



D&B ENGINEERS
AND
ARCHITECTS, P.C.

330 Crossways Park Drive, Woodbury, New York 11797
516-364-9890 • 718-460-3634 • Fax: 516-364-9045 • www.db-eng.com

Board of Directors

Steven A. Fangmann, P.E., BCEE
President & Chairman

Robert L. Raab, P.E., BCEE, CCM
Senior Vice President

William D. Merklin, P.E.
Senior Vice President

May 16, 2019

Ms. Caroline Eigenbrodt
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7013

Re: New York State Superfund Standby Contract
Work Assignment No. D007620-41
123 Post Avenue Site (Site No. 130088)
D&B No. 3150-41

Dear Ms. Eigenbrodt:

The purpose of this letter is to summarize site management activities completed for the 123 Post Avenue Site – OUI, located at 123 Post Avenue, Westbury, NY (see **Attachment A - Figures**). This monitoring report addresses the period from July 1, 2018 through September 30, 2018. Presented below is a summary of system operations during the quarter, as well as the results of analytical testing completed in accordance with the approved work plan for the referenced work assignment.

During this reporting period, activities occurring at the Site included the installation of a new electrical service to power the existing soil vapor extraction (SVE) system; completion of a geophysical survey; groundwater monitoring well installation and development; soil vapor point and sub-slab vapor point installation; completion of a site survey to survey the locations and elevations of the newly installed monitoring wells and vapor points; non-routine system maintenance activities to enable successful SVE system start-up; weekly SVE system operation and maintenance; and, routine groundwater sampling.

Electrical Service

A new electrical service was installed on the site building by Charles J. Hoyler Electrical Contractors Inc. of Babylon, New York. The service was constructed as a 100 Amp, 3 Phase service and the electrical contractor transferred the power supply for the SVE system from the electrical service that powers the site building to the new service. A copy of the Electrical Approval Certificate provided by the electrical inspector is provided as **Attachment B**.

Geophysical Survey

Prior to undertaking any intrusive activities, a geophysical survey was completed on August 9, 2018 by Utility Detection Inc. to: verify the locations of known underground utilities that were identified

Ms. Caroline Eigenbrodt
 New York State Department of Environmental Conservation
 Division of Environmental Remediation
 May 16, 2019

Page 2

by New York 811 one-call and non-member utility companies; identify and mark any unknown/unmarked utilities or subsurface structures; and, clear each proposed boring location. The geophysical survey was performed using non-intrusive locating techniques including ground penetrating radar, radio frequency pipe and cable locator and electromagnetic utility locating system. All utilities and/or structures that were identified during the survey were marked on the ground using standard utility color codes. A location for each proposed subsurface sampling location, which was clear of utilities and subsurface structures was identified in white on the ground surface.

Groundwater Monitoring Well Installation and Development

Two groundwater monitoring wells (MW-1A and MW-2A) were installed in the vicinity of MW-1 and MW-2 as replacement wells on August 13, 2018 by Land Air Water Environmental Services, Inc. (LAWES). The monitoring well locations are provided in **Attachment A**.

The monitoring wells were installed utilizing a hollow stem auger (HSA) drill rig to depths of approximately 40 feet. Each well was constructed utilizing 2-inch diameter (I.D.) Schedule 40 polyvinyl chloride (PVC) riser and 10 feet of 0.010-inch slotted well screen. A No. 1 well gravel pack was placed around each well screen. A bentonite seal was placed above the sand pack and the remainder of the borehole was grouted to grade. Protective, flush mount casings with locking covers were installed at each well location. Monitoring well construction logs are provided in **Attachment C**. A summary of the depth of each well and construction details are presented in Table 1 below.

