ARCADIS
Infrastructure · Water · Environment · Buildings

ARCADIS-US
855 Route 146
Suite 210
Clifton Park
New York 12065
Tel 518 250 7300
Fax 518 250 7301
www.arcadis-us.com

Michael A. Mason, P.E.
Remedial Bureau E, Section A
Division of Environmental Remediation
New York Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, NY 12233-7017

Environment

Subject:
2014 Site Monitoring Report
Former Paulsen Holbrook Site
NYSDEC Site No. 401046
Albany County, Albany, New York

Date:
January 19, 2015

Contact:
David Hiss, P.E., BCEE

Phone:
518-250-7309

Email:
David.Hiss@arcadis-us.com

Our ref:
00266398.0000

Dear Mr. Mason:

ARCADIS-US (ARCADIS) has prepared this letter report to summarize the results of the 2014 Site Monitoring Event at the former Paulsen Holbrook Site on Railroad Avenue in Guilderland, Albany County, New York (Site). Figure 1 depicts the location of the former Paulsen Holbrook Site. During the period October 20, 2014 through October 22, 2014, groundwater and surface water samples were collected from on or near the Site to evaluate the presence or absence of potential contaminants associated with past practices at, and adjacent to, the Site. A Site-wide inspection was also conducted in conjunction with the 2014 Site Monitoring Event. Descriptions of the activities and results of the Site Monitoring Event follow.

GROUNDWATER AND SURFACE WATER SAMPLING

Sampling activities during the 2014 Site Monitoring Event were performed in accordance with the approved Site Monitoring Plan (SMP) for the Former Paulsen Holbrook Site (ARCADIS, 2014). Groundwater samples were collected from 14 of the 17 wells in the on- and offsite monitoring well network (see Figure 2) using a peristaltic pump. Groundwater samples could not collected from monitoring wells ML-8, ML-9, and ML-11 during this event, since these wells were dry. Two surface water samples, one field filtered and one unfiltered, were also collected from the discharge point of the Site's surface water collection and conveyance system located near the southern Site boundary. Field purge logs for the wells that were sampled are provided in Attachment A.

Groundwater samples were sent to Test America Laboratories to be analyzed to detect Target Analyte List (TAL) Metals using USEPA Method 6010C (mercury by USEPA Method 7470A). Laboratory analytical reporting forms are provided in Attachment B.

GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS

Analytical results of the laboratory testing conducted on groundwater samples collected at the Site are provided in Table 1. Figure 3 presents the concentrations of compounds identified as present in the samples, and indicates which exceeded the NYSDEC's Class GA Groundwater Standards (Standards). As shown in Table 1 and on Figure 3, concentrations of arsenic exceeded the Standard of 25 micrograms per liter (µg/L) at three locations: ML-2R (4,600 µg/L), ML-04 (820 µg/L), and PHMW-01 (2,800 µg/L). Concentrations of chromium exceeded the Standard of 50 µg/L at two locations: ML-04 (200 µg/L), MW-X, duplicate of PHMW-02S (220 µg/L). Copper did not exceed the NYSDEC GA Standard of 200 µg/L at any of the sampling locations. Several other non-Site-related metals exceeded the Standards for iron, magnesium, manganese or sodium (see Table 1) at various locations.

A trend analysis of Site-related contaminants (copper, chromium, arsenic) and three groundwater quality parameters (pH, reduction-oxidation potential and dissolved oxygen) for groundwater samples collected during the 2013-2014 post-construction period is included as Attachment C.

The unfiltered surface water sample collected from the surface water collection and conveyance system's discharge point contained low concentrations of copper, chromium and arsenic that did not exceed NYSDEC Part 703 Class D Surface Water Standards. These results are shown on Table 2. These results were estimated below the laboratory reporting limits. The filtered sample did not contain concentrations of arsenic or chromium above laboratory reporting limits, but did contain an estimated low concentration of copper.

A summary of current and historical groundwater elevation data is provided in Table 3. Figure 4 presents the potentiometric surface of the Site's groundwater at the time of the 2014 Site Monitoring Event. Groundwater elevations in overburden wells located on or near the Site ranged from 223.38 feet above mean sea level (ft. amsl) at monitoring well ML-15 to 236.56 ft. amsl at monitoring well ML-6. Based on these

data, the direction of groundwater flow in the vicinity of the Site is to the south and southwest, which is generally consistent with previous monitoring events. Groundwater elevations were lower than the average measurements collected during previous sampling events. The greatest change was in PHMW-03S, where the groundwater elevation in October 2014 was 1.39 feet lower than in November 2013. Groundwater potentiometric figures prepared from data obtained during sampling events in 2013 are included for comparison in Attachment D. In compiling this data, it is apparent that a new monitoring well is needed to provide information regarding environmental and hydraulic conditions to the west of the areas of soil excavation and treatment.

SITE MONITORING

A Site-wide inspection was conducted in accordance with the SMP during the 2014 Site Monitoring Event to document general Site conditions and the effectiveness of Site management elements and Site controls. This included inspection of the following:

- Individual monitoring wells;
- Storm water catch basins; and
- Surface cover in areas which had been excavated or treated during the remedial construction activities.

Since little or no activity had occurred on the Site since the conclusion of the remedial construction activities in 2013, no major changes to the physical facilities were identified and the Site controls remained largely the same as at the completion of construction.

Monitoring wells were inspected to identify potential damage to covers or protective casings, as well as erosion in the vicinity of the well. In general, the monitoring wells were in good condition, with the exception of the following:

- ML-7, which was missing the flush-mount cover;
- ML-9, which was missing the J-plug; and
- ML-11, which was missing the J-plug and the flush-mount cover bolts.

Storm water catch basins were visually inspected for silt and debris build-up, which could potentially inhibit proper drainage at the Site. Silt fabric filters, which had been installed by the remedial construction contractor in 2013, were still present in most of the catch basins. These had retained numerous leaves other surface debris, which

were cleared off during the inspection. The surface water collection and conveyance system appeared to be functioning, although the outlet does not freely discharge to a downgradient location, causing it to be subject to surcharging.

A visual inspection of the surface soil cover in the areas of excavation and treatment was conducted to identify any changes, such as damage or erosion, to the surficial media which could compromise its functionality. Small areas of puddled water and surface weeds were evident on both the onsite soil cover area and the offsite soil cover area, located to the south on CSX property. A Site-wide inspection form and individual monitoring well inspection forms are provided in Attachment E. A photographic log made during the inspection event is provided in Attachment F.

SUMMARY

Groundwater analytical results show that the following Site-related constituents were detected at concentrations exceeding the NYSDEC Class GA Standards:

- Arsenic at three locations (PHMW-01, ML-2R, ML-04); and
- Chromium at two locations (ML-04 and the duplicate sample at PHMW-02S).

Copper did not exceed the NYSDEC GA Standard at any location during the October 2014 sampling event.

Trend analysis of groundwater data generally show that the concentration of Site contaminants in groundwater immediately adjacent to the excavation and treatment areas has stabilized or is decreasing. Since the identified source of the Site groundwater contamination has been remediated, it is anticipated that the concentration of the contaminants in the groundwater will decrease over time.

In general, monitoring wells were in good condition, with the exception of a few missing surface casing items that require repair prior to, or during the next Site Monitoring Event.

Installation of a new monitoring well is recommended to provide information regarding environmental and hydraulic conditions to the west of the areas of soil excavation and treatment.

The onsite surface water collection and conveyance system was inspected and appeared to be operational and free of excessive silt or debris build-up.

In general, the onsite soil cover appeared to be intact and functioning properly. However, small areas of puddled water and surface weeds were present at onsite and offsite locations.

We appreciate this opportunity to continue to assist the NYSDEC with the former Paulsen Holbrook Site. Please contact me at 518-250-7309 or David.Hiss@arcadis-us.com if you have any questions concerning this 2014 Site Monitoring Report.

Sincerely,

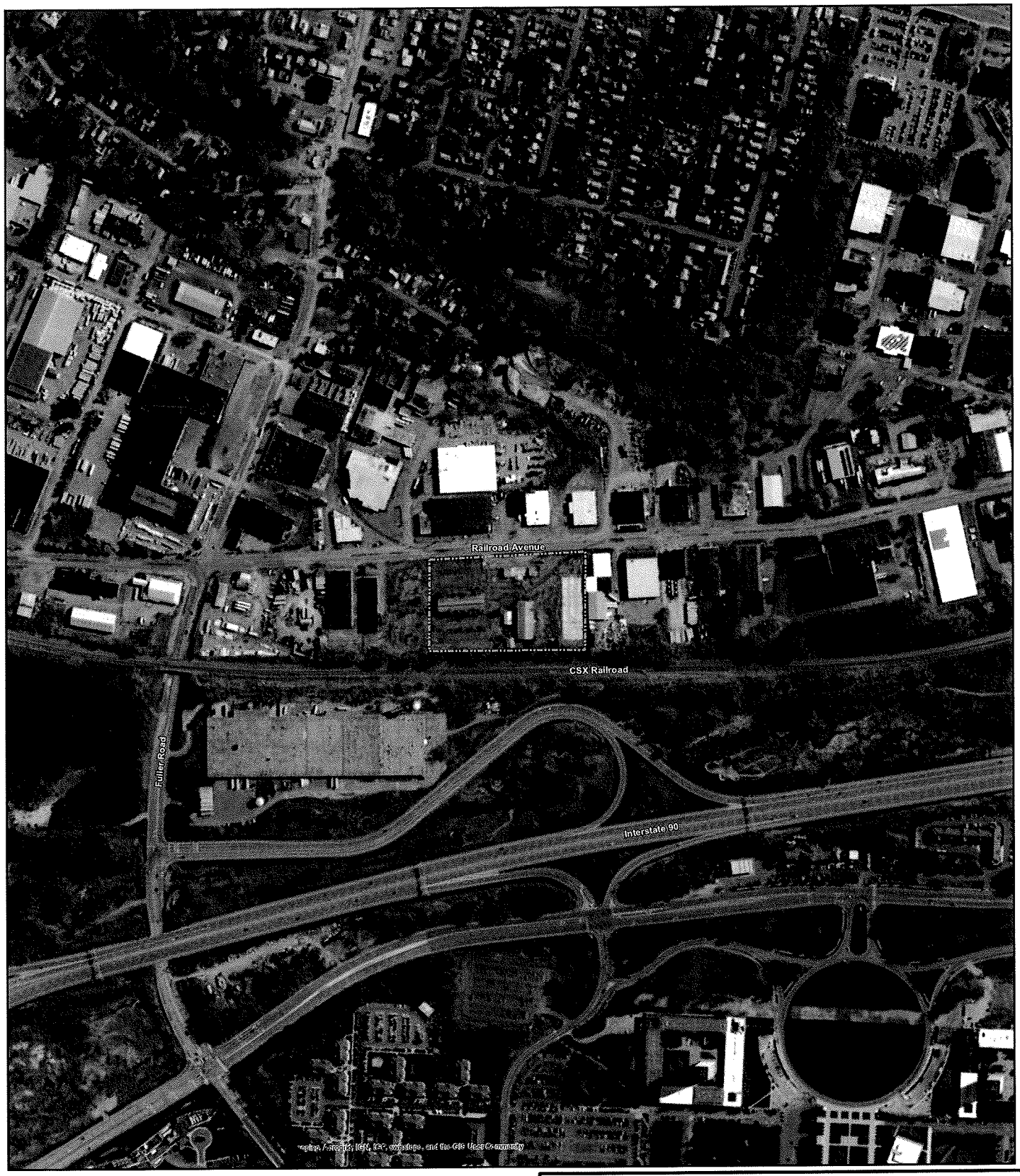
ARCADIS-US

David R Hiss

David Hiss, P.E., BCEE
Senior Engineer

ARCADIS

Figures



0 250 500 1,000 1,500 2,000 Feet

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
FORMER PAULSEN HOLBROOK SITE (#401046)
SITE MONITORING REPORT 2014

SITE MAP

Legend

Site Boundary

ARCADIS

FIGURE
1

G:\GISMOD\0266376\SMP\Site Map.mxd

Legend

- Drainage Discharge Point

Monitoring Wells

- Existing
- Abandoned/Destroyed
- Site Boundary

0 150 300 600 900 1,200 Feet

N

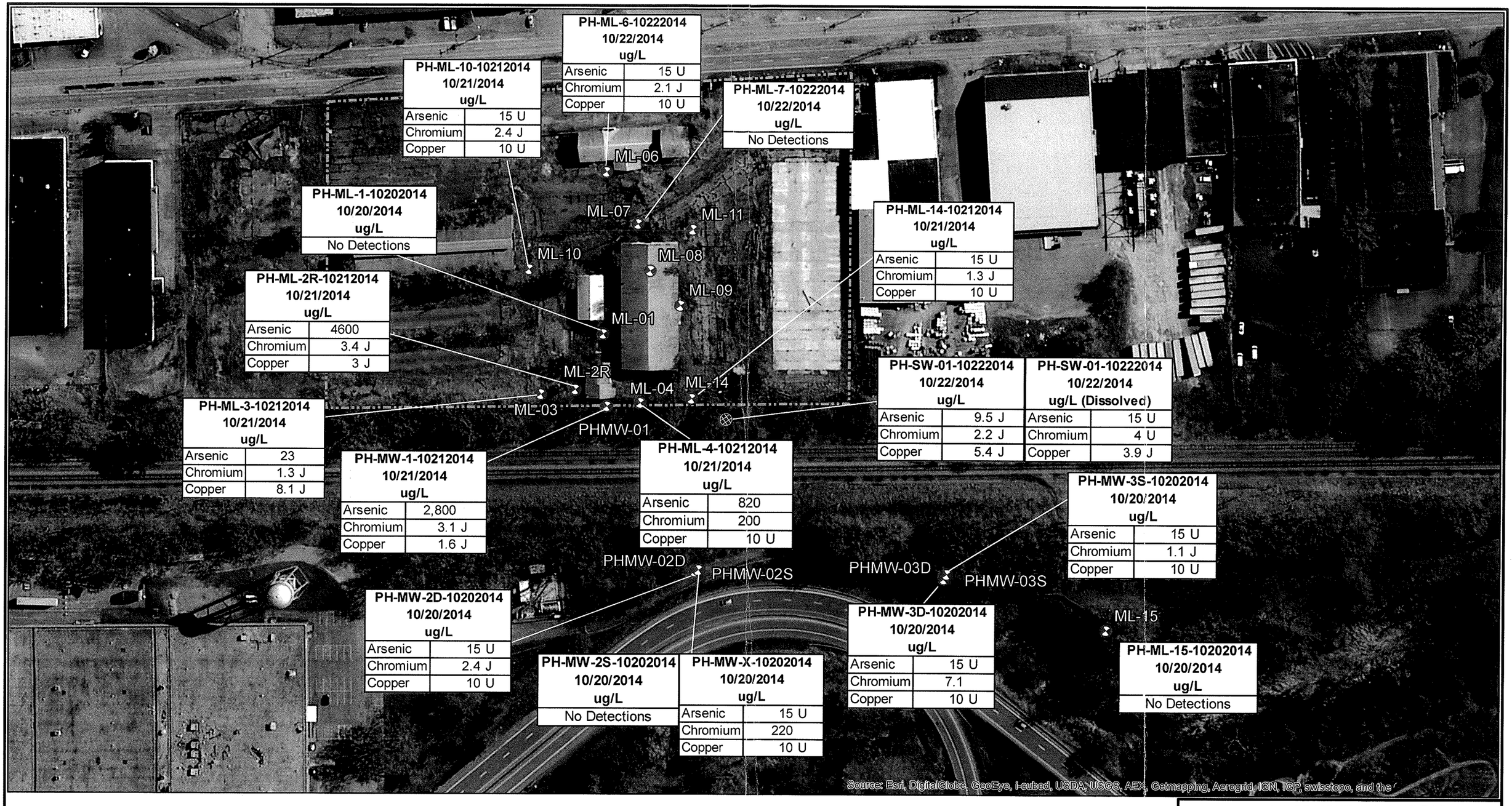
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
FORMER PAULSEN HOLBROOK SITE (#401046)
SITE MONITORING REPORT 2014

MONITORING WELL NETWORK

ARCADIS

FIGURE 2

G:\GIS\MOD\02263376\SMP\Wells.mxd



Legend

- Drainage Discharge Point
- Monitoring Well

Notes: Samples were not collected from ML-8, ML-9, or ML-11. These wells were dry.
Wells with concentrations of Copper, Chromium, and/or Arsenic that exceed the respective NYSDEC GA Standards are highlighted in yellow.

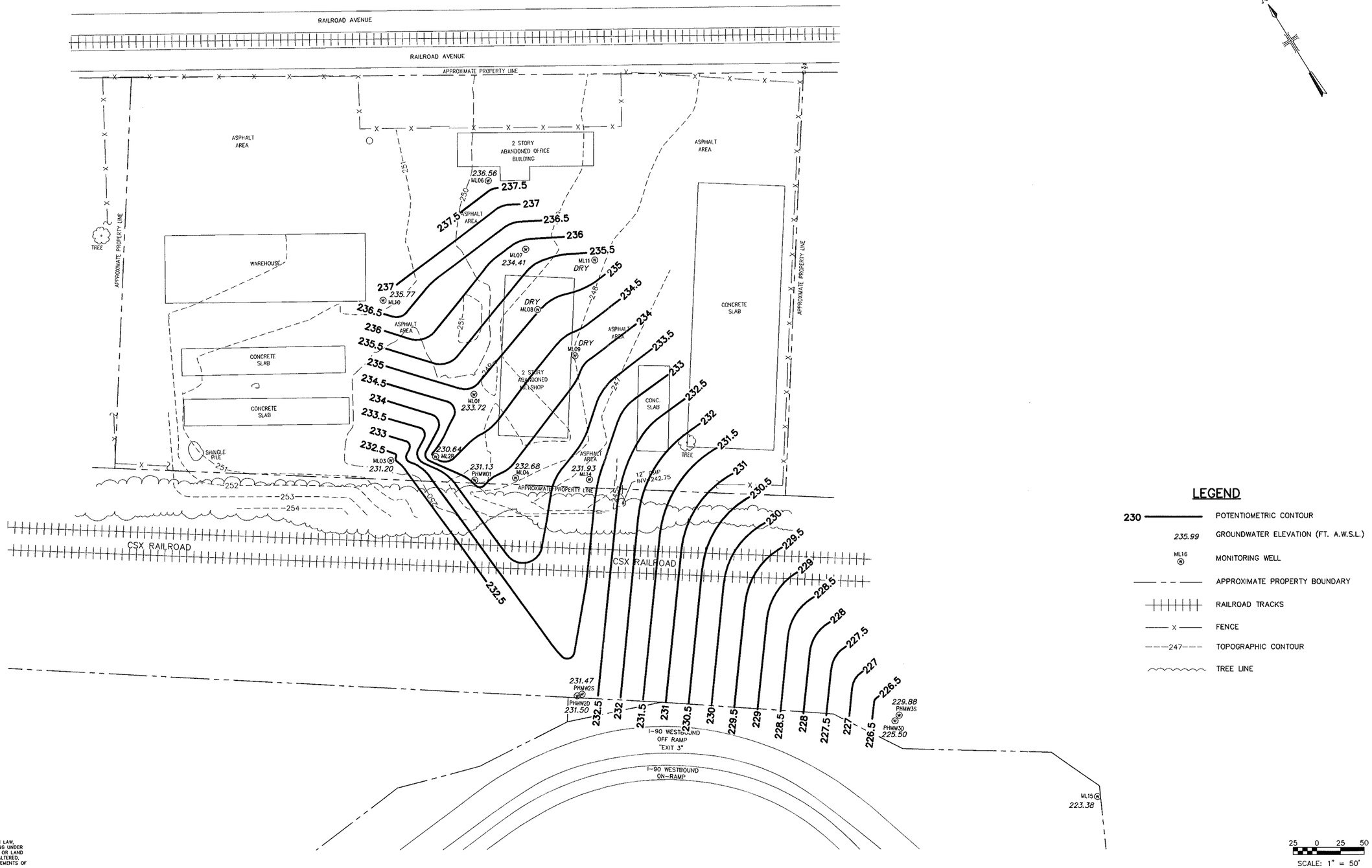
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
FORMER PAULSEN HOLBROOK SITE (#401046)
SITE MONITORING REPORT 2014

CONCENTRATIONS OF CCA IN WATER SAMPLES

ARCADIS

FIGURE
3

G:\GIS\MOD\0266376\SMP\HBoxMap.mxd



MALCOLM PIRNIE

REVISIONS			
NO.	BY	DATE	REMARKS

DES _____
DWN _____
CKD _____

NEW YORK STATE DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

FORMER PAULSEN–HOLBROOK SITE
SITE MONITORING REPORT 2014

POTENTIOMETRIC MAP (10/20/14)

SCALE: AS SHOWN

DATE JANUARY 2015

FIGURE 4

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
(METALS)
SITE MONITORING REPORT 2014
TOWN OF GUILDERLAND, NEW YORK
FORMER PAULSEN HOLBROOK SITE

Sample ID	NYSDEC Class GA Standard or Guidance Value	PH-ML-01-10202014	PH-ML-2R-10212014	PH-ML-03-10212014	PH-ML-04-10212014	PH-ML-06-10222014	PH-ML-07-10222014	PH-ML-10-10212014	PH-ML-15-10202014	PH-MW-01-10212014	PH-MW-02D-10202014
Sampling Date		10/20/2014	10/21/2014	10/21/2014	10/21/2014	10/22/2014	10/22/2014	10/21/2014	10/20/2014	10/21/2014	10/20/2014
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Filtered/Unfiltered											
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Metals											
Aluminum		200 U	200 U	960	200 U	67 J	200 U	1100	200 U	200 U	640
Antimony	3	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Arsenic	25	15 U	4,600	23	820	15 U	15 U	15 U	15 U	2,800	15 U
Barium	1,000	20	89	12	20	28	5.3	22	21	18	27
Beryllium	3	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Cadmium	5	0.55 J	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Calcium		97,100	93,700	110,000	124,000	101,000	41,700	63,400	75,500	94,300	108,000
Chromium	50	4 U	3.4 J	1.3 J	200	2.1 J	4 U	2.4 J	4 U	3.1 J	2.4 J
Cobalt		4 U	2.5 J	4 U	4 U	4 U	4 U	4 U	4 U	2.9 J	4 U
Copper	200	10 U	3 J	8.1 J	10 U	10 U	10 U	10 U	10 U	1.6 J	10 U
Iron	500**	22 J	1,600	410	50 U	110	39 J	1200	74	600	760
Lead	25	10 U	4.3 J	10 U	10 U	10 U	10 U	4.2 J	10 U	3 J	10 U
Magnesium	35,000*	8,400	184,000	13,200	9,500	13,200	4,500	8,100	13,000	30,900	19,200
Manganese	500*	11	1,600	920	5.9	1.8 J	400	49	19	7300	56
Mercury	0.7000	0.2 U	0.2 U	0.2000 U	0.2000 U	0.2000 U	0.2000 U	0.2000 U	0.51	0.2000 U	0.2000 U
Nickel	100	1.8 J	7.7 J	5 J	1.5 J	10 U	10 U	1.5 J	10 U	2.2 J	1.6 J
Potassium		1,800	139,000	21,400	3,000	3,500	2,100	1,400	1,300	15,800	1,900
Selenium	10	25 U	25 U	25 U	25 U	25 U	9.9 J	25 U	25 U	25 U	25 U
Silver	50	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Sodium	20,000	95,400	123,000	14,500	41,900	275,000	10,500	232,000	5,000	16,900	182,000
Thallium		20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Vanadium		5 U	1.9 J	3 J	2.3 J	5.00 U	5 U	2.5 J	5 U	5 U	1.9 J
Zinc	2,000*	4.6 J B	5.8 J B	4.9 J B	3.8 J B	3.3 J B	7.4 J B	4.7 J B	3.9 J B	4.1 J B	7 J B

Notes
[ ] - Concentration exceeds corresponding NYSDEC Class GA Standard.

