (feet): Midcycle + Screen
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0 ppm.
After Cap Removal: 19.9

Depth to Product* (feet):	100
Initial Depth to Water* (feet):	6.70
Product Thickness (feet):	NOT affected
Depth to Top of Screen* (feet):	100
Total Depth* (feet):	71.391
Water Column (feet):	64.99
Casing Volume (gal):	10.55
DTW After Pump Installed:	5.67

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 0800
End Purge Date/Time: 0855
Total Volume Purged (gal): 11.3 gallons
Depth to Water After Purge* (feet): 0.681

Pre-Sample Depth to Water* (feet): 6.68
Start Sample Date/Time: 10/5/10 0900
End Sample Date/Time: 10/5/10
Sampler Names: M. Merdinger

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheep, PID/FID readings):

Slight hazy color, No odor / No sheen, No turbidity

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 601373(6)
Project Name: Metropolis
Date: 10/5/10
Weather: cloudy, mid 50's, light breeze

Well ID: 33
Sample ID: MW-33 (10510)
Permit Number:
Well Condition: NA
good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	<u>8" steel</u>
Inner Casing Diameter (inch):	<u>2"</u>
Inner Casing Material:	<u>PVC</u>
Purge/Sample Method:	<u>Low Flow</u>
Pump Intake Setting* (feet):	<u>10'</u>
PID/FID Reading of Well Headspace (ppm)	
Before Cap Removal:	<u>0.0</u>
After Cap Removal:	<u>60-8</u>

Depth to Product* (feet):	ND
Initial Depth to Water* (feet):	1.91
Product Thickness (feet):	ND
Depth to Top of Screen* (feet):	31
Total Depth* (feet):	14.36
Water Column (feet):	12.45'
Casing Volume (gal):	2.03
DTW After Pump Installed:	NA

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 10/5/10 9:46
End Purge Date/Time: 10/5/10 10:45
Total Volume Purged (gal): 3 gal
Depth to Water After Purge* (feet): 1.9 ft

Pre-Sample Depth to Water* (feet): 1.93
Start Sample Date/Time: 10/5/10 10:30
End Sample Date/Time: 10/5/10 10:45
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheep, RID/FID readings):

slight HClO, no shear

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan - Net Grid
Date: 10/15/10
Weather: 60°5, Partly

Well ID: MW-3I
Sample ID: MW-3I (100S10)
Permit Number: N/A
Well Condition: Good → Noils in casing

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
 Inner Casing Diameter (inch): 2 in
 Inner Casing Material: PVC
 Purge/Sample Method: Low Flow
 Pump Intake Setting* (feet): Mid-Screen
 PID/FID Reading of Well Headspace (ppm)
 Before Cap Removal: 0.0 ppm.
 After Cap Removal: 1418

Depth to Product* (feet):	not detected
Initial Depth to Water* (feet):	4.02
Product Thickness (feet):	not detected
Depth to Top of Screen* (feet):	25'
Total Depth* (feet):	50.68'
Water Column (feet):	46.64
Casing Volume (gal):	7.61
DTW After Pump Installed:	NA

PURGING/SAMPLING INFORMATION

Start Purge Date/Time:

0945

End Purge Date/Time:

1035

Total Volume Purged (gal):

~~2.5 galls~~

Depth to Water After Purge* (feet):

405

Pre-Sample Depth to Water* (feet):

Start Sample Date/Time:

End Sample Date/Time:

Sampler Names:

4.05

10510 1045

DIS 110.

M. Merding

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Slightly hazy grey color Col-Tar like odor

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 600137367
Project Name: Metropolitan - NetGrid
Date: 10/5/10
Weather: 60's, Drizzle

Well ID: MW-4S
Sample ID: MW-4S (100510)
Permit Number: N/A
Well Condition: Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8inSteel
 Inner Casing Diameter (inch): 2in
 Inner Casing Material: PVC
 Purge/Sample Method: Carry Flow
 Pump Intake Setting* (feet): Mid-Screen
 PID/FID Reading of Well Headspace (ppm)
 Before Cap Removal: 0.0
 After Cap Removal: 4.4