Table 1: Monitoring Well Construction Summary

Well ID	Depth of Well (Feet bgs)	Depth of Screened Interval (Feet bgs)	Well Inner Diameter (inches)	Ground Surface Elev. (U.S. Survey Feet)	PVC Elev. (U.S. Survey Feet)	Screened Interval Elev. (U.S. Survey Feet)	Northing (U.S. Survey Feet)	Easting (U.S. Survey Feet)
MW-1A	40	30 – 40	2.0	96.07	95.73	65.73-55.73	192449.03	2113998.69
MW-2A	42	32 - 42	2.0	98.49	98.27	66.27-56.27	192388.2	2113928.94

Notes:

- ID: Identification
- bgs: below ground surface
- Elev.: Elevation
- U.S.: United States
- PVC: Polyvinyl Chloride
- Vertical Datum: North American Vertical Datum 88
- Horizontal Datum: North American Datum of 1983 (NAD83) Projected on the Universal Transverse Mercator (Zone 18N)

Following installation on August 15, 2018, LAWES developed the newly installed wells and existing monitoring well MW-3 (three wells total) in order to remove foreign materials and to facilitate hydraulic communication between the formation and the wells. The wells were developed utilizing standard surging and pumping techniques. Well development water was monitored for turbidity during purging using a water quality meter and readings were recorded. Development was considered

Ms. Caroline Eigenbrodt
New York State Department of Environmental Conservation
Division of Environmental Remediation
May 16, 2019

Page 3

complete when either the turbidity of the purge water was below 50 nephelometric turbidity units (NTUs), the well purged dry, or 10 well volumes were removed. Monitoring well development logs are provided in **Attachment D**.

Soil Vapor and Sub-Slab Vapor Point Installation

Three soil vapor points (SV-1 through SV-3) were installed in paved areas surrounding the on-site building on August 14, 2018 by LAWES. The soil vapor points were set at approximately 10 feet bgs. utilizing direct push techniques. The subsurface soil vapor points were constructed using stainless steel screens and Teflon® lined polyethylene tubing. The vapor point screens are approximately 6-inches long and constructed of double-woven stainless-steel wire. Filter glass beads were placed around the screened portion of each vapor point extending from the bottom of the borehole to approximately 1-foot above the screen. Approximately 6 inches of washed sand were placed directly above the filter glass beads, followed by a bentonite seal above the washed sand to a depth of approximately 1-foot bgs.

Two sub-slab vapor points (SS-1 and SS-2) were installed within the on-site building on August 14, 2018 by LAWES. The concrete slab was cored at each sub-slab sample location. The sub-slab vapor points were constructed to approximately 1.5 feet below grade, using stainless steel screens and polyethylene tubing. The point screens were approximately 6-inches long and constructed of double-woven stainless-steel wire. Filter glass beads were placed around the screened portion of each vapor point extending from the bottom of the borehole to approximately 4-inches above the screen followed by a washed sand and a bentonite seal.

After construction each vapor point was purged using a low-flow sample pump to evacuate 3 volumes of soil vapor. A PID was utilized to record volatile organic compound (VOC) concentrations from the soil vapor probes in ppb. Helium was used as a tracer gas to ensure that an adequate surface seal was created during construction. Flush mount protective casings with covers were installed at all soil vapor and sub-slab vapor point locations. Locations of the soil vapor points and sub-slab vapor points are provided in **Attachment A**. Construction logs for the soil vapor points and the sub-slab soil vapor points are provided in **Attachment C**.

SVE System Operation, Maintenance and Sampling

Non-routine System Maintenance Activities

On September 9, 2018, Clean Globe Environmental (Clean Globe) was on-site to complete an SVE system inspection to enable the successful restart of the system. Following the system inspection Clean Globe recommended repair or replacement of the system flow meters, vacuum gauges, effluent piping and gripper plugs at the well heads, as well as installation of a temperature gauge for the effluent piping. Clean Globe retuned on September 17, 2018, to complete the above-mentioned maintenance activities to enable the system restart. Clean Globe attempted to fix the flow rate meters at the on-site recovery wells (RW-1S, RW-2S, RW-3S and RW-4S); however, due to the