U - The compound was not detected at the indicated concentration.
J - Estimated value.
B - Analyte detected in the method blank.
*Guidance Value.
**Applies to the sum of these compounds.

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
(METALS)
SITE MONITORING REPORT 2014
TOWN OF GUILDERLAND, NEW YORK
FORMER PAULSEN HOLBROOK SITE

Sample ID	NYSDEC Class GA Standard or Guidance Value	PH-MW-02S-10202014	PH-MW-X-10202014 dup of PH-MW-02S	PH-MW-03D-10202014	PH-MW-03S-10202014	PH-ML-14-10212014
Sampling Date		10/20/2014	10/20/2014	10/20/2014	10/20/2014	10/21/2014
Matrix		WATER	WATER	WATER	WATER	WATER
Filtered/Unfiltered						
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Metals						
Aluminum		200 U	200 U	690	320	200 U
Antimony	3	20 U	20 U	20 U	20 U	20 U
Arsenic	25	15 U	15 U	15 U	15 U	15 U
Barium	1,000	5.2	11	51	56	5.4
Beryllium	3	2 U	2 U	2 U	2 U	2 U
Cadmium	5	2 U	2 U	2 U	2 U	2 U
Calcium		92,200	59,200	91,100	109,000	97,000
Chromium	50	4 U	220	7.1	1.1 J	1.3 J
Cobalt		4 U	4 U	4 U	0.64 J	4 U
Copper	200	10 U	10 U	10 U	10 U	10 U
Iron	500**	37 J	50 U	700	1400	26 J
Lead	25	10 U	10 U	4.2 J	4.1 J	3.4 J
Magnesium	35,000*	15,600	6,500	17,400	31,000	16,100
Manganese	500*	21	0.79 J	33	230	17
Mercury	0.7000	0.2000 U	0.2000 U	0.2000 U	0.2000 U	0.2000 U
Nickel	100	10 U	10 U	1.4 J	1.9 J	10 U
Potassium		1,400	3,000	1,600	1,200	1,500
Selenium	10	25 U	25 U	25 U	25 U	25 U
Silver	50	6 U	6 U	6 U	6 U	6 U
Sodium	20,000	6,300	15,100	81,300	16,000	6,500
Thallium		20 U	20 U	20 U	20 U	20 U
Vanadium		5 U	5 U	1.8 J	2.8 J	5 U
Zinc	2,000*	2.6 J B	5.6 J B	5.3 J B	5.9 J B	4.4 J B

Notes
[ ] - Concentration exceeds corresponding NYSDEC Class GA Standard.

U - The compound was not detected at the indicated conce
J - Estimated value.
B - Analyte detected in the method blank.
*Guidance Value.
**Applies to the sum of these compounds.

TABLE 2
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
(METALS)
SITE MONITORING REPORT 2014
FORMER PAULSEN HOLBROOK SITE
TOWN OF GUILDERLAND, NEW YORK

Sample ID Sampling Date Matrix Filtered/Unfiltered Units	NYSDEC Part 703 Class D Type A(A) Surface Water Standard ug/L	PH-SW-01-10222014 10/22/2014 WATER ug/L	PH-SW-01-10222014 (DISSOLVED) 10/22/2014 WATER ug/L
Metals			
Aluminum		330	200 U
Antimony		20 U	20 U
Arsenic	340*	9.5 J	15 U
Barium		11	290
Beryllium		2 U	2 U
Cadmium	**	2 U	2 U
Calcium		8,600	8,600
Chromium	**	2.2 J	4 U
Cobalt		4 U	4 U
Copper	**	5.4 J	3.9 J
Iron		340	26 J
Lead	**	10 U	10 U
Magnesium		1,300	1,200
Manganese		15	2 J
Mercury	1.4*	0.2000 U	0.2000 U
Nickel	**	10 U	10 U
Potassium		2,700	2,400
Selenium		25 U	25 U
Silver		6 U	6 U
Sodium		650 J	1,600
Thallium	20	20 U	20 U
Vanadium	190	1.7 J	5 U
Zinc	**	11 B	120 B

Notes
[ ] - Concentration exceeds corresponding NYSDEC Class GA Standard.

U - The compound was not detected at the indicated concentration.
J - Estimated value.
B - Analyte detected in the method blank.
*Dissolved Form
**Standards vary based on hardness

TABLE 3. MONITORING WELL INFORMATION
SITE MONITORING REPORT 2014
FORMER PAULSEN HOLBROOK SITE
ALBANY, NEW YORK

WELL ID	NORTHING	EASTING	DATE INSTALLED	STATUS	TOTAL DEPTH (ft. bgs)	TOP OF CASING ELEVATION (ft. amsl)	MEASURING POINT ELEVATION (PVC, ft. amsl)	DEPTH TO WATER (ft. bgs) 6/17/2013	DEPTH TO WATER (ft. bgs) 9/5/2013	DEPTH TO WATER (ft. bgs) 11/24/2013	DEPTH TO WATER (ft. bgs) 10/20/2014	GROUNDWATER ELEVATION (ft. amsl) 6/17/2013	GROUNDWATER ELEVATION (ft. amsl) 9/5/2013	GROUNDWATER ELEVATION (ft. amsl) 11/24/2013	GROUNDWATER ELEVATION (ft. amsl) 10/20/2014
ML-01	1407459.9176	674271.5521	1/7/2013	Replaced	16	249.38	250.97	15.04	15.82	16.02	17.25	235.93	235.15	234.95	233.72
ML-2R	1407419.4747	674198.9544	4/17/2013	Replaced	20	249.59	249.08	16.3	16.62	17.31	18.44	232.78	232.46	231.77	230.64
ML-03	1407440.7488	674157.3019	4/17/2013	Replaced	17	249.79	249.34	16.11	16.45	17.04	18.14	233.23	232.89	232.3	231.2
ML-04	1407355.5145	674259.3045	1/18/2013	Replaced	15	247.94	249.91	14.94	15.3	16.04	17.23	234.97	234.61	233.87	232.68
ML-05	1407333.7239	674291.1166	pre-2009 RI	Abandoned	16	247.29	246.8284	NM	NM	NM	NM	--	--	--	--
ML-06	1407636.4140	674399.0165	pre-2009 RI	Existing	15.93	249.86	249.76	NM	NM	12.04	13.20	--	--	237.72	236.56
ML-07	1407554.5636	674393.9344	pre-2009 RI	Existing	unknown	249.34	249.16	NM	NM	13.45	14.75	--	--	235.71	234.4095
ML-08	1407493.9200	674370.8600	pre-2009 RI	Existing	15.06	249.32	249.27	NM	NM	NM	DRY	--	--	--	--
ML-09	1407432.2643	674377.9266	pre-2009 RI	Existing	14.57	247.95	247.8	NM	NM	13.6	DRY	--	--	234.2	--
ML-10	1407587.7103	674239.7905	pre-2009 RI	Existing	17.82	251.52	251.1339	NM	NM	14.24	15.36	--	--	236.8939	235.7739
ML-11	1407506.9245	674449.1413	pre-2009 RI	Existing	unknown	248.39	248.0333	NM	NM	12.73	DRY	--	--	235.3033	--
ML-12	1407468.4542	674113.3429	pre-2009 RI	Abandoned	21	250.38	249.969	NM	NM	NM	NM	--	--	--	--
ML-13	1407372.4153	674230.8058	pre-2009 RI	Abandoned	18	249.30	248.883	NM	NM	NM	NM	--	--	--	--
ML-14	1407320.8248	674318.6869	1/18/2013	Replaced	17	246.80	249.03	14.53	15.12	15.87	17.1	234.5	233.91	233.16	231.93
ML-15	1406749.4281	674595.4719	pre-2009 RI	Existing	28.23	242.14	241.94	NM	NM	NM	18.56	--	--	--	223.38
PHMW-01	1407377.0440	674220.2460	1/8/2013	Replaced	40	250.16	249.97	16.58	16.99	17.6	18.84	233.39	232.98	232.37	231.13
PHMW-02D	1407128.1250	674190.3550	1/11/2013	New	40	250.80	250.58	17.02	17.41	17.89	19.08	233.56	233.17	232.69	231.5
PHMW-02S	1407126.9310	674195.6060	1/11/2013	New	20	250.92	250.61	17.1	17.48	17.76	19.14	233.51	233.13	232.85	231.47
PHMW-03D	1406929.677	674457.527	1/14/2013	New	40	241.75	241.08	13.95	14.51	14.89	15.58	227.13	226.57	226.19	225.5
PHMW-03S*	1406932.383	674464.28	11/21/2008	Renamed	20	Casing Damaged	238.55	5.9	7.4	7.28	8.67	232.65	231.15	231.27	229.88

Notes:
NM - Not Measured
* ML-16 was renamed as PHMW-03S

ARCADIS

Attachment A

Groundwater Purge Logs

ARCADIS
Infrastructure Water Environment Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: ML-01 **DATE:** 10/20/14

PROJECT NAME: Paulsen Holbrook
PROJECT NUMBER: ~~60266376~~ CO266398
SAMPLERS: A. Goodrich

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: 17.25

D: Volume of Water in Casing: _____

v = 0.0408 $(B)^2$ x (A-C) = D

v = 0.0408 ( )^2 x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	16:25	16:30	16:35	16:40	16:45	16:50	16:55	17:00	17:05	17:10	17:15	17:20
Gallons	0.25	0.5	~1	~1.5	~2	~2.5	~2.75	3	3.25	3.75	4	4.25
Well Volume	~~0.5~~											
Depth to Water (ft.)		17.77		17.79				17.82				
Temperature (°C)	14.72	15.14	15.24	15.39	15.42	15.52	15.48	15.54	15.60	15.68	15.73	15.75
pH	6.71	6.59	6.56	6.56	6.55	6.56	6.56	6.56	6.55	6.56	6.59	6.56
REDOX (mV)	15	54	79	79	73	79	83	84	84	87	89	90
Conductivity (mohm/cm)	0.772	0.774	0.771	0.764	0.761	0.771	0.760	0.760	0.754	0.763	0.757	0.751
Turbidity	*0.0	108	86.5	61.6	47.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dissolved Oxygen	0.38	0.10	0.21	0.13	0.28	0.35	0.28	0.23	0.13	0.08	0.04	0.00
TDS	—	—	—	—	—	—	—	—	—	—	—	—
Salinity	—	—	—	—	—	—	—	—	—	—	—	—

Notes: water initially very turbid. Went clear after a min.
* >800 NTU

Sample Collected @ 17:25

ARCADIS
Infrastructure · Water · Environment · Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: PH-MW-35 **DATE:** 10/20/14

PROJECT NAME: PH-MW-35 Former Paulsen Holbrook Site.
PROJECT NUMBER: 00266398
SAMPLERS: KE

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	14:15	14:20	14:25	14:30	14:35	14:40	14:45	14:50	14:55		16:35	
Gallons												
Well Volume												
Depth to Water (ft.)												
Temperature (°C)	13.50	13.57	13.55	13.47	13.34	13.16	13.06	12.93	12.90		13.07	
pH	1.45	6.32	6.33	6.36	6.39	6.44	6.50	6.49	6.52		6.48	
REDOX (mV)	268	-43	-48	-53	-64	-84	-104	-107	-102		61	
Conductivity (mohm/cm)	0.678	0.643	0.674	0.678	0.685	0.692	0.696	0.690	0.663		0.559	
Turbidity	11.1	1.6	3.0	4.3	0.5	0	0	9.2	230		38.7	
Dissolved Oxygen	0	0	0	0	0	0	0	0	5.96		3.96	
TDS	0.432	0.412	0.431	0.434	0.439	0.443	0.445	0.441	0.421		0.358	
Salinity	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		0.3	

Notes: Begin purge at 14:10.
Well purged dry at 1455. Will return to collect sample. (3.5 gal)
Sampled 16:35
Recalibrated Horiba prior to purging

ARCADIS
Infrastructure · Water · Environment · Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: MW-15 **DATE:** 10/20/14

PROJECT NAME: Former Paulsen - Holbrook Site
PROJECT NUMBER: CO2661398
SAMPLERS: KF

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	12:40	12:50	12:55	13:00	1305	1310	1315	1320	1325	1330	1335	1340
Gallons												
Well Volume												
Depth to Water (ft.)												
Temperature (°C)	14.79	11.93	11.87	11.85	11.83	11.79	11.80	11.83	11.81	11.80	11.82	11.95
pH	2.77	2.93	3.05	3.17	3.29	3.41	4.03	3.53	3.52	3.62	3.65	3.70
REDOX (mV)	424	413	405	397	390	380	341	370	370	361	359	355
Conductivity (mohm/cm)	0.362	0.370	0.366	0.362	0.362	0.361	0.361	0.360	0.360	0.359	0.360	0.359
Turbidity	0	0	0	0	0	0	0	0	0	0	0	0
Dissolved Oxygen	0.53	0	6	0	0	0	0	0	0	0	0	0
TDS	0.249	0.240	0.237	0.235	0.236	0.235	0.235	0.234	0.234	0.233	0.234	0.233
Salinity	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Notes: Begin purge at 12:35 pH probe might be malfunctioning
Sampled at 13:45

_____ gallons purged

ARCADIS
Infrastructure · Water · Environment · Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: PH-MW-03D **DATE:** 10/20/14

PROJECT NAME: Paulsen Holbrook
PROJECT NUMBER: ~~CO26637b~~ CO266398
SAMPLERS: A. Goodrich

A: Total Casing and Screen Length: 41.61

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: 15.58

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

$v = 0.0408 (\quad)^2 \times (\quad 26.03 \quad - \quad) = 4.4$ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	13:00	13:05	13:10	13:15	13:20	13:25	13:35	13:40	13:45			
Gallons	0.2	0.5	~1	1.5	~2	~2.5	~3	~4	~4.25			
Well Volume												
Depth to Water (ft.)		17.2		17.26			17.29					
Temperature (°C)	13.53	12.69	12.51	12.43	12.54	12.53	12.54	12.54	12.56			
pH	5.82	6.66	7.05	7.26	7.17	7.28	7.33	7.34	7.35			
REDOX (mV)	139	-23	-40	-42	-38	-31	-15	-11	-8			
Conductivity (mohm/cm)	0.339	0.333	0.338	0.338	0.674	0.6770	726	0.731	0.735			
Turbidity	235	239	258	244	74.5	23.6	0.0	0.0	0.0			
Dissolved Oxygen	0.000	00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
TDS	—	—	—	—	—	—	—	—	—			
Salinity	—	—	—	—	—	—	—	—	—			

Notes: Flow rate = ~ 240-350 mL/min

Sample collected @ 13:50

ARCADIS
Infrastructure Water Environment Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: PH-MW-02D **DATE:** 10/20/14

PROJECT NAME: Paulsen Holbrook
PROJECT NUMBER: ~~CO2662376~~ CO2662398
SAMPLERS: A. Goodrich

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	14:40	14:50	~~14:55~~	15:00	15:05	15:10	15:~~20~~	15:25				
Gallons	0.25	~1		~2	~2.5	~3	~4	4.5				
Well Volume												
Depth to Water (ft.)	19.15				19.15							
Temperature (°C)	13.07	13.06		13.02	13.02	12.99	12.99	13.00				
pH	7.43	7.37		7.38	7.38	7.38	7.38	7.38				
REDOX (mV)	121	110		105	104	101	101	101				
Conductivity (mohm/cm)	0.831	1.11		1.18	1.19	1.32	1.33	1.32				
Turbidity	15.8	0.4		0.0	0.0	0.0	0.0	0.0				
Dissolved Oxygen	0.00	0.00		0.00	0.00	0.00	0.00	0.00				
TDS	—	—		—	—	—	—	—				
Salinity	—	—		—	—	—	—	—				

Notes:

Flow Rate ~ 250 mL/min
Sampled @ 15:30 for metals, MS/MSD collected

ARCADIS

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: PH-MW-02S DATE: 10/20/14

PROJECT NAME: Paulsen Holbrook
PROJECT NUMBER: ~~00266376~~ 00266398 af
SAMPLERS: K. Farris

A: Total Casing and Screen Length: ______

B: Casing Internal Diameter: ______

C: Water Level Below Top of Casing: ______

D: Volume of Water in Casing: ______

$v = 0.0408\,(B)^2 \times (A-C) = D$

$v = 0.0408\,(\quad)^2 \times (\quad - \quad) =$ ______ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED												
Time	1600	1605	1610	1615	1620	1626							
Gallons													
Depth to Water													
Temperature (°C)	13.36	13.30	13.20	13.22	13.18	13.17							
pH	6.64	6.53	6.50	6.46	6.46	6.43							
Redox (mV)	81	91	91	93	93	95							
Conductivity (mohm/cm	0.432	0.430	0.428	0.428	0.428	0.428							
Turbidity (ntu)	266	88.2	6.2	0	0	0							
Disolved Oxygen (mg/l)	3.02	0.56	0	0	0	0							
TDS	0.281	0.279	0.278	0.276	0.278	0.278							
Salinity	0.2	0.2	0.2	0.2	0.2	0.2							

Notes: Begin purge at 1555
Sampled at 16:25 2.5 gal purged.
Dup collected PH-MW-X-10202014

ARCADIS
Infrastructure Water Environment Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: PH-mw-01 DATE: 10/21/14

PROJECT NAME: Paulsen Holbrook

PROJECT NUMBER: ~~Ge30637E~~ 00266398

SAMPLERS: A. Goodrich

A: Total Casing and Screen Length: 42.15

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: 18.85

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )^2 x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	11:10	11:15	11:25	11:30	11:35	11:40						
Gallons		~~189~~										
Well Volume	0.25	0.5	0.75	1.25	1.75	2						
Depth to Water (ft.)		18.90		18.90		18.90						
Temperature (°C)	15.01	14.96	14.85	14.78	14.81	14.75						
pH	7.42	7.20	7.11	7.10	7.09	7.09						
REDOX (mV)	-79	-85	-93	-97	-99	-101						
Conductivity (mohm/cm)	0.703	0.693	0.712	0.682	0.693	0.701						
Turbidity	0.0	0.0	0.0	0.0	0.0	0.0						
Dissolved Oxygen	0.00	0.00	0.00	0.00	0.00	0.00						
TDS	—	—	—	—	—	—						
Salinity	—	—	—	—	—	—						

Notes: Sample collected @ 11:45

ARCADIS
Infrastructure Water Environment Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: ML-03R DY DATE: 10/21/14

PROJECT NAME: Former Paulsen Hydrobrook Site

PROJECT NUMBER: 00266398

SAMPLERS: ICF

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	9:30		9:35	9:40	9:45	9:50	9:55	10:00	10:05	10:10		
Gallons												
Well Volume												
Depth to Water (ft.)												
Temperature (°C)	14.22		14.42	14.49	14.49	14.56	14.59	14.55	14.55	14.55		
pH	5.85		6.44	6.43	6.38	6.31	6.35	6.28	6.24	6.21		
REDOX (mV)	-126		-194	-197	-191	-186	-176	-176	-171	-166		
Conductivity (mohm/cm)	0.500		0.526	0.531	0.530	0.536	0.536	0.547	0.553	0.558		
Turbidity	286		605	38.9	26.6	16.4	8.1	5.4	2.1	0		
Dissolved Oxygen	0		0	0	0	0	0	0	0	0.357	0 mg/L	
TDS	0.320		0.337	0.340	0.339	0.343	0.343	0.350	0.354	0.357		
Salinity	0.2		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		

Notes: Sample time 10:25

ARCADIS
Infrastructure Water Environment Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: ML-2R DATE: 10/21/14

PROJECT NAME: Paulsen Holbrook
PROJECT NUMBER: ~~60276376~~ 60316398 GT
SAMPLERS: A Goodrich

A: Total Casing and Screen Length: 27.51

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: 18.44

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time *	09:45	09:55	10:00	10:05	10:10	10:20	10:25	10:30	10:35		11:50	
Gallons		1										
Well Volume												
Depth to Water (ft.)		23.67										
Temperature (°C)	13.52	15.24	15.23	15.15	15.15	15.01	14.98	14.85	14.87		14.85	
pH	4.37	8.27	8.22	8.18	8.16	8.24	8.33	8.34	8.30		8.06	
REDOX (mV)	258	-285	-281	-273	-266	-262	-262	-246	-231		-29	
Conductivity (mohm/cm)	0.000	3.40	3.37	3.37	3.32	3.15	3.01	2.81	2.70		2.52	
Turbidity	249	58.8	89.0	101	97.2	102	93.2	71.2	74.9		13.4	
Dissolved Oxygen	10.65	0.00	0	0	0	0	0	0	0		2.21	
TDS												
Salinity												

Notes: * set @ single measurements, switched over *
- well dry @ 10:40
Sample collected at 11:55

ARCADIS
Infrastructure · Water · Environment · Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: ML-10 **DATE:** 10/21/14

PROJECT NAME: FORMER RAVISEN HOLBROOK SITE
PROJECT NUMBER: 60266398
SAMPLERS: ICF

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED												
Time	10:50	10:55	11:00	11:05	11:10	11:15	11:20	11:25	11:30	11:35	11:40	11:45	11:50
Gallons													
Well Volume													
Depth to Water (ft.)													
Temperature (°C)	14.40	14.71	14.80	14.85	14.82	14.77	14.80	14.78	14.77	14.79	14.77	14.84	14.85
pH	6.42	6.45	6.45	6.43	6.43	6.41	6.40	6.46	6.45	6.45	6.45	6.45	6.45
REDOX (mV)	-128	-106	-80	-62	-32	5	16	21	24	29	32	34	36
Conductivity (mohm/cm)	0.887	0.977	1.02	1.03	1.05	1.06	1.06	1.25	1.24	1.24	1.24	1.24	1.24
Turbidity	92.5	57.1	28.1	16.0	7.3	0	0	15.8	25.3	34.8	40.6	41.3	37.5
Dissolved Oxygen	1.56	0.11	0	0	0	0	0	0	0	0	0	0	0
TDS	0.576	0.627	0.659	0.662	0.669	0.678	0.678	0.797	0.796	0.798	0.795	0.796	0.793
Salinity	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6

Notes: Begin purge 10:45
Sampled at 12:00
~ 3.5 gallons purged.