Depth to Product* (feet):	
Initial Depth to Water* (feet):	4.42
Product Thickness (feet):	
Depth to Top of Screen* (feet):	5.60
Total Depth* (feet):	15.60
Water Column (feet):	11.18
Casing Volume (gal):	1.82
DTW After Pump Installed:	4.42

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 1605
End Purge Date/Time: 1640
Total Volume Purged (gal): 2.5 gallons
Depth to Water After Purge* (feet): 4.70

Pre-Sample Depth to Water* (feet): 4.70
Start Sample Date/Time: 10/15/10 1645
End Sample Date/Time:
Sampler Names: MM

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number:
Project Name:
Date:
Weather:

(60) 37361
Metropolitan
10/57/0
Cloudy, mid 50's, light breeze

Well ID:
Sample ID:
Permit Number:
Well Condition:

4I
MW-4I (10510)
NA
good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):
Inner Casing Diameter (inch):
Inner Casing Material:
Purge/Sample Method:
Pump Intake Setting* (feet):
PID/FID Reading of Well Heads

8" Steel
3"
PVC
low flow
10'
ce (ppm)
0.0

Depth to Product* (feet):
Initial Depth to Water* (feet):
Product Thickness (feet):
Depth to Top of Screen* (feet):
Total Depth* (feet):
Water Column (feet):
Casing Volume (gal):
DTW After Pump Installed:

PURGING/SAMPLING INFORMATION

torbidity
meter

Start Purge Date/Time:
End Purge Date/Time:
Total Volume Purged (g)
Depth to Water After Purge

10/5/10 1615
10/5/10 1742
4.5 gal
3.95

Pre-Sample Depth to Water* (feet):
Start Sample Date/Time:
End Sample Date/Time:
Sampler Names:

4.08
10/5/10 1730
10/5/10 1741
JE

Slight sheen & HClO

maybe we should sample this well as the tide is going out,
the canal could be having an effect on the DO.

Fig 5-1 lowflowform.xls
★ Tide is coming in.

AECOM

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137367
Project Name: Metropolitan
Date: 10/16/10
Weather: 60°'s, Sunny

Well ID: MW-5S
Sample ID: MW-5S (100610)
Permit Number: N/A
Well Condition: Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8inSteel
 Inner Casing Diameter (inch): 7.25in
 Inner Casing Material: PVC
 Purge/Sample Method: Low Flow
 Pump Intake Setting* (feet): Mid Screen
 PID/FID Reading of Well Headspace (ppm)
 Before Cap Removal: 0.0 ppm
 After Cap Removal: 0.1 ppm

Depth to Product* (feet): —
 Initial Depth to Water* (feet): 0.71
 Product Thickness (feet): —
 Depth to Top of Screen* (feet): 5.50 13'
 Total Depth* (feet): 15.50
 Water Column (feet): 9.79
 Casing Volume (gal): 1,43 gal.
 DTW After Pump Installed: 6.71

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 0835
End Purge Date/Time: 0905
Total Volume Purged (gal): 51 liters (1 gal)
Depth to Water After Purge* (feet): 0.75

Pre-Sample Depth to Water* (feet): 6.75
Start Sample Date/Time: 10/6/10 MW-5S (100010) 0910
End Sample Date/Time: 10/6/10 MW SS (100010) Dp 0930
Sampler Names: M. Merding

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheep, PID/FID readings):

Slightly hazy. Organic odor

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number:	60137367
Project Name:	Metropolitans - Not Grid
Date:	10/6/16
Weather:	Sunny, 60° S

Well ID: MW-5T
Sample ID: MW-5T (100610)
Permit Number:
Well Condition: N/A
Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
 Inner Casing Diameter (inch): 2in
 Inner Casing Material: PVC
 Purge/Sample Method: Low Flow
 Pump Intake Setting* (feet): Mid Screen
 PID/FID Reading of Well Headspace (ppm)
 Before Cap Removal: 0.0 ppm.
 After Cap Removal: 22.5

Depth to Product* (feet):	
Initial Depth to Water* (feet):	<u>6.66</u>
Product Thickness (feet):	
Depth to Top of Screen* (feet):	<u>34.60</u>
Total Depth* (feet):	<u>41.90</u>
Water Column (feet):	
Casing Volume (gal):	<u>112.34</u>
DTW After Pump Installed:	<u>6.90</u>
	<u>6.60</u>