Ms. Caroline Eigenbrodt
 New York State Department of Environmental Conservation
 Division of Environmental Remediation
 May 16, 2019

Page 4

configuration of the flow meters and housings Clean Globe recommended the use of a hand-held meter to obtain accurate system flow rate readings at the recovery wells through an access point in the PVC. Clean Globe replaced the broken vacuum gauges at recovery wells (RW-1S, RW-2S, RW-3S and RW-4S), at the blower and moisture separator and a new temperature gauge was installed on the blower effluent line. Additionally, Clean Globe installed new CPVC piping to the effluent line and removed the granular activated carbon adsorbers, as the previous piping was compromised. Following the above completed maintenance activities Clean Globe restarted the system on September 17, 2018, of this reporting period.

System Performance Summary

Following the SVE system start-up on September 17, 2018, D&B completed weekly site visits to complete routine operations and maintenance activities. System monitoring logs are provided in **Attachment E – SVE Operation and Maintenance Logs**. The SVE system has been in operation since start-up on September 17, 2018 of this reporting period. The performance of the SVE system during the current reporting period and start-up on September 17, 2018, is summarized below.

SVE System Performance Summary			
Parameter	Current Reporting Period	Previous Reporting Period	Totals to Date (3)
SVE System			
SVE System Average Flow Rate ⁽¹⁾	203.85	NA	203.85
VOC Removal Summary (lbs.) ⁽²⁾	6.91	NA	6.91
Total VOC Removal (lbs.)	6.91	NA	6.91

1. SVE System flow rates are monitored on a weekly basis.
2. SVE discharge vapor sampling is conducted on a quarterly basis
3. Totals are based on SVE System start-up on September 17, 2018 through the end of this reporting period.

Soil Vapor Extraction System Runtime/Downtime Summary

The total elapsed time for this reporting period from system start-up on September 17, 2018 through September 30, 2018 was 320 hours. Of this amount, the SVE system operated for 320 hours or 100 percent of the total elapsed time. A detailed system downtime summary, which identifies specific information regarding alarm conditions, downtime, system restart time, repairs, etc. is provided as **Attachment F**.

System runtime/downtime summary for the SVE system is summarized below.

SVE Runtime/Downtime Summary		
	(Hours)	(Percentage)
SVE System Runtime	320	100%
SVE System Downtime	0	0%
Total SVE System Runtime to Date ⁽¹⁾	320	100%

1. Total SVE System runtime and downtime to date are based the system being restarted on September 17, 2018.

Ms. Caroline Eigenbrodt
New York State Department of Environmental Conservation
Division of Environmental Remediation
May 16, 2019

Page 5

Soil Vapor Extraction System Vapor Sampling

One vapor-phase effluent discharge sample was collected for laboratory analysis via United States Environmental Protection Agency (USEPA) Method TO-15. The sample was collected from the SVE effluent system on September 17, 2018 upon system restart. The total volatile organic compound (VOC) emissions rate was 2.16E-02 pounds per hour (lbs./hr.) based on the sample collected on September 17, 2018 where the SVE blower average flow rate was 203.85 CFM. Since the system start-up through the end of this reporting period the SVE system removed approximately 6.91 pounds of VOCs. The sample exhibited VOC Concentrations well below the site-specific effluent limit of 0.5 lbs/hr, which was developed in consultation with the NYSDEC as a means of monitoring VOC emissions associated with the SVE System. Refer to **Attachment G** for analytical results.

Groundwater Monitoring and Sampling

Water levels were measured at the newly installed monitoring wells in conjunction with the quarterly groundwater sampling event conducted on September 17, 2018. Depth to water measurements and topographic survey data were used to calculate groundwater elevations and to prepare a groundwater elevation contour map. Groundwater level measurements and a groundwater contour map are provided in **Attachment A**. Based on information gathered, the depth to groundwater ranges from 31.72 feet bgs in MW-01A to 34.38 feet bgs in MW-02A. Based on groundwater elevation measurements, the groundwater flow direction is to the southwest.