ARCADIS
Infrastructure Water Environment Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: ML-04 DATE: 10/21/14

PROJECT NAME: Paulsen Holbrook
PROJECT NUMBER: ~~60266378~~ 60266398
SAMPLERS: A. Goodrich

A: Total Casing and Screen Length: 22.50

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: 17.23

D: Volume of Water in Casing: _____

v = 0.0408 (B)^2 x (A-C) = D

v = 0.0408 ( )^2 x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	13:30	13:35	13:41	13:45	13:50	13:55	14:00	14:05				
Gallons	0.75	1.25	1.75	2.25	2.75	3.25	3.75	4.25				
Well Volume												
Depth to Water (ft.)			17.51									
Temperature (°C)	16.02	16.05	16.07	16.08	16.14	16.15	16.17	16.18				
pH	6.78	6.69	6.65	6.63	6.62	6.61	6.61	6.61				
REDOX (mV)	83	90	98	103	106	108	110	113				
Conductivity (mohm/cm)	0.803	0.769	0.745	0.742	0.742	0.725	0.739	0.744				
Turbidity	71.1	41.9	14.1	2.9	0.0	0.0	0.0	0.0				
Dissolved Oxygen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
TDS	—	—	—	—	—	—	—					
Salinity	—	—	—	—	—	—	—					

Notes: Water initially slightly turbid. Cleared up ~1 min.
Sample collected at 14:10

ARCADIS
Infrastructure · Water · Environment · Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: ML-14 **DATE:** 10/21/2014

PROJECT NAME: Former Paulsen-Holbrook Site.
PROJECT NUMBER: ~~60266376.0000~~ CO366398
SAMPLERS: KC

A: Total Casing and Screen Length: 19.25

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

$v = 0.0408 (\quad)^2 \times (\quad - \quad) =$ _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1320	1325	1330	1335	1340	1345	1350	1355	1400	1405	1410	1415
Gallons												
Well Volume												
Depth to Water (ft.)												
Temperature (°C)	16.11	16.24	16.27	16.29	16.27	16.26	16.23	16.23	16.29	16.29	16.27	16.25
pH	6.66	6.24	6.15	6.09	6.06	6.03	6.00	5.99	5.99	6.04	6.07	6.08
REDOX (mV)	81	113	122	129	132	136	141	142	143	142	141	143
Conductivity (mohm/cm)	0.321	0.307	0.303	0.302	0.302	0.302	0.302	0.303	0.303	0.303	0.303	0.303
Turbidity	127	20.3	0	0	0	0	0	0	0	0	0	0
Dissolved Oxygen	4.90	1.85	0.93	0.63	0.56	0.47	0.42	0.33	0.32	0.26	0.24	0.20
TDS	0.207	0.199	0.197	0.196	0.196	0.196	0.196	0.197	0.197	0.197	0.197	0.197
Salinity	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Notes: Begin purging 13:15 initially turbid.
Sampled at ~~1430~~ 14:15
~ 4 gallons purged

ARCADIS
Infrastructure Water Environment Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: MW-06 **DATE:** 10/22/14

PROJECT NAME: Former Paulsen Holbrook Site
PROJECT NUMBER: ~~00266376.0000~~ 00266398
SAMPLERS: KF

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

$v = 0.0408 (\quad)^2 \times (\quad - \quad) =$ _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED												
Time	8:45	8:50	8:55	9:00	9:05	9:10	9:20	9:25	9:35	9:40	9:45	9:50	9:55
Gallons													
Well Volume													
Depth to Water (ft.)													
Temperature (°C)	14.89	15.53	15.62	15.70	15.74	15.60	15.64	15.61	15.46	15.39	15.58	15.55	15.64
pH	5.46	5.88	5.97	6.03	6.04	6.09	6.08	6.09	6.12	6.11	6.11	6.10	6.10
REDOX (mV)	178	157	154	154	156	154	156	157	155	158	159	160	161
Conductivity (mohm/cm)	1.88	1.85	1.84	1.84	1.84	1.84	1.83	1.83	1.82	1.83	1.83	1.83	1.83
Turbidity	315	17.0	0	0	7.2	0	0	0	67.6	0	0	0	0
Dissolved Oxygen	2.47	1.87	1.75	1.30	1.13	1.03	1.06	0.96	1.17	0.80	0.54	0.75	0.67
TDS	1.20	1.18	1.18	1.18	1.18	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17
Salinity	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

Notes: Began purging at 8:40
~~Sampled at 9:30~~ Went to sample, slug of turbidity - stopped - started purging again
Sampled at 9:55

ARCADIS
Infrastructure · Water · Environment · Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: ML-07 DATE: 10/22/14

PROJECT NAME: Paulsen Holbrook
PROJECT NUMBER: 00266376 00266398 QA
SAMPLERS: A. Goodnon

A: Total Casing and Screen Length: 15.82
B: Casing Internal Diameter: 2"
C: Water Level Below Top of Casing: 14.75
D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	09:10	09:15	09:20	09:25	09:30	09:35	09:40	09:45	09:50	09:55		
Gallons	~1		1.5		2					~3		
Well Volume												
Depth to Water (ft.)					15.35							
Temperature (°C)	15.10	15.09	15.10	15.10	15.06	15.09	15.04	15.05	15.04	15.06		
pH	6.36	6.37	6.43	6.45	6.46	6.48	6.48	6.48	6.48	6.48		
REDOX (mV)	145	99	91	85	74	106	146	153	155	151		
Conductivity (mohm/cm)	0.257	0.254	0.254	0.254	0.255	0.253	0.253	0.252	0.253	0.253		
Turbidity	0.0	0.0	0.0	0.0	250	689	18.5	0.0	0.0	0.0		
Dissolved Oxygen	0.74	0.82	0.82	0.83	0.53	0.59	0.76	0.67	0.68	0.66		
TDS	—	—	—	—	—	—	—	—	—	—		
Salinity	—	—	—	—	—	—	—	—	—	—		

Notes: Water very turbid initially. Clogged up tubing - had to change out tubing. Let water purge ~2-3 min. before hooking to Horiba. - Cleared up.
Sample collected @ 10:00

ARCADIS
Infrastructure · Water · Environment · Buildings

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: PH-SW-01-10222014 **DATE:** 10/22/14

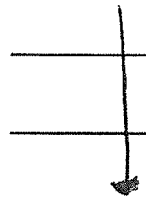
PROJECT NAME: Paulsen Holbrook
PROJECT NUMBER: ~~60366376~~ 60366398
SAMPLERS: A.G. + R.F.

A: Total Casing and Screen Length: N/A

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____



$v = 0.0408 (B)^2 \times (A-C) = D$

$v = 0.0408 (\quad)^2 \times (\quad - \quad) =$ _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED												
Time	11:15												
Gallons													
Well Volume													
Depth to Water (ft.)													
Temperature (°C)	13.85												
pH	6.98												
REDOX (mV)	140												
Conductivity (mohm/cm)	0.057												
Turbidity	30.5												
Dissolved Oxygen	6.89												
TDS													
Salinity													

Notes: Sample collected @ 11:15
Unfiltered + filtered samples

ARCADIS

Attachment B

Laboratory Analytical Reporting Forms

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-69923-1
Client Project/Site: Fmr. Paulsen/Holbrook #0401046

For:
New York State D.E.C.
625 Broadway
4th Floor
Albany, New York 12233

Attn: Mr. Michael Mason

Joseph V. Giacomazza

Authorized for release by:
10/29/2014 5:57:44 PM
Joe Giacomazza, Project Management Assistant II
joe.giacomazza@testamericainc.com

Designee for

Judy Stone, Senior Project Manager
(484)685-0868
judy.stone@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Joe Giacomazza
Project Management Assistant II
10/29/2014 5:57:44 PM

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Client Sample Results 6
Lab Chronicle 23
Certification Summary 27
Method Summary 28
Sample Summary 29
Chain of Custody 30
Receipt Checklists 32

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-69923-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-69923-1

Receipt
The samples were received on 10/23/2014 1:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2° C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-ML-01-10202014
Date Collected: 10/20/14 17:25
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-1
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 12:59	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 12:59	1
Arsenic	ND		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 12:59	1
Barium	**0.020**		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 12:59	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 12:59	1
Cadmium	**0.00055**	J	0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 12:59	1
Calcium	**97.1**		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 12:59	1
Chromium	ND		0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 12:59	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 12:59	1
Copper	ND		0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 12:59	1
Iron	**0.022**	J	0.050	0.019	mg/L		10/24/14 09:54	10/25/14 12:59	1
Lead	ND		0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 12:59	1
Magnesium	**8.4**		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 12:59	1
Manganese	**0.011**		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 12:59	1
Nickel	**0.0018**	J	0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 12:59	1
Potassium	**1.8**		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 12:59	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 12:59	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 12:59	1
Sodium	**95.4**		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 12:59	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 12:59	1
Vanadium	ND		0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 12:59	1
Zinc	**0.0046**	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 12:59	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 11:42	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-ML-2R-10212014
Date Collected: 10/21/14 11:55
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-2
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 13:01	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 13:01	1
Arsenic	4.6		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 13:01	1
Barium	0.089		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 13:01	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 13:01	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 13:01	1
Calcium	93.7		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:01	1
Chromium	0.0034	J	0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 13:01	1
Cobalt	0.0025	J	0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 13:01	1
Copper	0.0030	J	0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 13:01	1
Iron	1.6		0.050	0.019	mg/L		10/24/14 09:54	10/25/14 13:01	1
Lead	0.0043	J	0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 13:01	1
Magnesium	184		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 13:01	1
Manganese	1.6		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 13:01	1
Nickel	0.0077	J	0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 13:01	1
Potassium	139		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:01	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 13:01	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 13:01	1
Sodium	123		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 13:01	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 13:01	1
Vanadium	0.0019	J	0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 13:01	1
Zinc	0.0058	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 13:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 11:57	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-ML-03-10212014
Date Collected: 10/21/14 10:15
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-3
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.96		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 13:04	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 13:04	1
Arsenic	0.023		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 13:04	1
Barium	0.012		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 13:04	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 13:04	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 13:04	1
Calcium	110		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:04	1
Chromium	0.0013	J	0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 13:04	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 13:04	1
Copper	0.0081	J	0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 13:04	1
Iron	0.41		0.050	0.019	mg/L		10/24/14 09:54	10/25/14 13:04	1
Lead	ND		0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 13:04	1
Magnesium	13.2		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 13:04	1
Manganese	0.92		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 13:04	1
Nickel	0.0050	J	0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 13:04	1
Potassium	21.4		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:04	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 13:04	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 13:04	1
Sodium	14.5		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 13:04	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 13:04	1
Vanadium	0.0030	J	0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 13:04	1
Zinc	0.0049	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 13:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 11:59	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-ML-04-10212014
Date Collected: 10/21/14 14:10
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-4
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 13:07	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 13:07	1
Arsenic	0.82		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 13:07	1
Barium	0.020		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 13:07	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 13:07	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 13:07	1
Calcium	124		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:07	1
Chromium	0.20		0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 13:07	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 13:07	1
Copper	ND		0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 13:07	1
Iron	ND		0.050	0.019	mg/L		10/24/14 09:54	10/25/14 13:07	1
Lead	ND		0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 13:07	1
Magnesium	9.5		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 13:07	1
Manganese	0.0059		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 13:07	1
Nickel	0.0015	J	0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 13:07	1
Potassium	3.0		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:07	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 13:07	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 13:07	1
Sodium	41.9		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 13:07	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 13:07	1
Vanadium	0.0023	J	0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 13:07	1
Zinc	0.0038	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 13:07	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 12:01	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-ML-06-10222014
Date Collected: 10/22/14 10:00
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-5
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.067	J	0.20	0.060	mg/L		10/24/14 09:54	10/25/14 13:10	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 13:10	1
Arsenic	ND		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 13:10	1
Barium	0.028		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 13:10	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 13:10	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 13:10	1
Calcium	101		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:10	1
Chromium	0.0021	J	0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 13:10	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 13:10	1
Copper	ND		0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 13:10	1
Iron	0.11		0.050	0.019	mg/L		10/24/14 09:54	10/25/14 13:10	1
Lead	ND		0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 13:10	1
Magnesium	13.2		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 13:10	1
Manganese	0.0018	J	0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 13:10	1
Nickel	ND		0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 13:10	1
Potassium	3.5		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:10	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 13:10	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 13:10	1
Sodium	275		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 13:10	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 13:10	1
Vanadium	ND		0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 13:10	1
Zinc	0.0033	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 13:10	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 13:00	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-ML-07-10222014
Date Collected: 10/22/14 10:00
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-6
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 13:13	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 13:13	1
Arsenic	ND		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 13:13	1
Barium	0.0053		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 13:13	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 13:13	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 13:13	1
Calcium	41.7		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:13	1
Chromium	ND		0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 13:13	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 13:13	1
Copper	ND		0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 13:13	1
Iron	0.039	J	0.050	0.019	mg/L		10/24/14 09:54	10/25/14 13:13	1
Lead	ND		0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 13:13	1
Magnesium	4.5		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 13:13	1
Manganese	0.40		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 13:13	1
Nickel	ND		0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 13:13	1
Potassium	2.1		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:13	1
Selenium	0.0099	J	0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 13:13	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 13:13	1
Sodium	10.5		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 13:13	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 13:13	1
Vanadium	ND		0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 13:13	1
Zinc	0.0074	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 13:13	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 12:05	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-ML-10-10212014
Date Collected: 10/21/14 12:00
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-7
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.1		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 13:15	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 13:15	1
Arsenic	ND		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 13:15	1
Barium	0.022		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 13:15	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 13:15	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 13:15	1
Calcium	63.4		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:15	1
Chromium	0.0024	J	0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 13:15	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 13:15	1
Copper	ND		0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 13:15	1
Iron	1.2		0.050	0.019	mg/L		10/24/14 09:54	10/25/14 13:15	1
Lead	0.0042	J	0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 13:15	1
Magnesium	8.1		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 13:15	1
Manganese	0.049		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 13:15	1
Nickel	0.0015	J	0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 13:15	1
Potassium	1.4		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:15	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 13:15	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 13:15	1
Sodium	232		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 13:15	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 13:15	1
Vanadium	0.0025	J	0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 13:15	1
Zinc	0.0047	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 13:15	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 13:02	1

Client Sample ID: PH-ML-15-10202014
Date Collected: 10/20/14 13:45
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-8
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 13:27	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 13:27	1
Arsenic	ND		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 13:27	1
Barium	**0.021**		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 13:27	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 13:27	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 13:27	1
Calcium	**75.5**		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:27	1
Chromium	ND		0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 13:27	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 13:27	1
Copper	ND		0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 13:27	1
Iron	**0.074**		0.050	0.019	mg/L		10/24/14 09:54	10/25/14 13:27	1
Lead	ND		0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 13:27	1
Magnesium	**13.0**		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 13:27	1
Manganese	**0.019**		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 13:27	1
Nickel	ND		0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 13:27	1
Potassium	**1.3**		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:27	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 13:27	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 13:27	1
Sodium	**5.0**		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 13:27	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 13:27	1
Vanadium	ND		0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 13:27	1
Zinc	**0.0039**	**J B**	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 13:27	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00051**		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 12:08	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-MW-01-10212014
Date Collected: 10/21/14 11:45
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-9
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 13:30	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 13:30	1
Arsenic	2.8		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 13:30	1
Barium	0.018		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 13:30	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 13:30	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 13:30	1
Calcium	94.3		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:30	1
Chromium	0.0031	J	0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 13:30	1
Cobalt	0.0029	J	0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 13:30	1
Copper	0.0016	J	0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 13:30	1
Iron	0.60		0.050	0.019	mg/L		10/24/14 09:54	10/25/14 13:30	1
Lead	0.0030	J	0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 13:30	1
Magnesium	30.9		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 13:30	1
Manganese	7.3		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 13:30	1
Nickel	0.0022	J	0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 13:30	1
Potassium	15.8		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:30	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 13:30	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 13:30	1
Sodium	16.9		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 13:30	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 13:30	1
Vanadium	ND		0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 13:30	1
Zinc	0.0041	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 13:30	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 13:04	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-MW-02D-10202014
Date Collected: 10/20/14 15:30
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-10
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.64		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 13:33	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 13:33	1
Arsenic	ND		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 13:33	1
Barium	0.027		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 13:33	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 13:33	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 13:33	1
Calcium	108		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:33	1
Chromium	0.0024	J	0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 13:33	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 13:33	1
Copper	ND		0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 13:33	1
Iron	0.76		0.050	0.019	mg/L		10/24/14 09:54	10/25/14 13:33	1
Lead	ND		0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 13:33	1
Magnesium	19.2		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 13:33	1
Manganese	0.056		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 13:33	1
Nickel	0.0016	J	0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 13:33	1
Potassium	1.9		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:33	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 13:33	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 13:33	1
Sodium	182		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 13:33	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 13:33	1
Vanadium	0.0019	J	0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 13:33	1
Zinc	0.0070	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 13:33	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 13:17	1