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 1025
End Purge Date/Time: 1105
Total Volume Purged (gal): 31 liters
Depth to Water After Purge* (feet): 0.75

Pre-Sample Depth to Water* (feet): 6.75
Start Sample Date/Time: 10/6/10 1110
End Sample Date/Time: 10/6/10 1150
Sampler Names: M. Merdinger

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheep, PID/EID readings):

Slight Gray, NLO

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: (00)37367
Project Name: Metropolitan-Net Grid
Date: 10/6/10
Weather: 60°, Sunny

Well ID: MW-5D
Sample ID: MW-5D(100610)
Permit Number: N/A
Well Condition: Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
Inner Casing Diameter (inch): 2in
Inner Casing Material: PVC
Purge/Sample Method: Low Flow
Pump Intake Setting* (feet): Mid Screen
PID/FID Reading of Well Headspace (ppm)
Before Cap Removal: 0.0 ppm.
After Cap Removal: 0.8

Depth to Product* (feet): 7.11
Initial Depth to Water* (feet): 7.11
Product Thickness (feet): .52
Depth to Top of Screen* (feet): 7.52
Total Depth* (feet): 7.52
Water Column (feet): .41
Casing Volume (gal): 10,49
DTW After Pump Installed: 7.11

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 1200
End Purge Date/Time: 1300
Total Volume Purged (gal): 11 gal.
Depth to Water After Purge* (feet): 7.29

Pre-Sample Depth to Water* (feet): 7.11
Start Sample Date/Time: 10/6/10 1305
End Sample Date/Time: 10/6/10
Sampler Names: M. Mendenhall

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheep, PID/EID readings):

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan
Date: 10/5/10
Weather: cloudy, mid 50's light breeze

Well ID: 6S
Sample ID: MN-6S (10510)
Permit Number: NA
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	<u>8" Steel</u>
Inner Casing Diameter (inch):	<u>2" PVC</u>
Inner Casing Material:	<u>PVC</u>
Purge/Sample Method:	<u>Low-flow</u>
Pump Intake Setting* (feet):	<u>10'</u>
PID/FID Reading of Well Headspace (ppm)	
Before Cap Removal:	<u>0.0</u>
After Cap Removal:	<u>34.9</u>

Depth to Product* (feet):	<u> </u>
Initial Depth to Water* (feet):	<u>5.37</u>
Product Thickness (feet):	<u> </u>
Depth to Top of Screen* (feet):	<u>3'</u>
Total Depth* (feet):	<u>15.06'</u>
Water Column (feet):	<u>9.69'</u>
Casing Volume (gal):	<u>1.58</u>
DTW After Pump Installed:	<u>N/A</u>

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 10/5/10 1330
End Purge Date/Time: 10/5/10
Total Volume Purged (gal): 4 gal
Depth to Water After Purge* (feet): 6.35

Pre-Sample Depth to Water* (feet): 6.28
Start Sample Date/Time: 10/5/10 14:38
End Sample Date/Time: 10/5/10 15:15
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheep, PID/EID readings):

No shear, no order

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number:
Project Name:
Date:
Weather:

60137361
Metropolitan - Nat Grid
10/4/16
50°S, Kair

Well ID:
Sample ID:
Permit Number:
Well Condition:

MW-7S
MN-7S (100410)
DIA
good.

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in. Steel
 Inner Casing Diameter (inch): 2in
 Inner Casing Material: PVC
 Purge/Sample Method: Low flow
 Pump Intake Setting* (feet): 10.0 ft
 PID/FID Reading of Well Headspace (ppm)
 Before Cap Removal: 0.0
 After Cap Removal: 27.1

Depth to Product* (feet):	<u>4.51</u>
Initial Depth to Water* (feet):	<u>4.51</u>
Product Thickness (feet):	<u>ND</u>
Depth to Top of Screen* (feet):	<u>3'</u>
Total Depth* (feet):	<u>15.05</u>
Water Column (feet):	<u>10.54</u>
Casing Volume (gal):	<u>1.72</u>
DTW After Pump Installed:	<u>No pump - pbi</u>