Groundwater samples were collected from three on-site monitoring wells (MW-1A, MW-2A and MW-3) during this reporting period. Samples were analyzed for VOCs utilizing USEPA Method 8260, all results are compared to NYSDEC Class GA Groundwater Standards and Guidance Values. Additionally, per the request of the NYSDEC, all monitoring wells were sampled for per- and polyfluoroalkyl substances (PFAS), as well as 1,4-dioxane during this reporting period. The locations of on-site groundwater monitoring wells are provided in **Attachment A**. VOCs were not detected in excess of standards, criteria and guidance values in any of the monitoring wells sampled. **Attachment G** presents tabulated analytical results relative to SCGs and **Attachment H** presents groundwater quality logs.

Data Validation Summary

One vapor-phase sample and three groundwater samples were collected this reporting period. All three groundwater samples collected throughout this reporting period were analyzed for VOCs via USEPA Method 8260, 1,4-dioxane via USEPA Method 8270 SIM and TCL PFAS via USEPA Method 537 Modified by Test America Analytical Laboratory. Additionally, the collected vapor-phase sample was analyzed in accordance with USEPA Method TO-15 by Test America Analytical Laboratory.

Ms. Caroline Eigenbrodt
New York State Department of Environmental Conservation
Division of Environmental Remediation
May 16, 2019

Page 6

The laboratory deliverable packages were reviewed for contact and method compliance to determine the usability of the sample results. Data validation checklists are provided as **Attachment I**. The findings of the review process are summarized below:

Vapor Phase Sample:

- Tetrachloroethene exceeded the calibration in the original analysis and was reported from the secondary dilution which was “D” qualified for the vapor-phase system effluent sample collected on September 17, 2018.

Groundwater Samples:

- Perfluorobutanoic acid (PFBA) and perfluorohexanesulfonic acid (PFHxS) were detected in the FIELD BLANK and method blank for groundwater samples collected from MW-1A, MW-2A and MW-3 on September 17, 2018. Perfluorohexanesulfonic acid (PFHxS) was qualified as non-detect (UB) in sample MW-1A. The “B” qualifier was removed from the remaining water sample results in which the results were more than ten times that found in the blank.

Conclusions

- The site management activities completed this reporting period included the installation of a new electrical service to power the existing SVE system; completion of a geophysical survey; groundwater monitoring well installation and development; soil vapor point and sub-slab vapor point installation; completion of a site survey to survey the locations and elevations of the newly installed monitoring wells and vapor points; non-routine system maintenance activities to enable successful SVE system start-up; weekly SVE system operation and maintenance; and, routine groundwater sampling.
- Non-Routine SVE system maintenance was successfully completed prior to the system start-up in September 2018.
- The SVE system was operating during this reporting period since system start-up on September 17, 2018, following maintenance activities, as detailed above.
- One vapor-phase discharge sample was collected for laboratory analysis this reporting period. The sample was collected from the SVE effluent following SVE system start-up on September 17, 2018. The total VOC emissions rate was 2.16E-02 lbs/hr., lower than the Site-Specific Vapor-Phase Effluent Limit of 0.5lbs/hr. established by the NYSDEC.
- Three on-site monitoring wells (MW-1A, MW-2A, MW-3) were sampled on September 17, 2018. VOCs were not detected in excess of SCGs in any of the monitoring wells

Ms. Caroline Eigenbrodt
New York State Department of Environmental Conservation
Division of Environmental Remediation
May 16, 2019

Page 7

sampled. Additionally, per the request of the NYSDEC, the monitoring wells were sampled for PFAS and 1,4-dioxane during this reporting period.