Client Sample ID: PH-MW-02S-10202014
Date Collected: 10/20/14 16:25
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-11
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 13:47	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 13:47	1
Arsenic	ND		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 13:47	1
Barium	0.0052		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 13:47	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 13:47	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 13:47	1
Calcium	92.2		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:47	1
Chromium	ND		0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 13:47	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 13:47	1
Copper	ND		0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 13:47	1
Iron	0.037	J	0.050	0.019	mg/L		10/24/14 09:54	10/25/14 13:47	1
Lead	ND		0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 13:47	1
Magnesium	15.6		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 13:47	1
Manganese	0.021		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 13:47	1
Nickel	ND		0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 13:47	1
Potassium	1.4		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:47	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 13:47	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 13:47	1
Sodium	6.3		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 13:47	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 13:47	1
Vanadium	ND		0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 13:47	1
Zinc	0.0026	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 13:47	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 12:40	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-MW-03D-10202014
Date Collected: 10/20/14 13:50
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-12
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.69		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 13:49	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 13:49	1
Arsenic	ND		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 13:49	1
Barium	0.051		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 13:49	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 13:49	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 13:49	1
Calcium	91.1		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:49	1
Chromium	0.0071		0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 13:49	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 13:49	1
Copper	ND		0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 13:49	1
Iron	0.70		0.050	0.019	mg/L		10/24/14 09:54	10/25/14 13:49	1
Lead	0.0042	J	0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 13:49	1
Magnesium	17.4		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 13:49	1
Manganese	0.033		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 13:49	1
Nickel	0.0014	J	0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 13:49	1
Potassium	1.6		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 13:49	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 13:49	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 13:49	1
Sodium	81.3		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 13:49	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 13:49	1
Vanadium	0.0018	J	0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 13:49	1
Zinc	0.0053	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 13:49	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 12:42	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-MW-03S-10202014
Date Collected: 10/20/14 16:35
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-13
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.32		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 14:01	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 14:01	1
Arsenic	ND		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 14:01	1
Barium	0.056		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 14:01	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 14:01	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 14:01	1
Calcium	109		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 14:01	1
Chromium	0.0011	J	0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 14:01	1
Cobalt	0.00064	J	0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 14:01	1
Copper	ND		0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 14:01	1
Iron	1.4		0.050	0.019	mg/L		10/24/14 09:54	10/25/14 14:01	1
Lead	0.0041	J	0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 14:01	1
Magnesium	31.0		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 14:01	1
Manganese	0.23		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 14:01	1
Nickel	0.0019	J	0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 14:01	1
Potassium	1.2		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 14:01	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 14:01	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 14:01	1
Sodium	16.0		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 14:01	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 14:01	1
Vanadium	0.0028	J	0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 14:01	1
Zinc	0.0059	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 14:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 12:44	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-MW-X-10202014
Date Collected: 10/20/14 00:00
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-14
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 14:04	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 14:04	1
Arsenic	ND		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 14:04	1
Barium	**0.0054**		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 14:04	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 14:04	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 14:04	1
Calcium	**97.0**		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 14:04	1
Chromium	**0.0013**	J	0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 14:04	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 14:04	1
Copper	ND		0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 14:04	1
Iron	**0.026**	J	0.050	0.019	mg/L		10/24/14 09:54	10/25/14 14:04	1
Lead	**0.0034**	J	0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 14:04	1
Magnesium	**16.1**		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 14:04	1
Manganese	**0.017**		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 14:04	1
Nickel	ND		0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 14:04	1
Potassium	**1.5**		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 14:04	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 14:04	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 14:04	1
Sodium	**6.5**		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 14:04	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 14:04	1
Vanadium	ND		0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 14:04	1
Zinc	**0.0044**	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 14:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 12:45	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-SW-01-10222014 (UNFILTERED)
Date Collected: 10/22/14 11:15
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-15
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.33		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 14:06	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 14:06	1
Arsenic	0.0095	J	0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 14:06	1
Barium	0.011		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 14:06	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 14:06	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 14:06	1
Calcium	8.6		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 14:06	1
Chromium	0.0022	J	0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 14:06	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 14:06	1
Copper	0.0054	J	0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 14:06	1
Iron	0.34		0.050	0.019	mg/L		10/24/14 09:54	10/25/14 14:06	1
Lead	ND		0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 14:06	1
Magnesium	1.3		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 14:06	1
Manganese	0.015		0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 14:06	1
Nickel	ND		0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 14:06	1
Potassium	2.7		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 14:06	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 14:06	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 14:06	1
Sodium	0.65	J	1.0	0.32	mg/L		10/24/14 09:54	10/25/14 14:06	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 14:06	1
Vanadium	0.0017	J	0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 14:06	1
Zinc	0.011	B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 14:06	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 12:47	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-SW-01-10222014 (FILTERED)
Date Collected: 10/22/14 11:15
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-16
Matrix: Water

5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 11:23	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 11:23	1
Arsenic	ND		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 11:23	1
Barium	**0.29**		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 11:23	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 11:23	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 11:23	1
Calcium	**8.6**		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 11:23	1
Chromium	ND		0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 11:23	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 11:23	1
Copper	**0.0039**	J	0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 11:23	1
Iron	**0.026**	J	0.050	0.019	mg/L		10/24/14 09:54	10/25/14 11:23	1
Lead	ND		0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 11:23	1
Magnesium	**1.2**		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 11:23	1
Manganese	**0.0020**	J	0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 11:23	1
Nickel	ND		0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 11:23	1
Potassium	**2.4**		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 11:23	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 11:23	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 11:23	1
Sodium	**1.6**		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 11:23	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 11:23	1
Vanadium	ND		0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 11:23	1
Zinc	**0.12**	B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 11:23	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/24/14 12:30	10/25/14 13:02	1

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-ML-14-10212014
Date Collected: 10/21/14 14:15
Date Received: 10/23/14 01:20

Lab Sample ID: 480-69923-17
Matrix: Water

5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/24/14 09:54	10/25/14 14:09	1
Antimony	ND		0.020	0.0068	mg/L		10/24/14 09:54	10/25/14 14:09	1
Arsenic	ND		0.015	0.0056	mg/L		10/24/14 09:54	10/25/14 14:09	1
Barium	**0.011**		0.0020	0.00070	mg/L		10/24/14 09:54	10/25/14 14:09	1
Beryllium	ND		0.0020	0.00030	mg/L		10/24/14 09:54	10/25/14 14:09	1
Cadmium	ND		0.0020	0.00050	mg/L		10/24/14 09:54	10/25/14 14:09	1
Calcium	**59.2**		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 14:09	1
Chromium	**0.22**		0.0040	0.0010	mg/L		10/24/14 09:54	10/25/14 14:09	1
Cobalt	ND		0.0040	0.00063	mg/L		10/24/14 09:54	10/25/14 14:09	1
Copper	ND		0.010	0.0016	mg/L		10/24/14 09:54	10/25/14 14:09	1
Iron	ND		0.050	0.019	mg/L		10/24/14 09:54	10/25/14 14:09	1
Lead	ND		0.010	0.0030	mg/L		10/24/14 09:54	10/25/14 14:09	1
Magnesium	**6.5**		0.20	0.043	mg/L		10/24/14 09:54	10/25/14 14:09	1
Manganese	**0.00079**	J	0.0030	0.00040	mg/L		10/24/14 09:54	10/25/14 14:09	1
Nickel	ND		0.010	0.0013	mg/L		10/24/14 09:54	10/25/14 14:09	1
Potassium	**3.0**		0.50	0.10	mg/L		10/24/14 09:54	10/25/14 14:09	1
Selenium	ND		0.025	0.0087	mg/L		10/24/14 09:54	10/25/14 14:09	1
Silver	ND		0.0060	0.0017	mg/L		10/24/14 09:54	10/25/14 14:09	1
Sodium	**15.1**		1.0	0.32	mg/L		10/24/14 09:54	10/25/14 14:09	1
Thallium	ND		0.020	0.010	mg/L		10/24/14 09:54	10/25/14 14:09	1
Vanadium	ND		0.0050	0.0015	mg/L		10/24/14 09:54	10/25/14 14:09	1
Zinc	**0.0056**	J B	0.010	0.0015	mg/L		10/24/14 09:54	10/25/14 14:09	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/27/14 07:15	10/27/14 12:49	1

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-ML-01-10202014

Lab Sample ID: 480-69923-1
Matrix: Water
Date Collected: 10/20/14 17:25
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 12:59	LMH	TAL BUF
Total/NA	Prep	7470A			209936	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 11:42	LRK	TAL BUF

Client Sample ID: PH-ML-2R-10212014

Lab Sample ID: 480-69923-2
Matrix: Water
Date Collected: 10/21/14 11:55
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 13:01	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 11:57	LRK	TAL BUF

Client Sample ID: PH-ML-03-10212014

Lab Sample ID: 480-69923-3
Matrix: Water
Date Collected: 10/21/14 10:15
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 13:04	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 11:59	LRK	TAL BUF

Client Sample ID: PH-ML-04-10212014

Lab Sample ID: 480-69923-4
Matrix: Water
Date Collected: 10/21/14 14:10
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 13:07	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 12:01	LRK	TAL BUF

Client Sample ID: PH-ML-06-10222014

Lab Sample ID: 480-69923-5
Matrix: Water
Date Collected: 10/22/14 10:00
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 13:10	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-ML-06-10222014

Lab Sample ID: 480-69923-5

Date Collected: 10/22/14 10:00
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	210279	10/27/14 13:00	LRK	TAL BUF

Client Sample ID: PH-ML-07-10222014

Lab Sample ID: 480-69923-6

Date Collected: 10/22/14 10:00
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 13:13	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 12:05	LRK	TAL BUF

Client Sample ID: PH-ML-10-10212014

Lab Sample ID: 480-69923-7

Date Collected: 10/21/14 12:00
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 13:15	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 13:02	LRK	TAL BUF

Client Sample ID: PH-ML-15-10202014

Lab Sample ID: 480-69923-8

Date Collected: 10/20/14 13:45
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 13:27	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 12:08	LRK	TAL BUF

Client Sample ID: PH-MW-01-10212014

Lab Sample ID: 480-69923-9

Date Collected: 10/21/14 11:45
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 13:30	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 13:04	LRK	TAL BUF

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-MW-02D-10202014

Lab Sample ID: 480-69923-10

Date Collected: 10/20/14 15:30
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 13:33	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 13:17	LRK	TAL BUF

Client Sample ID: PH-MW-02S-10202014

Lab Sample ID: 480-69923-11

Date Collected: 10/20/14 16:25
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 13:47	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 12:40	LRK	TAL BUF

Client Sample ID: PH-MW-03D-10202014

Lab Sample ID: 480-69923-12

Date Collected: 10/20/14 13:50
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 13:49	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 12:42	LRK	TAL BUF

Client Sample ID: PH-MW-03S-10202014

Lab Sample ID: 480-69923-13

Date Collected: 10/20/14 16:35
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 14:01	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 12:44	LRK	TAL BUF

Client Sample ID: PH-MW-X-10202014

Lab Sample ID: 480-69923-14

Date Collected: 10/20/14 00:00
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 14:04	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Fmr. Paulsen/Holbrook #0401046

TestAmerica Job ID: 480-69923-1

Client Sample ID: PH-MW-X-10202014

Lab Sample ID: 480-69923-14

Date Collected: 10/20/14 00:00
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	210279	10/27/14 12:45	LRK	TAL BUF

Client Sample ID: PH-SW-01-10222014 (UNFILTERED)

Lab Sample ID: 480-69923-15

Date Collected: 10/22/14 11:15
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 14:06	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 12:47	LRK	TAL BUF

Client Sample ID: PH-SW-01-10222014 (FILTERED)

Lab Sample ID: 480-69923-16

Date Collected: 10/22/14 11:15
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			209772	10/24/14 09:54	SLB	TAL BUF
Dissolved	Analysis	6010C		1	210138	10/25/14 11:23	LMH	TAL BUF
Dissolved	Prep	7470A			209822	10/24/14 12:30	LRK	TAL BUF
Dissolved	Analysis	7470A		1	210124	10/25/14 13:02	LRK	TAL BUF

Client Sample ID: PH-ML-14-10212014

Lab Sample ID: 480-69923-17

Date Collected: 10/21/14 14:15
Matrix: Water
Date Received: 10/23/14 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			209748	10/24/14 09:54	TRP	TAL BUF
Total/NA	Analysis	6010C		1	210138	10/25/14 14:09	LMH	TAL BUF
Total/NA	Prep	7470A			209937	10/27/14 07:15	LRK	TAL BUF
Total/NA	Analysis	7470A		1	210279	10/27/14 12:49	LRK	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TestAmerica Albany
25 Kraft Road
Albany, NY 12205

Chain of Custody Record

TestAmerica
ENVIRONMENTAL TESTING

480-69923 Chain of Custody

Client Information	Sampler: Amber Goodrich, Kathryn Farris	Lab PM: Stone, Judy L	374.1
Client Contact: Mrs. Amber Goodrich	Phone: (518)-250-7300	E-Mail: judy.stone@testamericainc.com	
Company: ARCADIS U.S. Inc			
Address: 855 Route 146 Suite 210	Due Date Requested:		
City: Clifton Park	TAT Requested (days):		
State, Zip: NY, 12065			
Phone: (518)-250-7300	PO #: CallOut NEEDED		
Email: andy.vitolins@arcadis-us.com	WO #:		
Project Name: Paulsen Holbrook Site	Project #: 00266376		
Site: Railroad Ave, Albany, NY	SSOW#:		

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7470A	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D		
~~PH-ML-01~~ PH-ML-01-10202014	10/20/14	17:25	G	Water	N	N	X		
PH-ML-2R-10212014	10/21/14	11:55		Water					
PH-ML-03-10212014	10/21/14	10:15		Water					
PH-ML-04-10212014	10/21/14	14:10		Water					
PH-ML-06-10222014	10/22/14	10:00		Water					
PH-ML-07-10222014	10/22/14	10:00		Water					
PH-ML-10-10212014	10/21/14	12:00		Water					
PH-ML-15-10202014	10/20/14	13:45		Water					
PHMW-01-10212014	10/21/14	11:45		Water					
PH-MW-02D-10202014	10/20/14	15:30	↓	Water					
PH-MW-02S-10202014	10/20/14	16:25		Water	V	V	V		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)
Category B, EDD

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by: Amber Goodrich	10/22/14 13:10	Arcadis	Received by:	10-22-14 13:10	TA
Relinquished by:	10-22-14 18:00	TA	Received by: Unknown	10/23/14 0120	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.2 #1

10/29/2014

TestAmerica Albany
25 Kraft Road
Albany, NY 12205

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Amber Goodrich, Kathryn Farris	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-56809-14974.2
Client Contact: Mrs. Amber Goodrich	Phone: (518)-250-7300	E-Mail: judy.stone@testamericainc.com		Page: Page 2 of 3
Company: ARCADIS U.S. Inc				Job #:
Address: 855 Route 146 Suite 210	Due Date Requested:			
City: Clifton Park	TAT Requested (days):			
State, Zip: NY, 12065				
Phone: (518)-250-7300	PO #: CallOut NEEDED			
Email: cindy.vitolins@arcadis-us.com	WO #:			
Project Name: Paulsen Holbrook Site	Project #: ~~48010657~~ 00266376			
Site: Railroad Ave, Albany NY	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7470A	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D		
PH-MW-03D-10202014	10/20/14	13:50	G	Water	N	N	X		
PH-MW-03S-10202014	10/20/14	16:35		Water	N				
PH-MW-X-10202014	—	—		Water	N				
PH-SW-01-10222014 (Unfiltered)	10/22/14	11:15		Water	N				
PH-SW-01-10222014 (Filtered)	10/22/14	11:15		Water	Y				
PH-ML-14-10212014	10/21/14	14:15		Water	N				
PH-MW-02D-MS-10202014	10/20/14	15:30		Water	N	Y			
PH-MW-02D-MSD-10262014	10/20/14	15:30		Water	N	Y			
				Water					
				Water					
				Water					

10-22-14

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify): Category B, EDD

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	10/22/14 13:10	Arcadis	[signature]	10-22-14 13:10	TA
Relinquished by: [signature]	Date/Time: 10-22-14 18:00	Company TA	Received by: Unknown	Date/Time: 10/23/14 0120	Company TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.2 #1

Page 31 of 32

10/29/2014

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-69923-1

Login Number: 69923
List Number: 1
Creator: Janish, Carl M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ARCADIS
Samples received within 48 hours of sampling.	False	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

ARCADIS

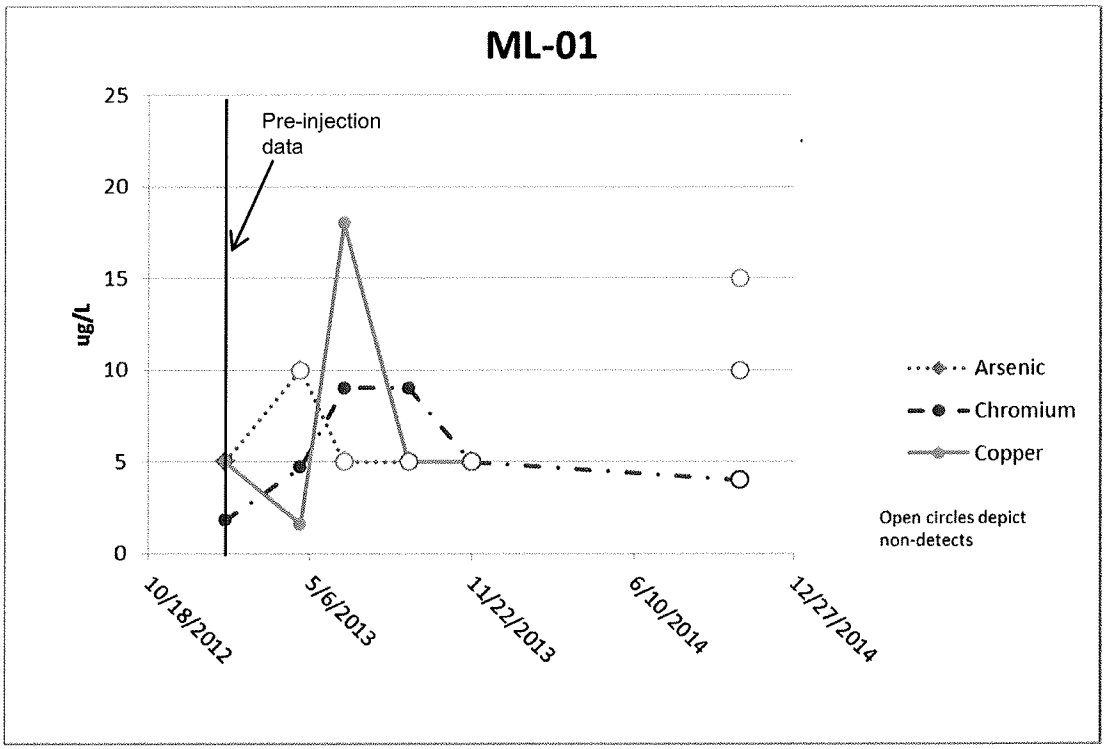
Attachment C

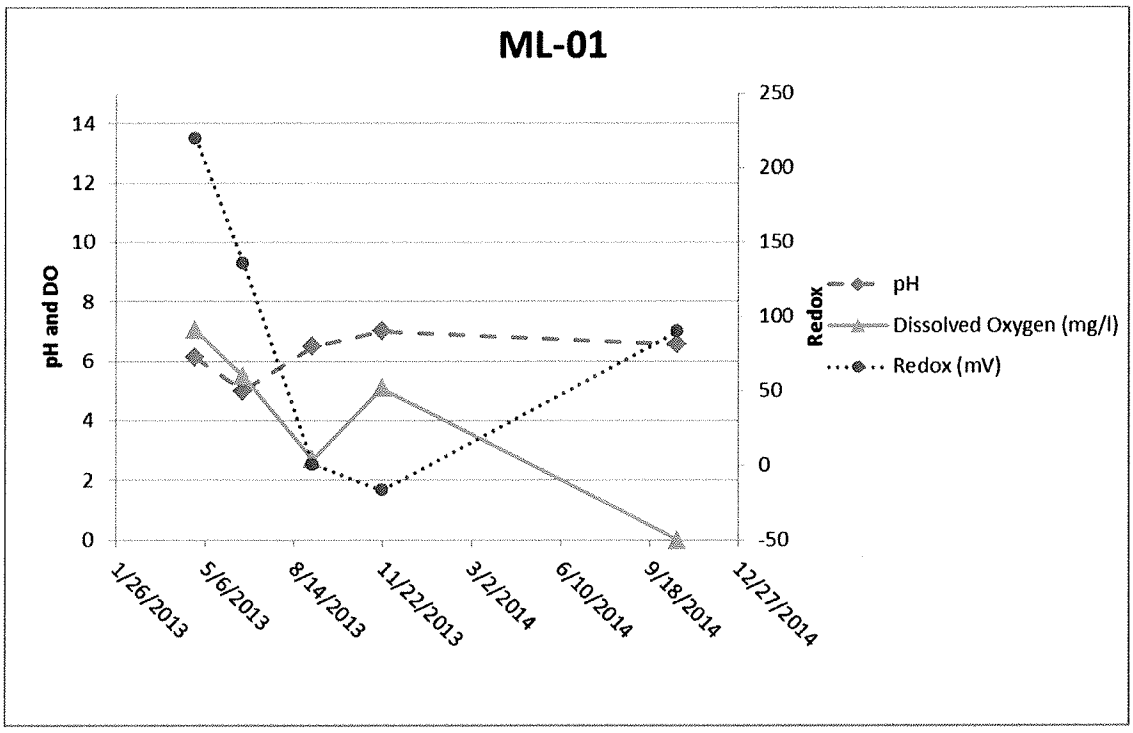
Trend Analysis Graphs

ARCADIS

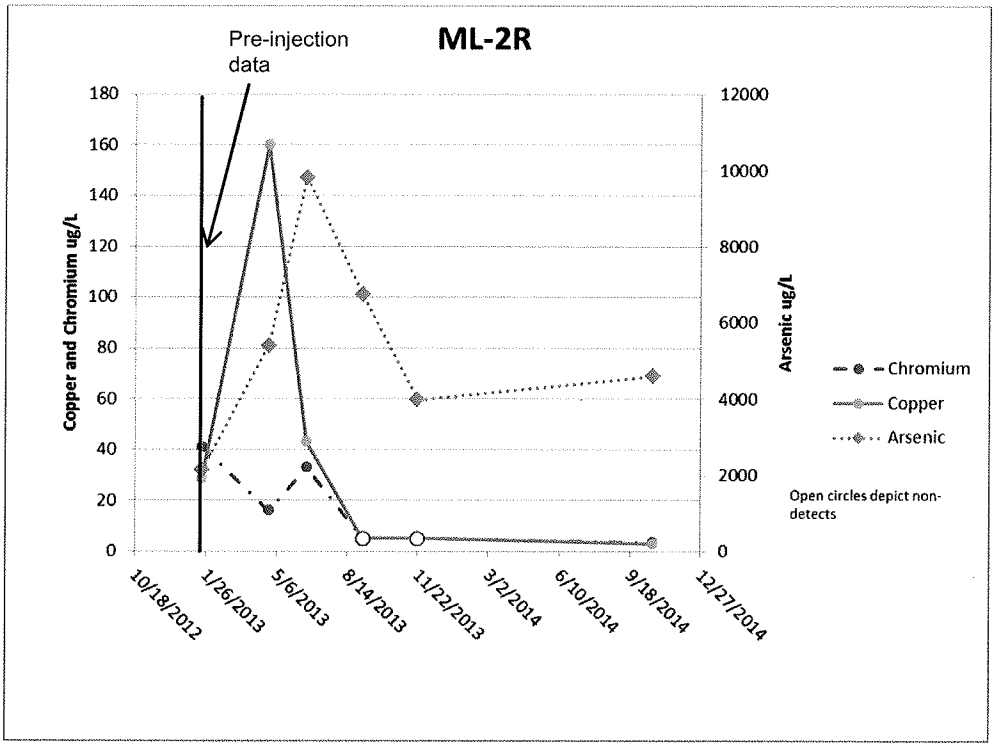
Attachment C
Concentrations of CCA and
Groundwater Quality Parameters