PURGING/SAMPLING INFORMATION

Start Purge Date/Time:
End Purge Date/Time:
Total Volume Purged (g)
Depth to Water After Purge

1525
1640
5 gallons
4.31

Pre-Sample Depth to Water* (feet):
Start Sample Date/Time:
End Sample Date/Time:
Sampler Names:

4.51
104110 1645
M. Merdinger

Observations During Sampling (e.g. slow recharge, turbidity, odor, shear, PID/EID readings):

Creamy grey, MGP odor.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: Metro polestar
Project Name: 10/4/10
Date: ~55°F, cloudy, drizzle
Weather:

Well ID: 7I
Sample ID: MW-7I (0410)
Permit Number:
Well Condition: NA
good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch):	8" Steel
Inner Casing Diameter (inch):	2"
Inner Casing Material:	PVC
Purge/Sample Method:	Low Flow
Pump Intake Setting* (feet):	10'
PID/FID Reading of Well Headspace (ppm)	0.0
Before Cap Removal:	0.0
After Cap Removal:	11.9

Depth to Product* (feet): 6.87'
 Initial Depth to Water* (feet): 30'
 Product Thickness (feet): 41.35'
 Depth to Top of Screen* (feet): 34.48'
 Total Depth* (feet): 5.62
 Water Column (feet): NA
 Casing Volume (gal):
 DTW After Pump Installed:

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 10/4/10 1523
End Purge Date/Time: 10/4/10 1636
Total Volume Purged (gal): 4 gal
Depth to Water After Purge* (feet): 7.29'

Pre-Sample Depth to Water* (feet): 7.85
Start Sample Date/Time: 1620
End Sample Date/Time: 1635
Sampler Names: TE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):

~~Slight shear & HClO~~

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan - Nat Grid
Date: 10/5/10
Weather: 60°s; Drizzle

Well ID: MW-8T
Sample ID: MW-8T (100S10)
Permit Number: N/A
Well Condition: Water in Well Casing

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8in Steel
 Inner Casing Diameter (inch): 2in
 Inner Casing Material: PVC
 Purge/Sample Method: Low Flow
 Pump Intake Setting* (feet): Mid-Screen
 PID/FID Reading of Well Headspace (ppm)
 Before Cap Removal: 0.0 ppm.
 After Cap Removal: 14.2

Depth to Product* (feet): 4.81
 Initial Depth to Water* (feet): 32.25
 Product Thickness (feet): 92.25
 Depth to Top of Screen* (feet): 37.44
 Total Depth* (feet): 6.1
 Water Column (feet): 4.81
 Casing Volume (gal):
 DTW After Pump Installed:

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 1351
End Purge Date/Time: 1425
Total Volume Purged (gal): 0.0 liters
Depth to Water After Purge* (feet): 4.87

Pre-Sample Depth to Water* (feet): 4.82
Start Sample Date/Time: 10/5/10 1430
End Sample Date/Time:
Sampler Names: M. Medina

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheep, PID/EID readings):

Slight Sheen, slight Napho-like odor.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number:	601373b1
Project Name:	Metropolitan
Date:	10/6/10
Weather:	Sunny, 60°F, light breeze

Well ID: MW-9I
Sample ID: MW-9I (10610)
Permit Number: NA
Well Condition: good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" Steel
 Inner Casing Diameter (inch): 8"
 Inner Casing Material: PVC
 Purge/Sample Method: Low flow
 Pump Intake Setting* (feet): 10'
 PID/FID Reading of Well Headspace (ppm)
 Before Cap Removal: 0.0
 After Cap Removal: 3.4

Depth to Product* (feet):	
Initial Depth to Water* (feet):	6.53
Product Thickness (feet):	
Depth to Top of Screen* (feet):	
Total Depth* (feet):	
Water Column (feet):	46.50
Casing Volume (gal):	39.97
DTW After Pump Installed:	6.53
	NA

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 10/6/10 1300
End Purge Date/Time: 10/6/10 1350
Total Volume Purged (gal): 3.5 gal
Depth to Water After Purge* (feet): 6.680