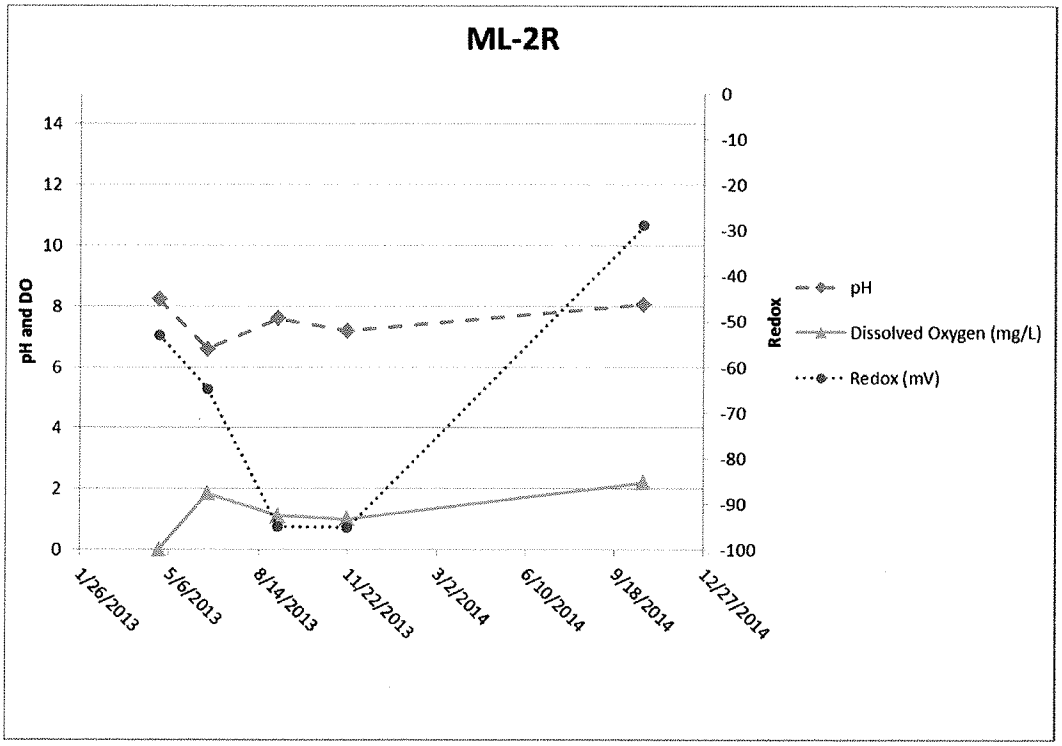
Former Paulsen Holbrook Site
Albany, New York



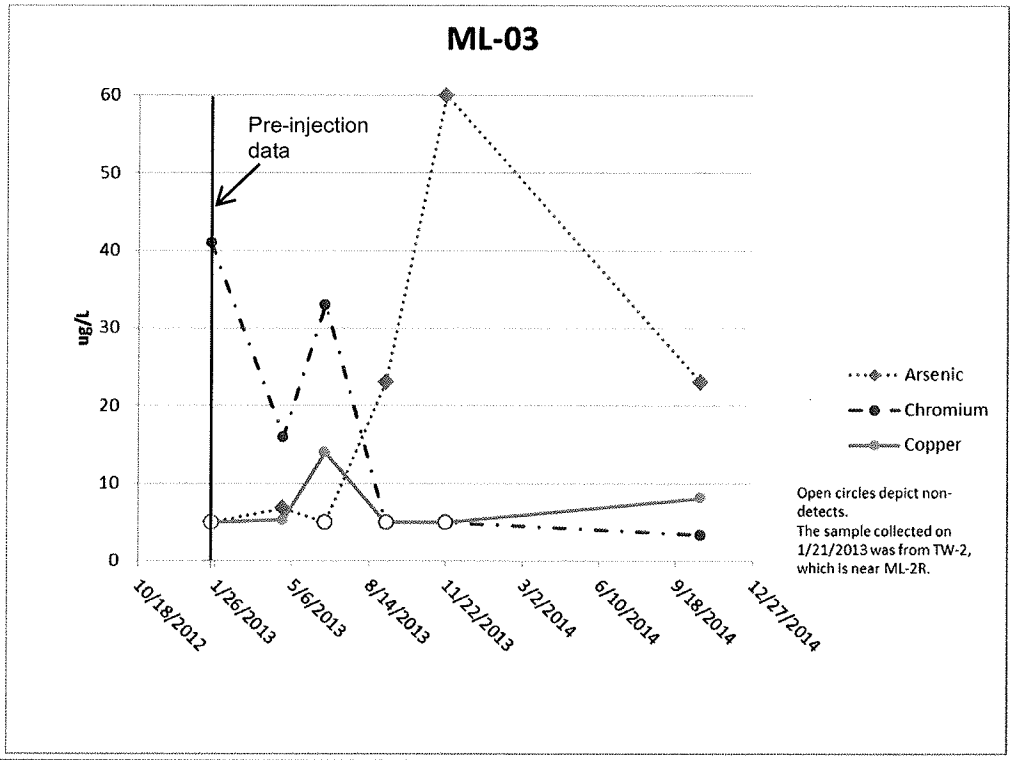


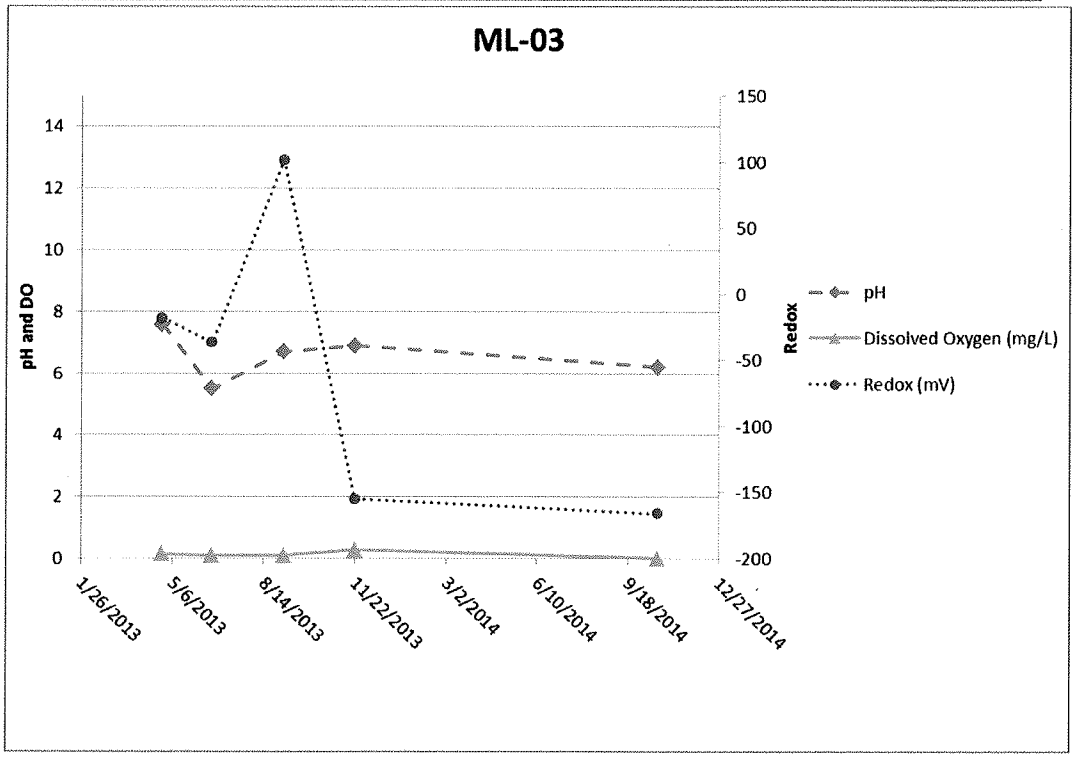
G:\PROJECT\00266398.0000\FILE\CA-RE\2014_October Site Monitoring\Letter Report\Figures\Concentration Graphs.ppt



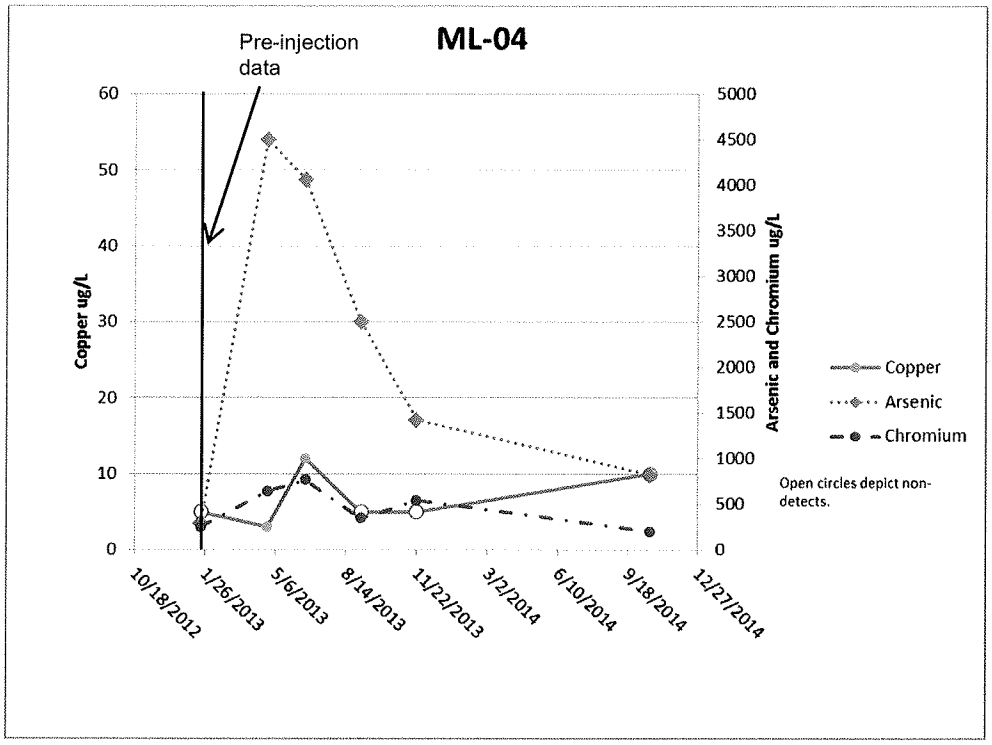


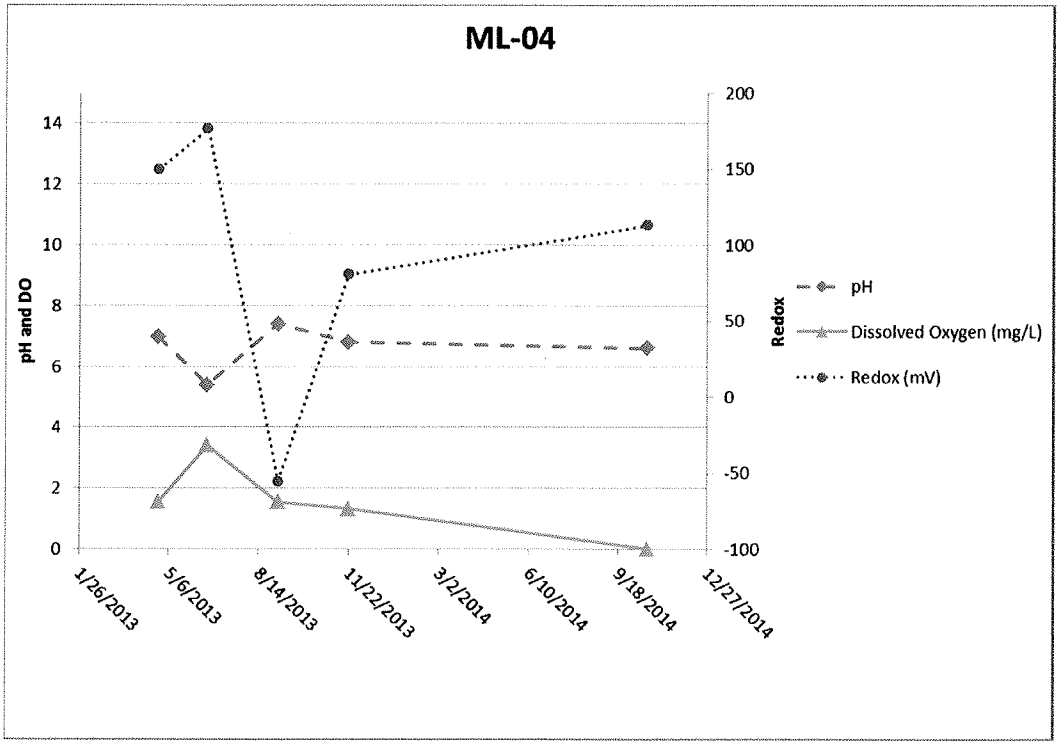
G:\PROJECT\00266398.0000\FILE\CA-RE\2014_October Site Monitoring\Letter Report\Figures\Concentration Graphs.ppt



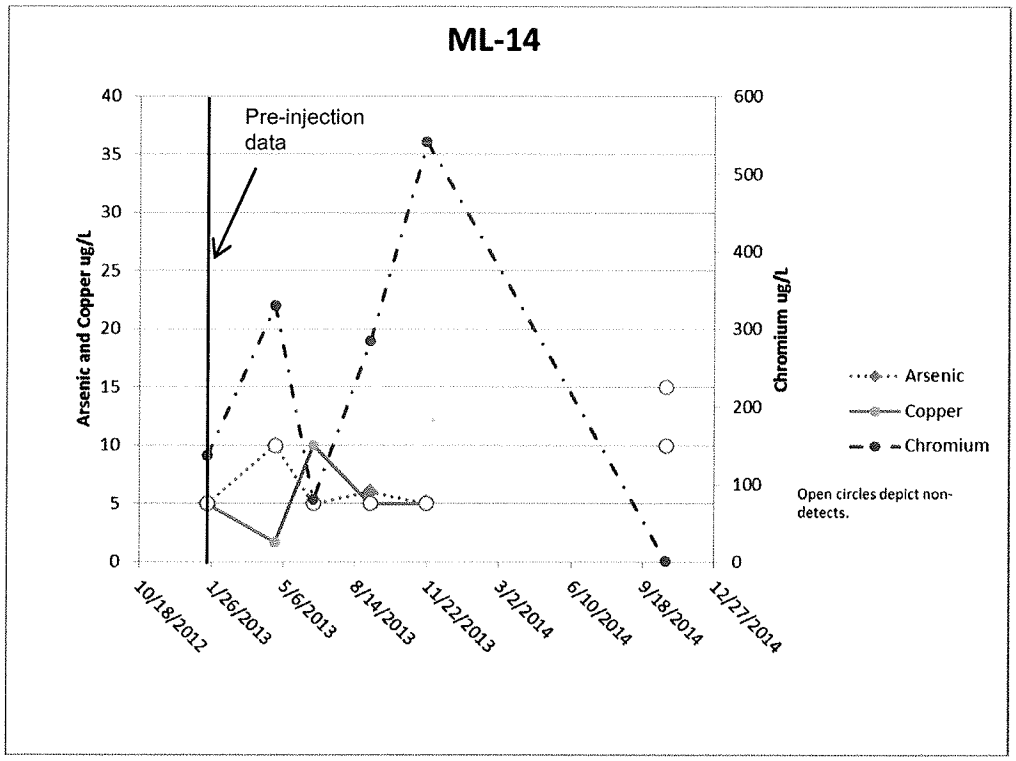


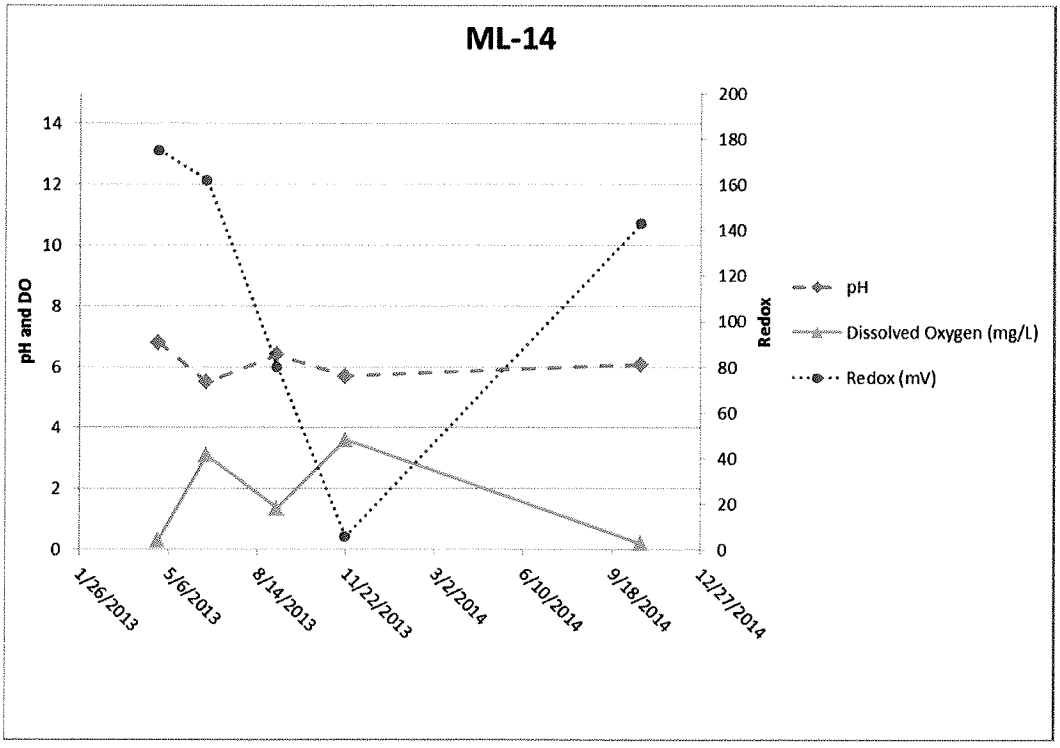
G:\PROJECT\00266398.0000\FILE\CA-RE\2014_October Site Monitoring\Letter Report\Figures\Concentration Graphs.ppt



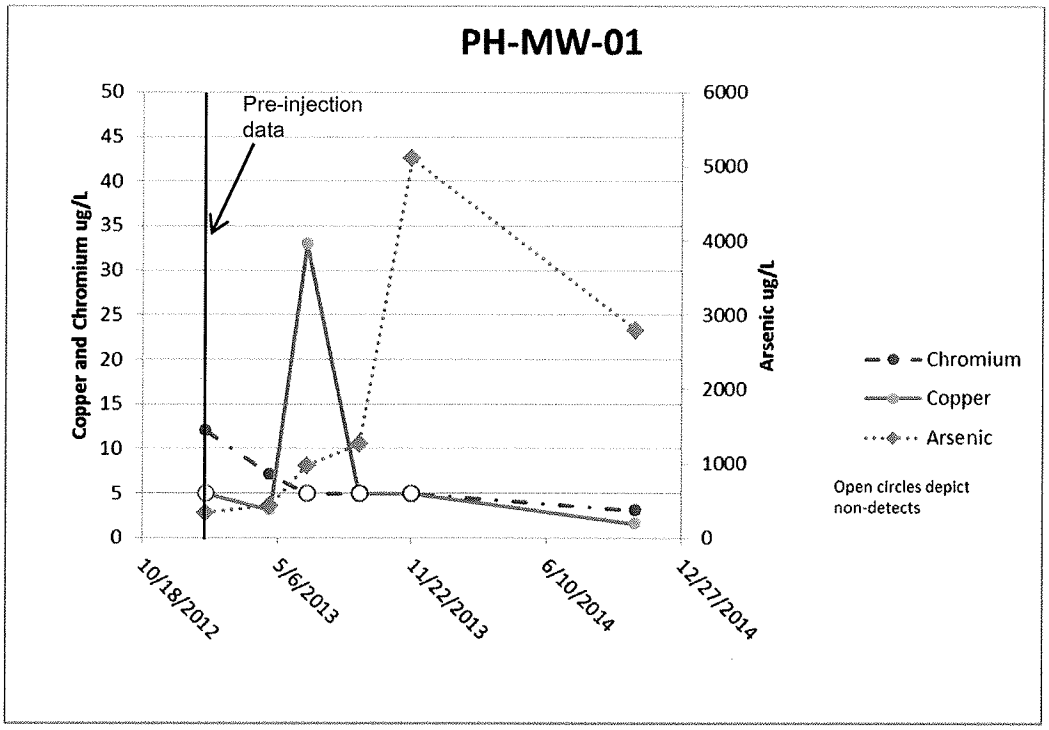


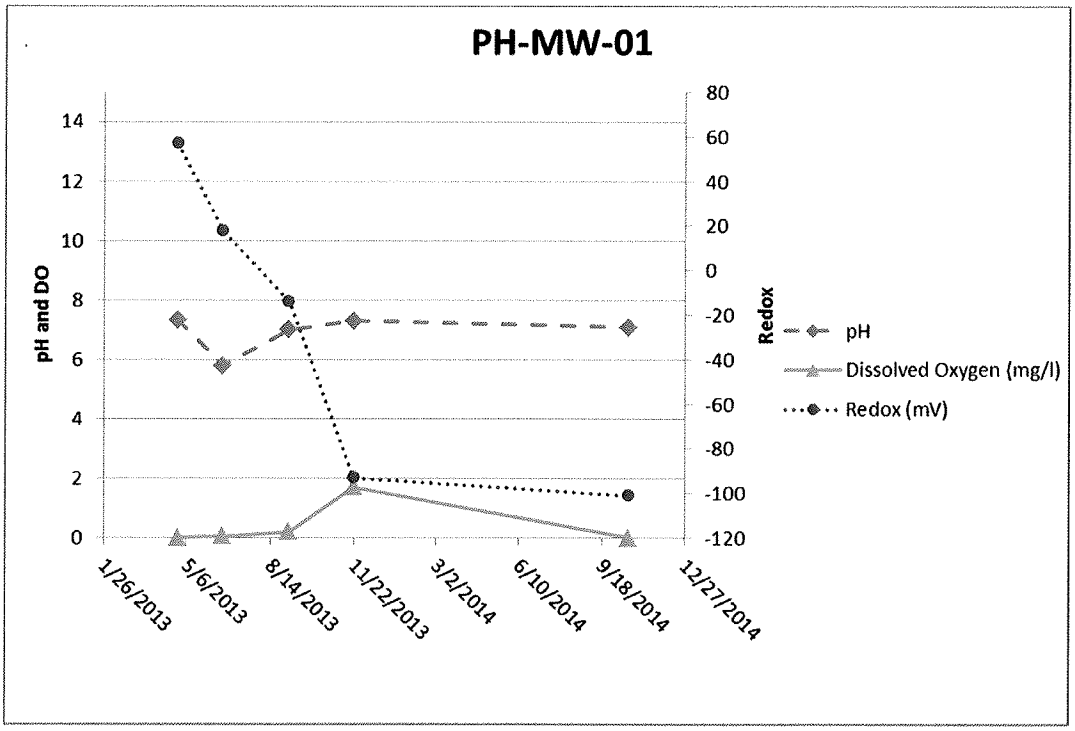
G:\PROJECT\00266398.0000\FILE\CA-RE\2014_October Site Monitoring\Letter Report\Figures\Concentration Graphs.ppt



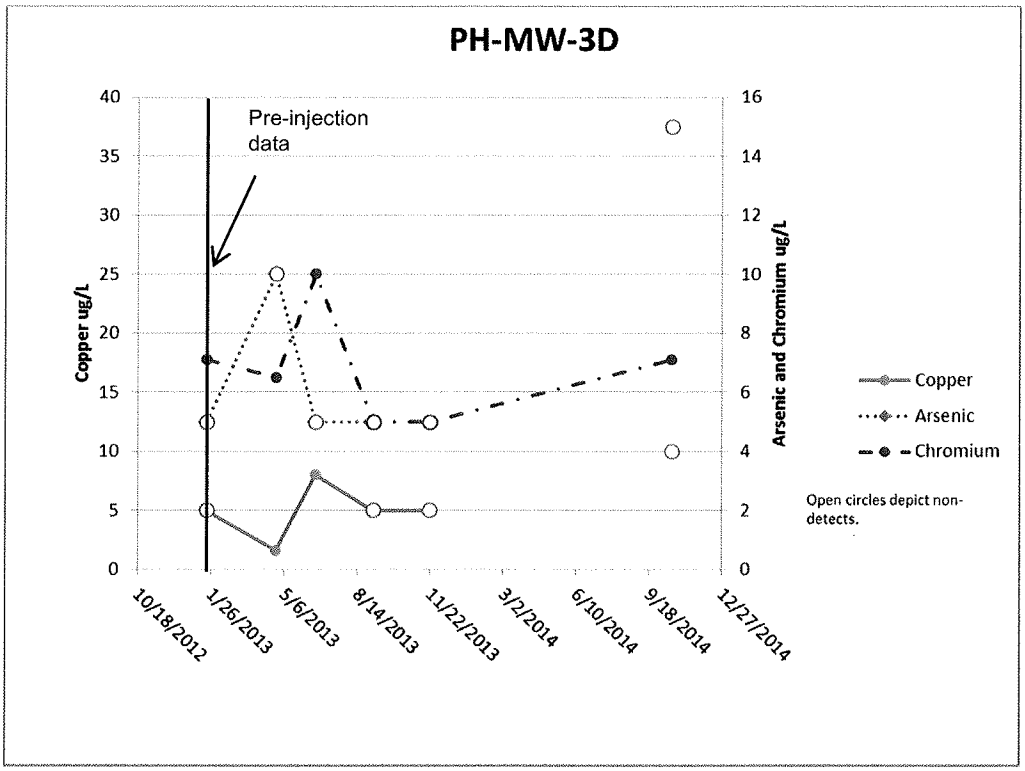


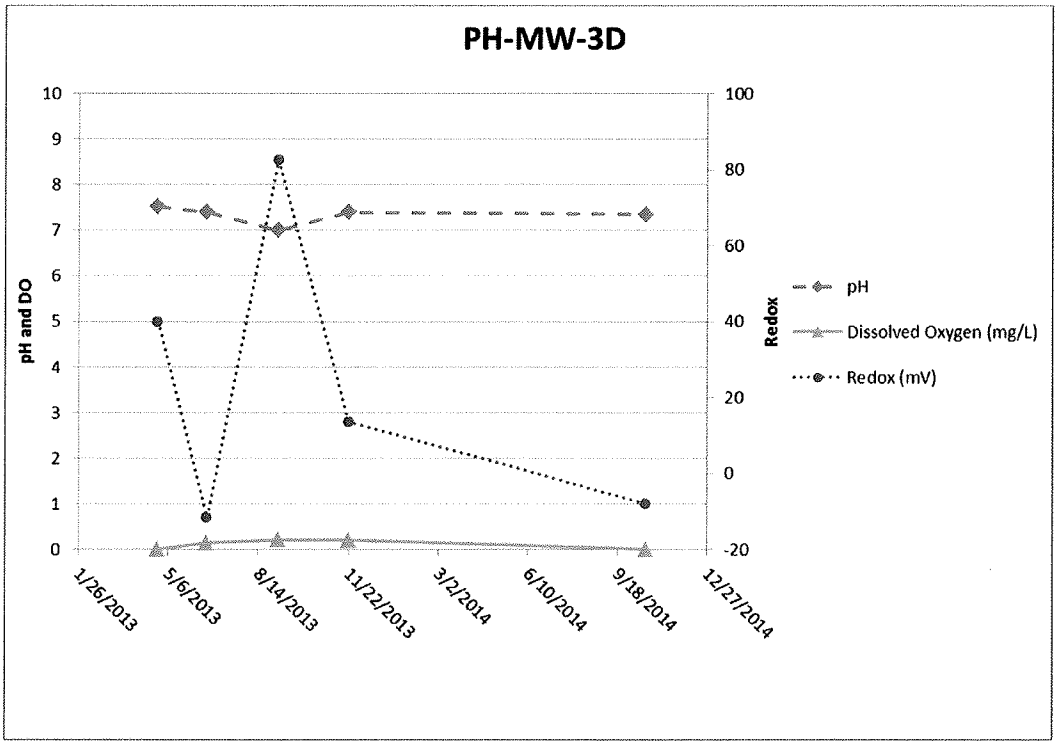
G:\PROJECT\00266398.0000\FILE\CA-RE\2014_October Site Monitoring\Letter Report\Figures\Concentration Graphs.ppt



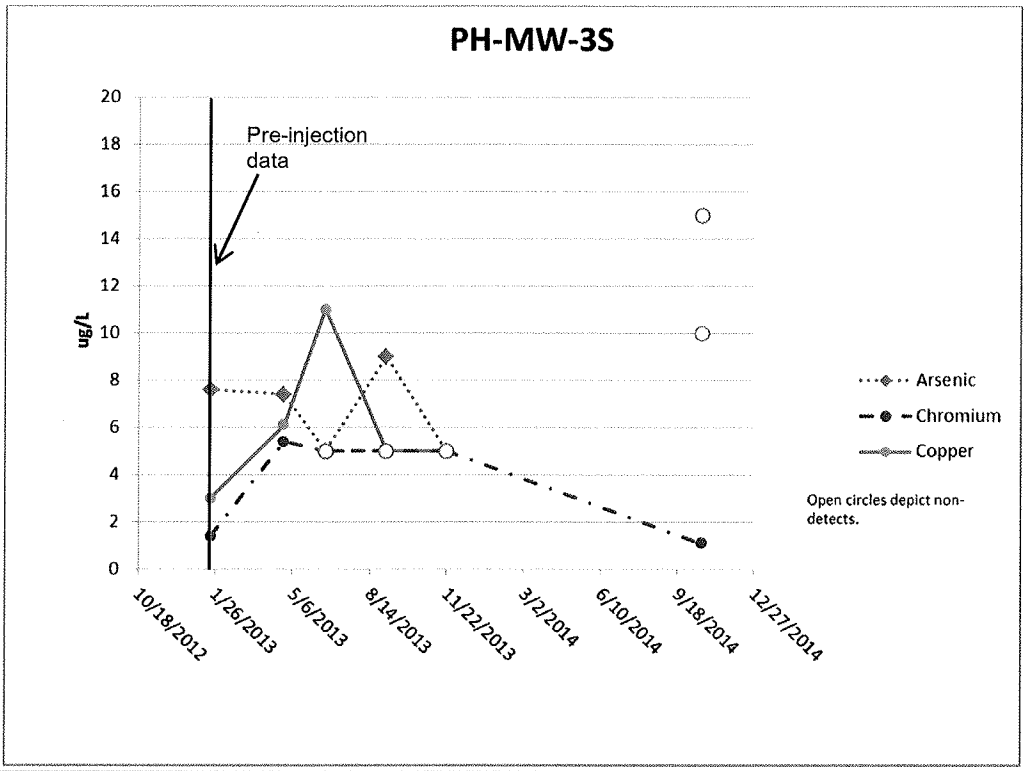


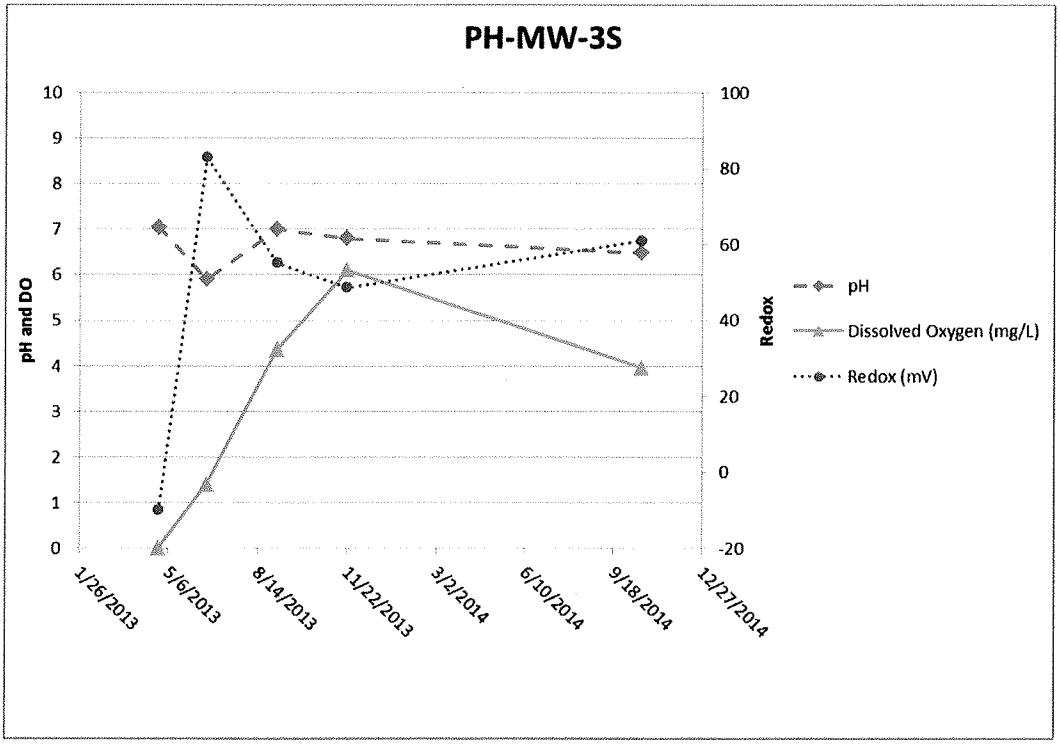
G:\PROJECT\00266398.0000\FILE\CA-RE\2014_October Site Monitoring\Letter Report\Figures\Concentration Graphs.ppt



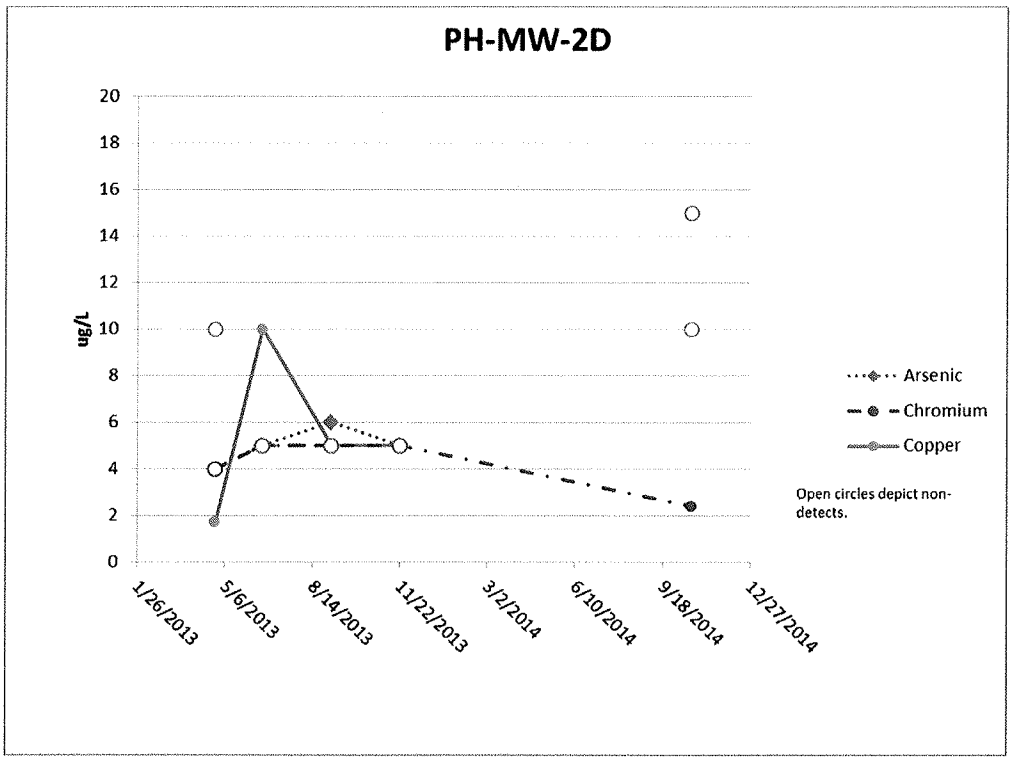


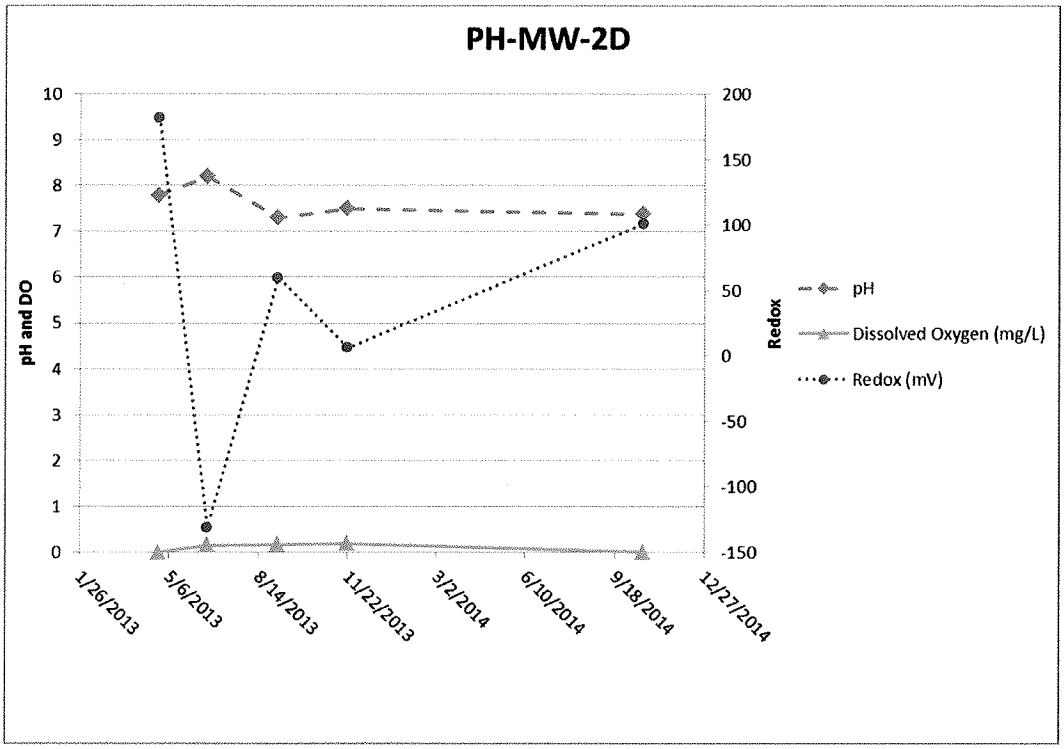
G:\PROJECT\00266398.0000\FILE\CA-RE\2014_October Site Monitoring\Letter Report\Figures\Concentration Graphs.ppt



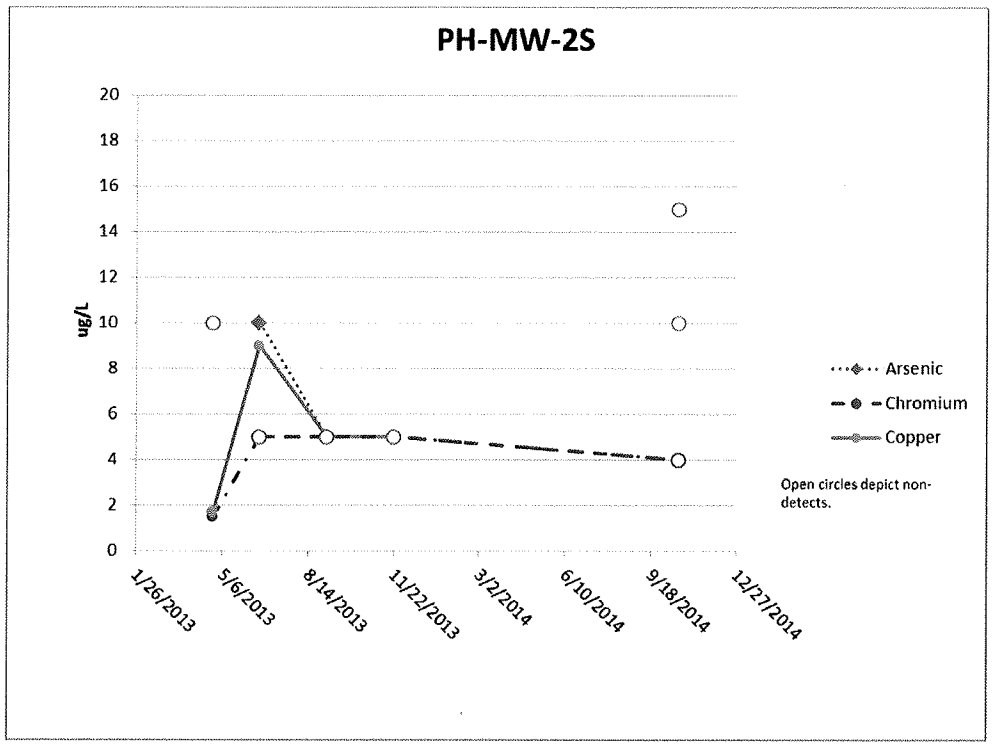


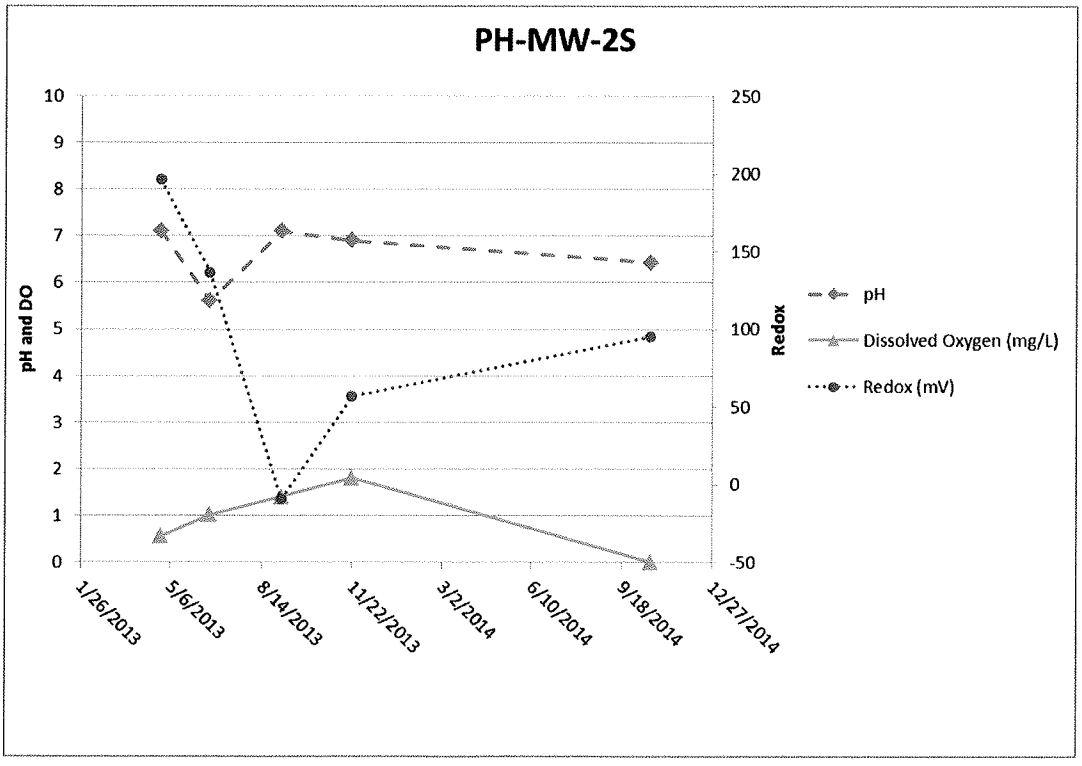
G:\PROJECT\00266398.0000\FILE\CA-RE\2014_October Site Monitoring\Letter Report\Figures\Concentration Graphs.ppt