Pre-Sample Depth to Water* (feet): 70'
Start Sample Date/Time: 10/6/10 1338
End Sample Date/Time: 10/6/10 1350
Sampler Names: JF

Moderate odor, no sheen

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number: 60137361
Project Name: Metropolitan
Date: 10/6/10
Weather: Sunny, ~60°F, light breeze

Well ID: MW-9S
Sample ID: MW-9S (10610)
Permit Number:
Well Condition: NA
Good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" Steel
 Inner Casing Diameter (inch): 2"
 Inner Casing Material: PVC
 Purge/Sample Method: low flow
 Pump Intake Setting* (feet): 10'
 PID/FID Reading of Well Headspace (ppm)
 Before Cap Removal: 0.0
 After Cap Removal: 2.4

Depth to Product* (feet):	ND
Initial Depth to Water* (feet):	5.87
Product Thickness (feet):	ND
Depth to Top of Screen* (feet):	5'
Total Depth* (feet):	110.47
Water Column (feet):	10.55
Casing Volume (gal):	1.72
DTW After Pump Installed:	NA

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 10/6/10 **851**
End Purge Date/Time: 10/6/10 **1007**
Total Volume Purged (gal): 4 gal
Depth to Water After Purge* (feet): 7.05

Pre-Sample Depth to Water* (feet): 7.38
Start Sample Date/Time: 10/6/10 950
End Sample Date/Time: 10/6/10 1007
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheep, PID/EID readings):

No Sheen, organic / swampy odor

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LOW-STRESS GROUND WATER SAMPLING FORM

Sampling Sequence:

Analysis	Method	Container	Number of Bottles	Preservative	Comments
Volatile Organics					
Base/ neutrals					
TPH					
Total Metals					
Dissolved Metals					
Cyanide					
Sulfate and Chloride					
Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
Bacteria					

Complete those analyses that apply.

Stabilization Ranges

Dissolved Oxygen: +/- 10%

Turbidity: +/- 10%

Specific Conductance: +/- 3%

Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

* = Measured from top of inner casing

DTW - Depth to Water

Thermo Environmental Instruments Model 580s OVM w/ 10.2 ev bulb

Water Levels Measured with an Electronic Water Level Meter

Field parameter meter calibration results are recorded in the field book.

Figure 5-1

LOW-STRESS GROUND WATER SAMPLING FORM

Project Number:
Project Name:
Date:
Weather:

60137361
Metropolitan
10/6/10
Sunny, ~60°F, light breeze

Well ID:
Sample ID:
Permit Number:
Well Condition:

MW-9D
MW-9D (10061D)
n/a
good

PRE-PURGE INFORMATION

Protective Casing Diameter (inch): 8" Steel
 Inner Casing Diameter (inch): 2"
 Inner Casing Material: PVC
 Purge/Sample Method: Low flow
 Pump Intake Setting* (feet): 10'
 PID/FID Reading of Well Headspace (ppm)
 Before Cap Removal: 0.0 ppm
 After Cap Removal: 7.4 ppm

Depth to Product* (feet):	not detected
Initial Depth to Water* (feet):	b-29
Product Thickness (feet):	not detected
Depth to Top of Screen* (feet):	60
Total Depth* (feet):	71.74
Water Column (feet):	65.45
Casing Volume (gal):	10.67
DTW After Pump Installed:	n/a

PURGING/SAMPLING INFORMATION

Start Purge Date/Time: 10/6/10 1113
End Purge Date/Time: 10/6/10 1000
Total Volume Purged (gal): 2.5 gal
Depth to Water After Purge* (feet): 4.3

Pre-Sample Depth to Water* (feet): 6.41
Start Sample Date/Time: 10/6/10 1200
End Sample Date/Time: 10/6/10 1212
Sampler Names: JE

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings):
No sheen, no odor

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Sampling Sequence:

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Volatile Organics					
Base/ neutrals					
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Nitrate and Ammonia					
Preserved Inorganics					
Non-Preserved Inorg					
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Complete those analyses that apply.

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Dissolved Oxygen: +/- 10%

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Temperature: +/- 3 %

pH: +/- 0.1 unit

Redox Potential: +/- 10mv

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DTW - Depth to Water

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