G:\PROJECT\00266398.0000\FILE\CA-RE\2014_October Site Monitoring\Letter Report\Figures\Concentration Graphs.ppt



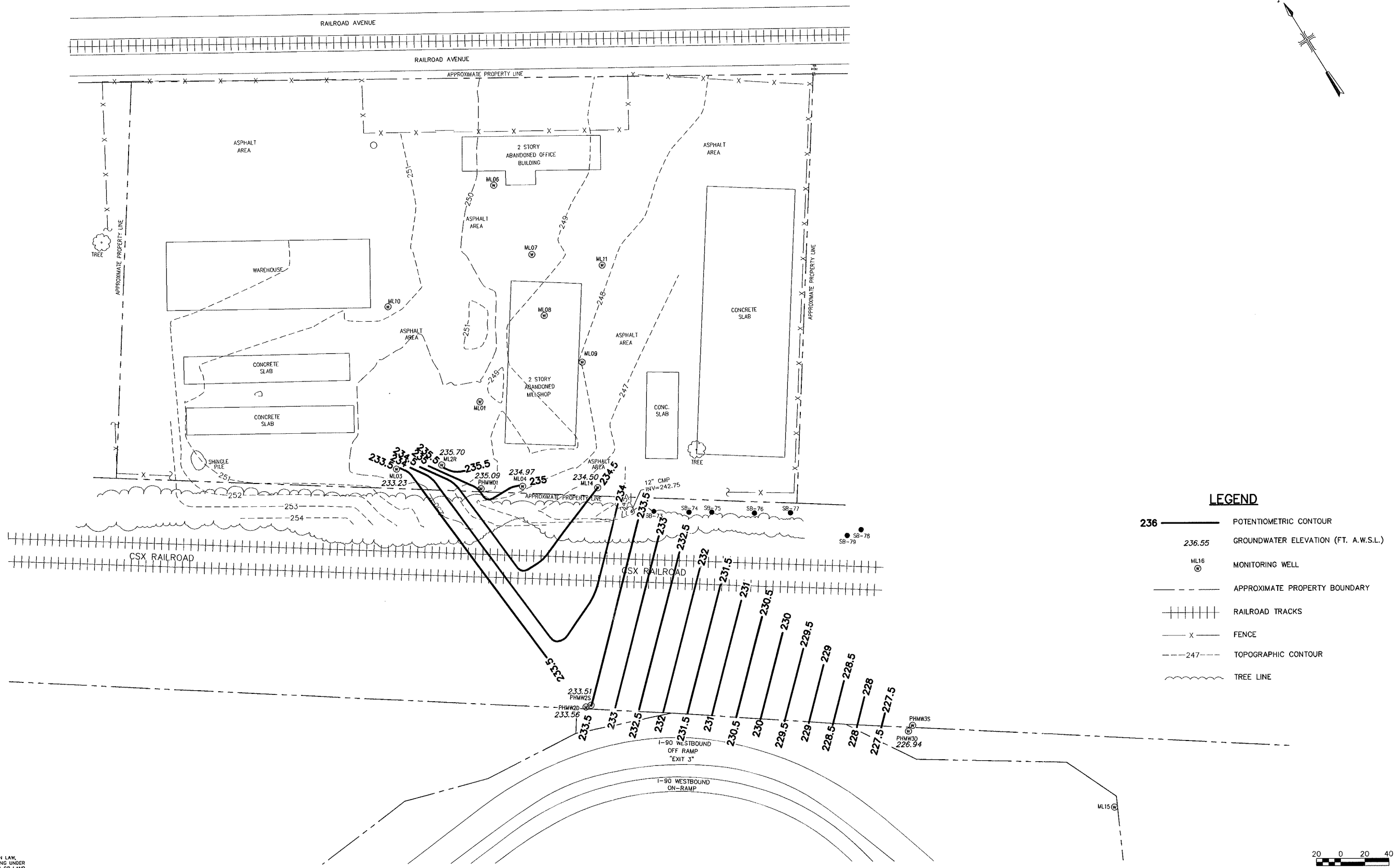


G:\PROJECT\00266398.0000\FILE\CA-RE\2014_October Site Monitoring\Letter Report\Figures\Concentration Graphs.ppt

ARCADIS

Attachment D

2013 Groundwater Potentiometric Figures



MALCOLM PIRNIE

REVISIONS			
NO.	BY	DATE	REMARKS

DES TAM
DWN SMH
CKD DJL

NEW YORK STATE DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

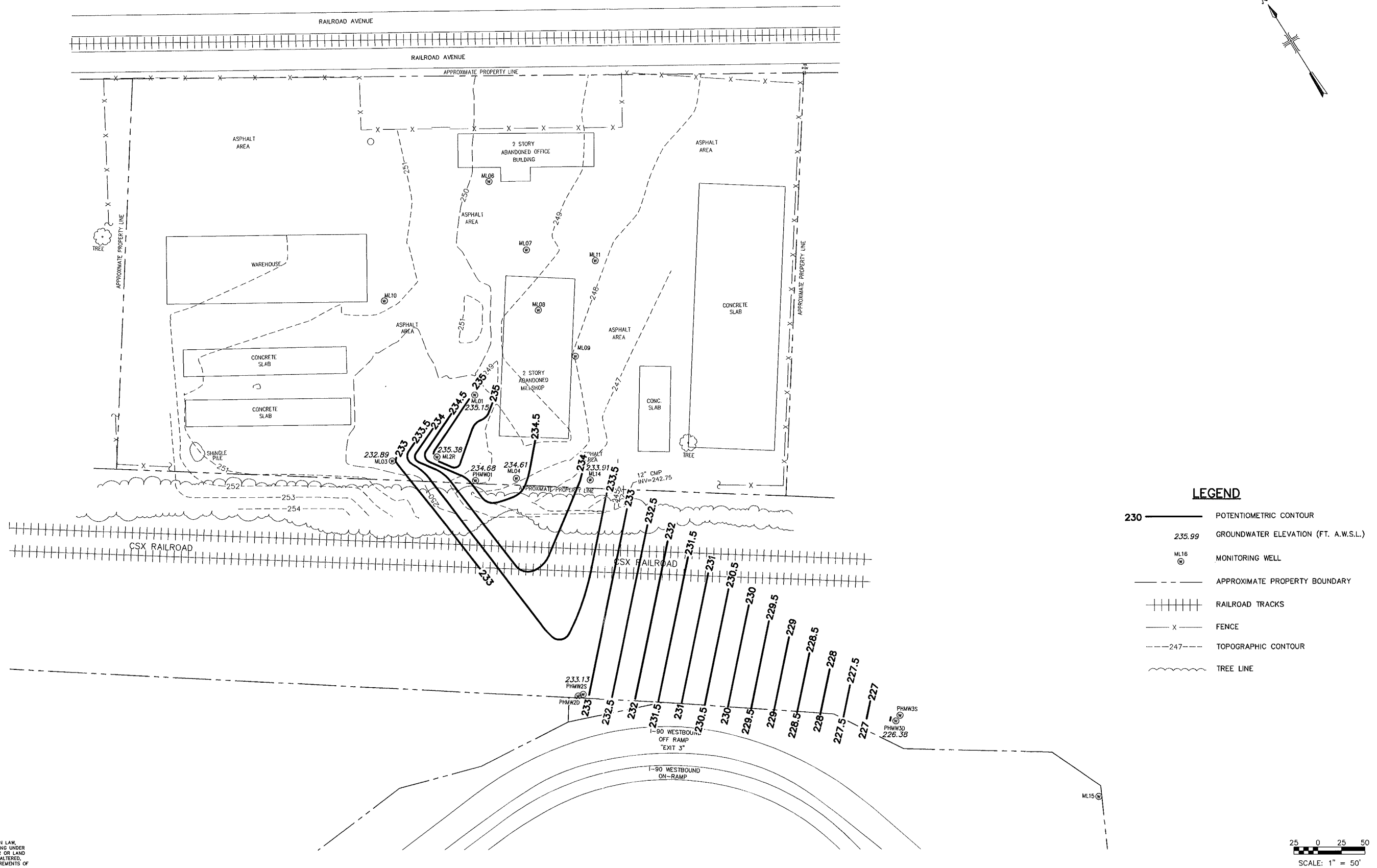
FORMER PAULSEN–HOLBROOK SITE
SITE MONITORING REPORT 2014

POTENTIOMETRIC MAP (6/17/13)

SCALE: AS SHOWN

DATE JANUARY 2015

FIGURE D–1



MALCOLM PIRNIE

REVISIONS			
NO.	BY	DATE	REMARKS

DES
DWN
CKD

NEW YORK STATE DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

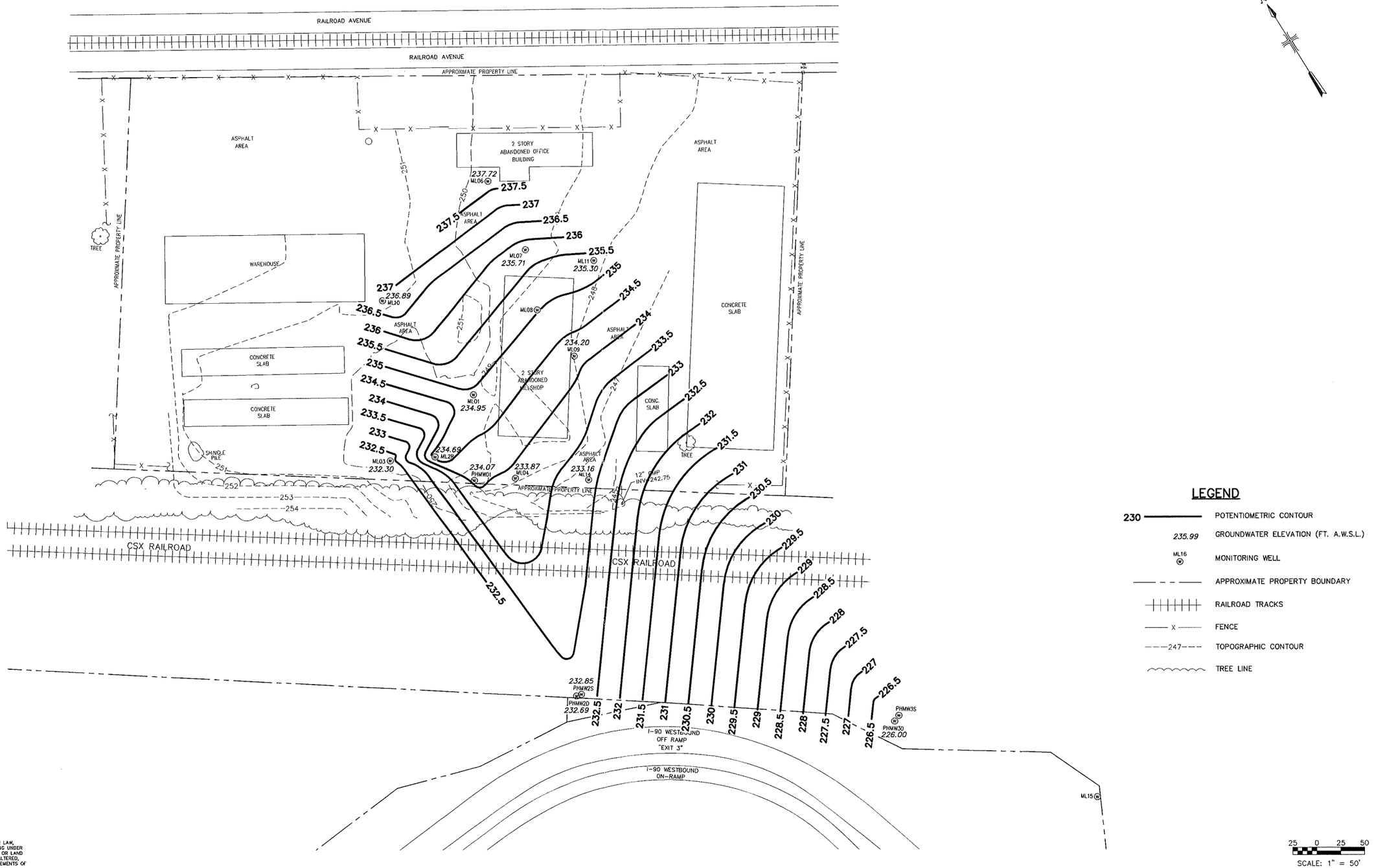
FORMER PAULSEN–HOLBROOK SITE
SITE MONITORING REPORT 2014

POTENTIOMETRIC MAP (9/5/13)

SCALE: AS SHOWN

DATE JANUARY 2015

FIGURE D–2



LEGEND

- 230 — POTENTIOMETRIC CONTOUR
- 235.99 — GROUNDWATER ELEVATION (FT. A.W.S.L.)
- ML16 — MONITORING WELL
- APPROXIMATE PROPERTY BOUNDARY
- RAILROAD TRACKS
- FENCE
- 247 — TOPOGRAPHIC CONTOUR
- TREE LINE

25 0 25 50

SCALE: 1" = 50'

MALCOLM PIRNIE

REVISIONS			
NO.	BY	DATE	REMARKS

DES
DWN
CKD

NEW YORK STATE DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

FORMER PAULSEN–HOLBROOK SITE
SITE MONITORING REPORT 2014

POTENTIOMETRIC MAP (11/24/13)

SCALE: AS SHOWN

DATE JANUARY 2015

FIGURE D–3

ARCADIS

Attachment E

Inspection Forms

FORMER PAULSEN HOLBROOK SITE

Post-Remedy Inspection Checklist

Inspected by: A. Goodrich + K. Farris

Date: 10/22/14 Time: 11:00

Weather Conditions: Cloudy, 40's/50's

SOIL COVER SYSTEM

On-Site

Erosion	~~X~~	YES	X	NO
Separation Fabric Visible	~~X~~	YES	X	NO
Ponded Water or Wet Areas	X	YES		NO
Soil beneath Gravel Cover Visible	~~X~~	YES	X	NO
Weeds visible	X	YES		NO

Off-Site

Erosion		YES	X	NO
Separation Fabric Visible		YES	X	NO
Ponded Water or Wet Areas	X	YES		NO
Sparse Vegetation/Bare Soil		YES	X	NO
Brush or Other Woody Vegetation,		YES	X	NO
Excessive Weeds in Grass	X	YES		NO

FENCING

Posts	X	OK		OTHER
Top Tension Wire	X	OK		OTHER
Barbed Wire	X	OK		OTHER

Comments: Weeds visible all over site

* See photo log *

Continued

MONITORING WELLS X

Capped and Locked _____ YES _____ NO

Casing Damage _____ YES _____ NO

Comments: *See well inspection forms

INSPECTOR'S SIGNATURE Amber Acosta DATE 10/22/14

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Paulsen Holbrook PROJECT NUMBER: 00266.398

DATE OF INSPECTION: 10/20/14 INSPECTOR: A. Goodrich

WELL DESIGNATION: ML-01

WELL LOCATION: on-site

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	1.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 ~~1.25~~ inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [ ] ?	
Bollards Present?	Yes [ ]	No [X] Describe:	
Well ID. Visible?	Yes [X]	No [ ] Describe: (cutline)	
Lock Present and Functional?	Yes [X]	No [ ] Describe:	
Photograph Taken? Photo #	Yes [X]	No [ ] Describe:	

Inner Appearance

Integrity of Well Casing	Describe: good		
Integrity of Cap Seal	Describe: good, J-plug present		
Surface Water in Casing?	Yes [ ]	No [X] Describe:	
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	~~Threaded [X]~~ OK	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X] Describe:	

Downhole

Odor	Yes [ ]	No [X] Describe:	
PID Reading	0 ppm		
Depth to Water (to top of casing)	7.25 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	18.71 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft		

Additional Comments:

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Pavilion Holbrook PROJECT NUMBER: CO266398
DATE OF INSPECTION: 10/21/14 INSPECTOR: A. Goodrich
WELL DESIGNATION: MW-2R
WELL LOCATION: On-site

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]		
Approximate Stickup Height	2 feet	N/A [ ]		
Integrity of Protective Casing	Describe: Rusted, but in good cond.			
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____	
Protective Casing Width or Dia.	4 inches			
Weep Hole in Protective Casing	Yes [ ]	No [X]		
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ]	Other ____
Integrity of Surface Seal/Apron	Describe: Good - intact			
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]		
Bollards Present?	Yes [ ]	No [X]	Describe: ____	
Well ID. Visible?	Yes [X]	No [ ]	Describe: ____	
Lock Present and Functional?	Yes [X]	No [ ]	Describe: ____	
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe: ____	

Inner Appearance

Integrity of Well Casing	Describe: Good, intact			
Integrity of Cap Seal	Describe: Good, J-Plug present			
Surface Water in Casing?	Yes [ ]	No [ ]	Describe: ____	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	~~Threaded [X]~~ (Cut)	Slip [ ]	Expansion Plug [X]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [X]	
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____	

Downhole

Odor	Yes [ ]	No [X]	Describe: ____	
PID Reading	0.3 ppm			
Depth to Water (to top of casing)	18.44 feet (nearest 0.01)	Depth to LNAPL	— feet (nearest 0.01)	N/A [ ]
Total Well Depth (to top of casing)	27.51 feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: Soft			

Additional Comments:

C:\Users\minehard\Documents\PH\SMP\Appendix F\GW Monitoring Well Inspection Form.xls.xls

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Paulsen Holbrook PROJECT NUMBER: ~~00266398~~ 00266398.0000 OX

DATE OF INSPECTION: 10/21/14 INSPECTOR: K. Farris

WELL DESIGNATION: ML-03

WELL LOCATION: Main Area

Outward Appearance

Flushmount Diameter	____ inches	N/A [✓]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Slightly rusted, but good.		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	6 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [✓]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: good.		
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [✓] Describe:	
Well ID. Visible?	Yes [✓]	No [ ] Describe: on top.	
Lock Present and Functional?	Yes [✓]	No [ ] Describe:	
Photograph Taken? Photo #	Yes [✓]	No [ ] Describe:	

Inner Appearance

Integrity of Well Casing	Describe: good.		
Integrity of Cap Seal	Describe: good.		
Surface Water in Casing?	Yes [ ]	No [✓] Describe:	
Well Casing Diameter	2 inches		
Well Casing Material	PVC [✓]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [✓] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [✓]
Evidence of Double Casing?	Yes [ ]	No [✓] Describe:	

Downhole

Odor	Yes [ ]	No [✓] Describe:	
PID Reading	0 ppm		
Depth to Water (to top of casing)	8.14 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	27.2 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Firm		

Additional Comments:

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Paulsen Holbrook PROJECT NUMBER: ~~00266396~~ 00266398.0005
DATE OF INSPECTION: 10/21/14 INSPECTOR: A. Goodrich
WELL DESIGNATION: ML-04
WELL LOCATION: on-site

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	1.6 feet	N/A [ ]	
Integrity of Protective Casing	Describe:		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other
Integrity of Surface Seal/Apron	Describe: Good - no cracks		
Surface Drainage	Away from Wellhead [X] ?	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe:
Well ID. Visible?	Yes [ ]	No [X]	Describe:
Lock Present and Functional?	Yes [X]	No [ ]	Describe:
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe:

Inner Appearance

Integrity of Well Casing	Describe: ~~Good~~ Fair - top of PVC has slight bends			
Integrity of Cap Seal	Describe: Good, J-plug present			
Surface Water in Casing?	Yes [ ]	No [X]	Describe:	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	~~Threaded [X]~~	Slip [ ]	Expansion Plug [X]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [X]	Describe:	

Downhole

Odor	Yes [ ]	No [X]	Describe:
PID Reading	0 ppm		
Depth to Water (to top of casing)	17.23 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	22.50 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft bottom		

Additional Comments:

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Former Pavlesnatholbrook PROJECT NUMBER: CC266398

DATE OF INSPECTION: 10/22/14 INSPECTOR: K. Farris

WELL DESIGNATION: ML-06

WELL LOCATION: on Site

Outward Appearance

Flushmount Diameter	6 inches	N/A [ ]		
Approximate Stickup Height	___ feet	N/A [✓]		
Integrity of Protective Casing	Describe: skin rusted - bolts intact (1/2" bolts)			
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ___	
Protective Casing Width or Dia.	___ inches			
Weep Hole in Protective Casing	Yes [ ]	No [✓]		
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓]	Other ___
Integrity of Surface Seal/Apron	Describe: ___			
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [✓]		
Bollards Present?	Yes [ ]	No [✓]	Describe: ___	
Well ID. Visible?	Yes [ ]	No [✓]	Describe: ___	
Lock Present and Functional?	Yes [ ]	No [✓]	Describe: ___	
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe: ___	

Inner Appearance

Integrity of Well Casing	Describe: good.			
Integrity of Cap Seal	Describe: good.			
Surface Water in Casing?	Yes [ ]	No [✓]	Describe: ___	
Well Casing Diameter	1.5 ~~1.0~~ inches			
Well Casing Material	PVC [✓]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [✓]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [✓]	Describe: ___	

Downhole

Odor	Yes [ ]	No [✓]	Describe: ___	
PID Reading	0 ppm			
Depth to Water (to top of casing)	13.20 feet (nearest 0.01)	Depth to LNAPL	___ feet (nearest 0.01)	N/A [ ]
Total Well Depth (to top of casing)	15.8 feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: soft bottom			

Additional Comments:

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Paulsen Holbrook PROJECT NUMBER: 30063918

DATE OF INSPECTION: 10/22/14 INSPECTOR: A. Jacobson

WELL DESIGNATION: ML-07

WELL LOCATION: on-site

Outward Appearance

Flushmount Diameter	6 inches	~~N/A [X]~~	
Approximate Stickup Height	____ feet	N/A [X]	
Integrity of Protective Casing	Describe:		N/A
Protective Casing Material	Steel [ ]	Stainless Steel [ ]	Other N/A
Protective Casing Width or Dia.	____ inches N/A		
Weep Hole in Protective Casing	Yes [ ]	No [ ] N/A	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [ ] Other N/A
Integrity of Surface Seal/Apron	Describe: N/A		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X] Describe:	
Well ID. Visible?	Yes [ ]	No [X] Describe:	
Lock Present and Functional?	Yes [X]	No [ ] Describe:	
Photograph Taken? Photo #	Yes [X]	No [ ] Describe:	

Inner Appearance

Integrity of Well Casing	Describe: good		
Integrity of Cap Seal	Describe: No cover on well, but J-plug present		
Surface Water in Casing?	Yes [ ]	No [X] Describe:	
Well Casing Diameter	1.5 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X] Describe:	

Downhole

Odor	Yes [ ]	No [X] Describe:	
PID Reading	0 ppm		
Depth to Water (to top of casing)	14.75 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	15.82 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: soft		

Additional Comments:

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Paulsen Holbrook PROJECT NUMBER: 00266398

DATE OF INSPECTION: 10/21/14 INSPECTOR: A. Gadrich

WELL DESIGNATION: ML-08

WELL LOCATION: On-Site (in bunker)

Outward Appearance

Flushmount Diameter	6 inches	N/A [ ]	
Approximate Stickup Height	____ feet	N/A [X]	
Integrity of Protective Casing	Describe: ____		N/A
Protective Casing Material	Steel [ ]	Stainless Steel [ ]	Other ____ N/A
Protective Casing Width or Dia.	____ inches N/A		
Weep Hole in Protective Casing	Yes [ ]	No [ ]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [ ] Other ____ N/A
Integrity of Surface Seal/Apron	Describe: ____		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [ ] N/A	
Bollards Present?	Yes [ ]	No [X] Describe: ____	
Well ID. Visible?	Yes [ ]	No [X] Describe: ____	
Lock Present and Functional?	Yes [ ]	No [X] Describe: ____	
Photograph Taken? Photo #	Yes [X]	No [ ] Describe: ____	

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X] Describe: ____	
Well Casing Diameter	15 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [X]
Evidence of Double Casing?	Yes [ ]	No [X] Describe: ____	

Downhole

Odor	Yes [ ]	No [X] Describe: ____	
PID Reading	0 ppm		
Depth to Water (to top of casing)	DRY feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	14.86 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: ____		

Additional Comments:

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Paulsen Holbrook PROJECT NUMBER: 30036238

DATE OF INSPECTION: 10/21/14 INSPECTOR: A Goodman

WELL DESIGNATION: ML-09

WELL LOCATION: on-site, next to building

Outward Appearance

Flushmount Diameter	6 inches	N/A [ ]	
Approximate Stickup Height	____ feet	N/A [X]	
Integrity of Protective Casing	Describe: N/A		
Protective Casing Material	Steel [ ]	Stainless Steel [ ]	Other N/A
Protective Casing Width or Dia.	N/A inches		
Weep Hole in Protective Casing	Yes [ ]	No [ ] N/A	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [ ] Other N/A
Integrity of Surface Seal/Apron	Describe: N/A		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [ ] ?	
Bollards Present?	Yes [ ]	No [X] Describe:	
Well ID. Visible?	Yes [ ]	No [X] Describe:	
Lock Present and Functional?	Yes [ ]	No [X] Describe:	
Photograph Taken? Photo #	Yes [X]	No [ ] Describe:	

Inner Appearance

Integrity of Well Casing	Describe: casing intact		
Integrity of Cap Seal	Describe: Rusted but good, no T-plug		
Surface Water in Casing?	Yes [ ]	No [X] Describe:	
Well Casing Diameter	1.5 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [ ] None [X]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [X]
Evidence of Double Casing?	Yes [ ]	No [X] Describe:	

Downhole

Odor	Yes [ ]	No [ ] Describe:	
PID Reading	0 ppm		
Depth to Water (to top of casing)	DRY feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	14.45 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Firm		

Additional Comments:

C:\Users\minehard\Documents\PH\SMP\Appendix F\GW Monitoring Well Inspection Form.xls xls

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Paulsen Holbrook PROJECT NUMBER: ~~0026637600000~~ 0026639808

DATE OF INSPECTION: 10/21/2014 INSPECTOR: K. Farris

WELL DESIGNATION: ML-10

WELL LOCATION: Main Site

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]		
Approximate Stickup Height	___ feet	N/A [✓]		
Integrity of Protective Casing	Describe: Rusted, fair			
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ___	
Protective Casing Width or Dia.	___ inches			
Weep Hole in Protective Casing	Yes [ ]	No [ ]		
Surface Seal/Apron Material	Cement [✓]	Bentonite [ ]	Not apparent [ ]	Other ___
Integrity of Surface Seal/Apron	Describe: cement is cracked			
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]		
Bollards Present?	Yes [ ]	No [✓]	Describe: ___	
Well ID. Visible?	Yes [ ]	No [✓]	Describe: ___	
Lock Present and Functional?	Yes [ ]	No [✓]	Describe: ___	
Photograph Taken? Photo #	Yes [✓]	No [✓]	Describe: ___	

Inner Appearance

Integrity of Well Casing	Describe: good			
Integrity of Cap Seal	Describe: good.			
Surface Water in Casing?	Yes [ ]	No [✓]	Describe: ___	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [✓]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [✓]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [✓]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [✓]	Describe: ___	

Downhole

Odor	Yes [ ]	No [✓]	Describe: ___	
PID Reading	0 ppm			
Depth to Water (to top of casing)	15.5 feet (nearest 0.01)	Depth to LNAPL	___ feet (nearest 0.01)	N/A [✓]
Total Well Depth (to top of casing)	18.3 feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: Firm			

Additional Comments:

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Paulsen Holbrook PROJECT NUMBER: 00366.398

DATE OF INSPECTION: 10/21/14 INSPECTOR: A Goodrich

WELL DESIGNATION: ML-11

WELL LOCATION: On-site

Outward Appearance

Flushmount Diameter	8" inches	N/A [ ]	
Approximate Stickup Height	____ feet	N/A [X]	
Integrity of Protective Casing	Describe: N/A		
Protective Casing Material	Steel [ ]	Stainless Steel [ ]	Other N/A
Protective Casing Width or Dia.	____ inches		
Weep Hole in Protective Casing	Yes [ ]	No [ ]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [ ] Other N/A
Integrity of Surface Seal/Apron	Describe: N/A		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [X]	
Bollards Present?	Yes [ ]	No [X] Describe:	
Well ID. Visible?	Yes [ ]	No [X] Describe:	
Lock Present and Functional?	Yes [ ]	No [X] Describe:	
Photograph Taken? Photo #	Yes [X]	No [ ] Describe:	

Inner Appearance

Integrity of Well Casing	Describe: Fair		
Integrity of Cap Seal	Describe: No bolts, no J-plug		
Surface Water in Casing?	Yes [ ]	No [X] Describe:	
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [ ] None [X]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [X]
Evidence of Double Casing?	Yes [ ]	No [X] Describe:	

Downhole

Odor	Yes [ ]	No [X] Describe:	
PID Reading	0 ppm		
Depth to Water (to top of casing)	Dry feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	12.75 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Firm		

Additional Comments:

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Former Revlon Holbrook Site PROJECT NUMBER: 00266398.0000 ~~00266376.0000~~

DATE OF INSPECTION: 10/21/2014 INSPECTOR: KFarris

WELL DESIGNATION: ML-14

WELL LOCATION: Main Site.

Outward Appearance

Flushmount Diameter	____ inches	N/A [✓]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: slightly rusted, but good		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	~6 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [✓]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: good		
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [✓]	Describe:
Well ID. Visible?	Yes [✓]	No [ ]	Describe:
Lock Present and Functional?	Yes [✓]	No [ ]	Describe:
Photograph Taken? Photo #	Yes [✓]	No [ ]	Describe:

Inner Appearance

Integrity of Well Casing	Describe: good.		
Integrity of Cap Seal	Describe: good.		
Surface Water in Casing?	Yes [ ]	No [✓]	Describe:
Well Casing Diameter	2 inches		
Well Casing Material	PVC [✓]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [✓] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [✓]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [✓]	Describe:

Downhole

Odor	Yes [ ]	No [✓]	Describe:
PID Reading	0 ppm		
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [✓]
Total Well Depth (to top of casing)	19.25 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft Bottom.		

Additional Comments:

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME:	Paulsen Holbrook	PROJECT NUMBER:	00266398 ~~00266376.0000~~
DATE OF INSPECTION:	10/20/14	INSPECTOR:	KFarris
WELL DESIGNATION:	ML-15		
WELL LOCATION:	~~Main Site~~ KF Off-site		

Outward Appearance

Flushmount Diameter	10 inches	N/A [ ]		
Approximate Stickup Height	____ feet	N/A [X]		
Integrity of Protective Casing	Describe: fair/good			
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____	
Protective Casing Width or Dia.	10 inches			
Weep Hole in Protective Casing	Yes [ ]	No [X]		
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [X]	Other ____
Integrity of Surface Seal/Apron	Describe: fair/good			
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [✓]		
Bollards Present?	Yes [ ]	No [✓]	Describe:	
Well ID. Visible?	Yes [ ]	No [✓]	Describe:	
Lock Present and Functional?	Yes [✓]	No [ ]	Describe:	present on cap - not functional
Photograph Taken? Photo #	Yes [✓]	No [X]	Describe:	

Inner Appearance

Integrity of Well Casing	Describe:			
Integrity of Cap Seal	Describe: good, newer cap			
Surface Water in Casing?	Yes [ ]	No [✓]	Describe:	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [✓]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [✓]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [✓]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [ ]	Describe:	

Downhole

Odor	Yes [ ]	No [✓]	Describe:	
PID Reading	0 ppm			
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01)	N/A [ ]
Total Well Depth (to top of casing)	____ feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe:			

Additional Comments:

a new stake has been hammered ~~into~~ to left of well. painted pink marker.

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME:	Paulsen Holbrook	PROJECT NUMBER:	~~00266376~~ 00266398.0002
DATE OF INSPECTION:	10/21/14	INSPECTOR:	A. Goodrich
WELL DESIGNATION:	on-site		
WELL LOCATION:	PH-MW-01		

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]		
Approximate Stickup Height	2 feet	N/A [ ]		
Integrity of Protective Casing	Describe: Good - intact, not rusted			
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____	
Protective Casing Width or Dia.	4 inches			
Weep Hole in Protective Casing	Yes [ ]	No [X]		
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ]	Other ____
Integrity of Surface Seal/Apron	Describe: Good - intact, no cracks			
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [ ]		
Bollards Present?	Yes [ ]	No [X]	Describe:	
Well ID. Visible?	Yes [X]	No [ ]	Describe:	
Lock Present and Functional?	Yes [X]	No [ ]	Describe:	
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe:	

Inner Appearance

Integrity of Well Casing	Describe: Good			
Integrity of Cap Seal	Describe: Good - J-plug present/intact			
Surface Water in Casing?	Yes [ ]	No [X]	Describe:	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	~~Threaded [X]~~ AG	Slip [ ]	Expansion Plug [X]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [X]	
Evidence of Double Casing?	Yes [ ]	No [X]	Describe:	

Downhole

Odor	Yes [ ]	No [X]	Describe:	
PID Reading	0 ppm			
Depth to Water (to top of casing)	18.84 feet (nearest 0.01)	Depth to LNAPL	— feet (nearest 0.01)	N/A [ ]
Total Well Depth (to top of casing)	42.15 feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: Hard			

Additional Comments:

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Paulsen Holbrook PROJECT NUMBER: ~~00266376.0000~~ 00266398.95

DATE OF INSPECTION: 10/20/2014 INSPECTOR: E. Farris

WELL DESIGNATION: PHMW-02S

WELL LOCATION: Off-site

Outward Appearance

Flushmount Diameter	____ inches	N/A [✓]	
Approximate Stickup Height	4 feet	N/A [ ]	
Integrity of Protective Casing	Describe: slightly rusted - good		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [ ] unobserved.	
Surface Seal/Apron Material	Cement [✓]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: good/fair		
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [✓]	Describe: ____
Well ID. Visible?	Yes [✓]	No [ ]	Describe: ____
Lock Present and Functional?	Yes [✓]	No [ ]	Describe: ____
Photograph Taken? Photo #	Yes [✓]	No [ ]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: good			
Integrity of Cap Seal	Describe: good			
Surface Water in Casing?	Yes [ ]	No [✓]	Describe: ____	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [✓]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [✓]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [✓]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [ ]	Describe: ____	

Downhole

Odor	Yes [ ]	No [✓]	Describe: ____	
PID Reading	0 ppm			
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01)	N/A [ ]
Total Well Depth (to top of casing)	22.44 feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: Firm			

Additional Comments:

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Paulsen Holbrook PROJECT NUMBER: 00766398

DATE OF INSPECTION: 10/30/14 INSPECTOR: A. Goodrich

WELL DESIGNATION: PH MW-02D

WELL LOCATION: off-site

Outward Appearance

Flushmount Diameter	____ inches	N/A [ ]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	~~Cement [X]~~ OK	Bentonite [ ]	Not apparent [X] Other ____
Integrity of Surface Seal/Apron	Describe: good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X] Describe:	
Well ID. Visible?	Yes [X]	No [ ] Describe: outline	
Lock Present and Functional?	Yes [X]	No [ ] Describe:	
Photograph Taken? Photo #	Yes [X]	No [ ] Describe:	

Inner Appearance

Integrity of Well Casing	Describe: good		
Integrity of Cap Seal	Describe: good		
Surface Water in Casing?	Yes [ ]	No [X] Describe:	
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [X]
Evidence of Double Casing?	Yes [ ]	No [X] Describe:	

Downhole

Odor	Yes [ ]	No [X] Describe:	
PID Reading	0 ppm		
Depth to Water (to top of casing)	19.08 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	42.00 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Firm		

Additional Comments:

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Paulsen Holbrook PROJECT NUMBER: ~~00266376.0000~~ 00266398 [initials]

DATE OF INSPECTION: 10/20/14 INSPECTOR: K. Farris

WELL DESIGNATION: PHMW-03S

WELL LOCATION: off-site

Outward Appearance

Flushmount Diameter	4 inches	N/A [ ]	
Approximate Stickup Height	___ feet	N/A [✓]	
Integrity of Protective Casing	Describe:		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other
Protective Casing Width or Dia.	8 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [✓]	Bentonite [ ]	Not apparent [ ] Other
Integrity of Surface Seal/Apron	Describe: Slightly cracked.		
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [~~✓~~] [initials]	
Bollards Present?	Yes [ ]	No [x]	Describe:
Well ID. Visible?	Yes [ ]	No [x]	Describe:
Lock Present and Functional?	Yes [ ]	No [x]	Describe:
Photograph Taken? Photo #	Yes [ ]	No [x]	Describe:

Inner Appearance

Integrity of Well Casing	Describe: fair/good		
Integrity of Cap Seal	Describe: fair/good		
Surface Water in Casing?	Yes [ ]	No [x]	Describe:
Well Casing Diameter	2 inches		
Well Casing Material	PVC [x]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [x] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [x]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [x]	Describe:

Downhole

Odor	Yes [ ]	No [x]	Describe:
PID Reading	0 ppm		
Depth to Water (to top of casing)	___ feet (nearest 0.01)	Depth to LNAPL	NA feet (nearest 0.01) N/A [x]
Total Well Depth (to top of casing)	___ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe:		

Additional Comments:

Threaded tabs are slightly rusted, hard to close.

ARCADIS

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Paulsen Holbrook ~~PHMW-03B~~ PROJECT NUMBER: 00266398

DATE OF INSPECTION: 10/20/14 INSPECTOR: A. Goodrich

WELL DESIGNATION: PHMW-03D

WELL LOCATION: off-site

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]		
Approximate Stickup Height	3 feet	N/A [ ]		
Integrity of Protective Casing	Describe: good			
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____	
Protective Casing Width or Dia.	4 inches			
Weep Hole in Protective Casing	Yes [ ]	No [X]		
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [X]	Other ____
Integrity of Surface Seal/Apron	Describe: N/A			
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [X]		
Bollards Present?	Yes [ ]	No [X]	Describe: ____	
Well ID. Visible?	Yes [ ]	No [X]	Describe: ____	
Lock Present and Functional?	Yes [X]	No [ ]	Describe: ____	
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe: ____	

Inner Appearance

Integrity of Well Casing	Describe: good			
Integrity of Cap Seal	Describe: good			
Surface Water in Casing?	Yes [ ]	No [X]	Describe: ____	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [X]	
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____	

Downhole

Odor	Yes [ ]	No [X]	Describe: ____	
PID Reading	0 ppm			
Depth to Water (to top of casing)	15.58 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01)	N/A [ ]
Total Well Depth (to top of casing)	41.61 feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: Firm			

Additional Comments:

ARCADIS

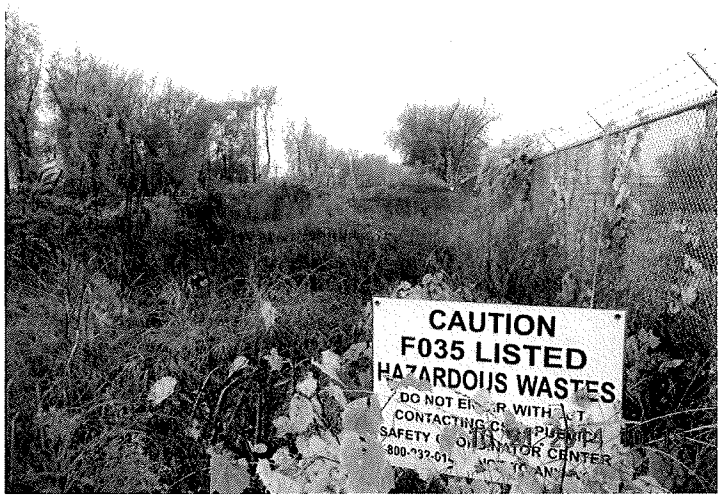
Attachment F

Photographic Log

ARCADIS

Project Photos

Former Paulsen Holbrook Site
Albany, New York



1. Off-site Hazardous Waste Notification, along the southwestern Site boundary, facing west.

2. Off-site Hazardous Waste Notification, along the southwestern Site boundary, facing southeast.

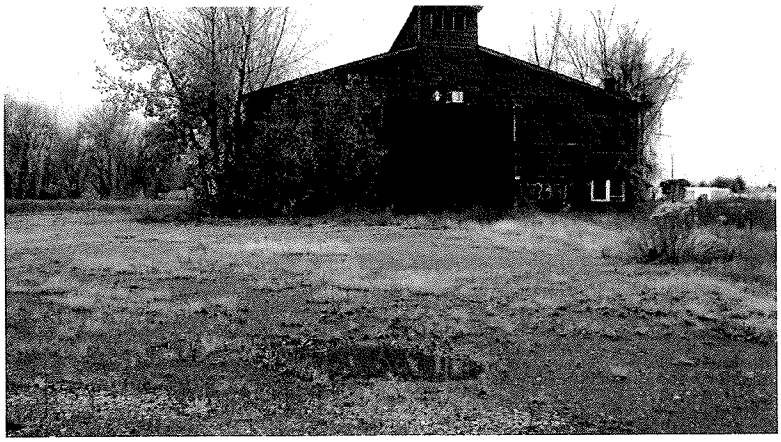
3. Southwestern portion of Site, facing northwest.

4. Excavation area of Site, facing northwest.

5. Excavation area of Site, facing northeast.

6. Southern boundary corner of Site, facing northeast.

7. Grass/weeds in excavation area, facing west.



8. Standing water, facing northwest.

9. Drainage discharge point. Location of surface water sample (SW-01).