Recommendations

- The SVE system be shutdown to allow for a soil vapor intrusion (SVI) study to be completed during the upcoming heating season.
- An evaluation should be performed after completion of the SVI study to determine if continued operation of the SVE system is necessary or if an alternate remedial measure such as installation of sub-slab depressurization system(s) should be implemented as VOC concentrations in groundwater were found to be below SCGs.
- Groundwater monitoring and sampling should continue to be conducted on a quarterly basis to monitor seasonal trends in groundwater contaminant levels at the site.
- Continue to report results, conclusions and recommendations for site/system performance activities in quarterly Site Management Reports and annual Periodic Review Reports.

Please do not hesitate to contact me at (516) 364-9890, Ext. 3506 if you have any questions.

Very truly yours,



James Van Horn
Project Manager

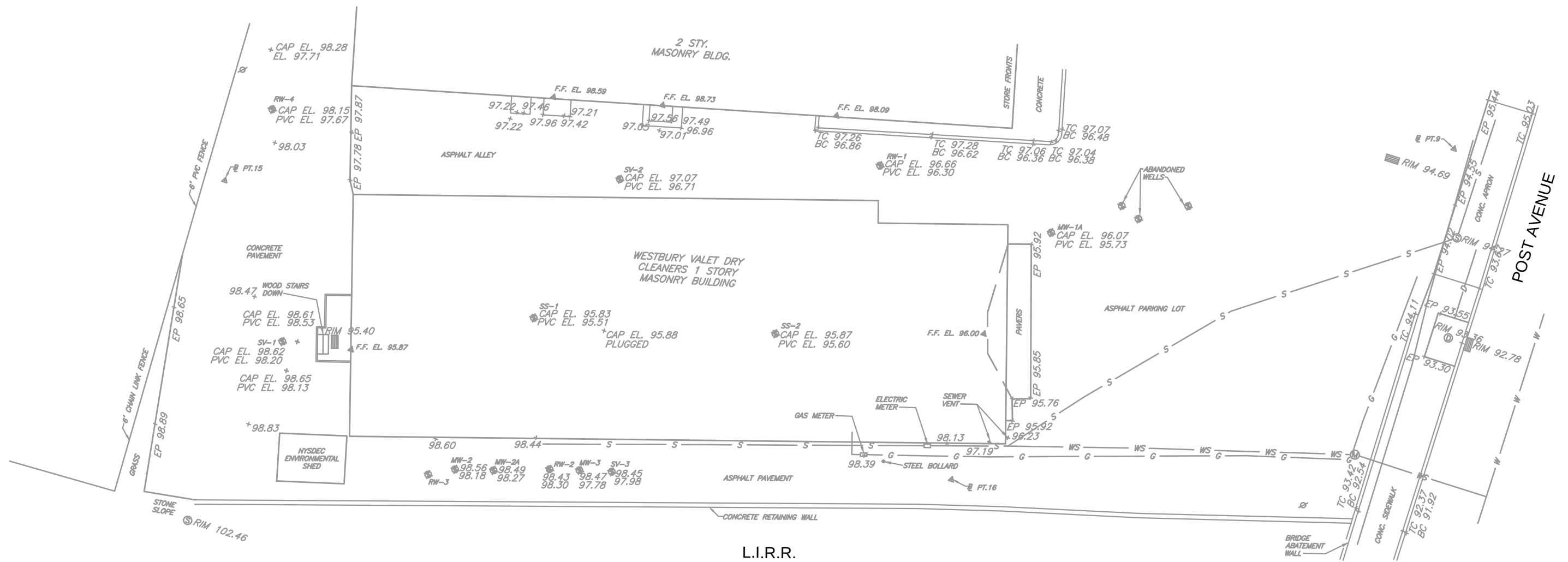
JVHt/cf

Attachments

cc: M. Wright (D&B)

♦3150JVH051619CE_Ltr

ATTACHMENT A
FIGURES AND TABLES



F:\3150-41C\DWG\3150-41C C-SP01_GND_CONT.dwg, 5/16/2019 7:19:13 AM, kalesius

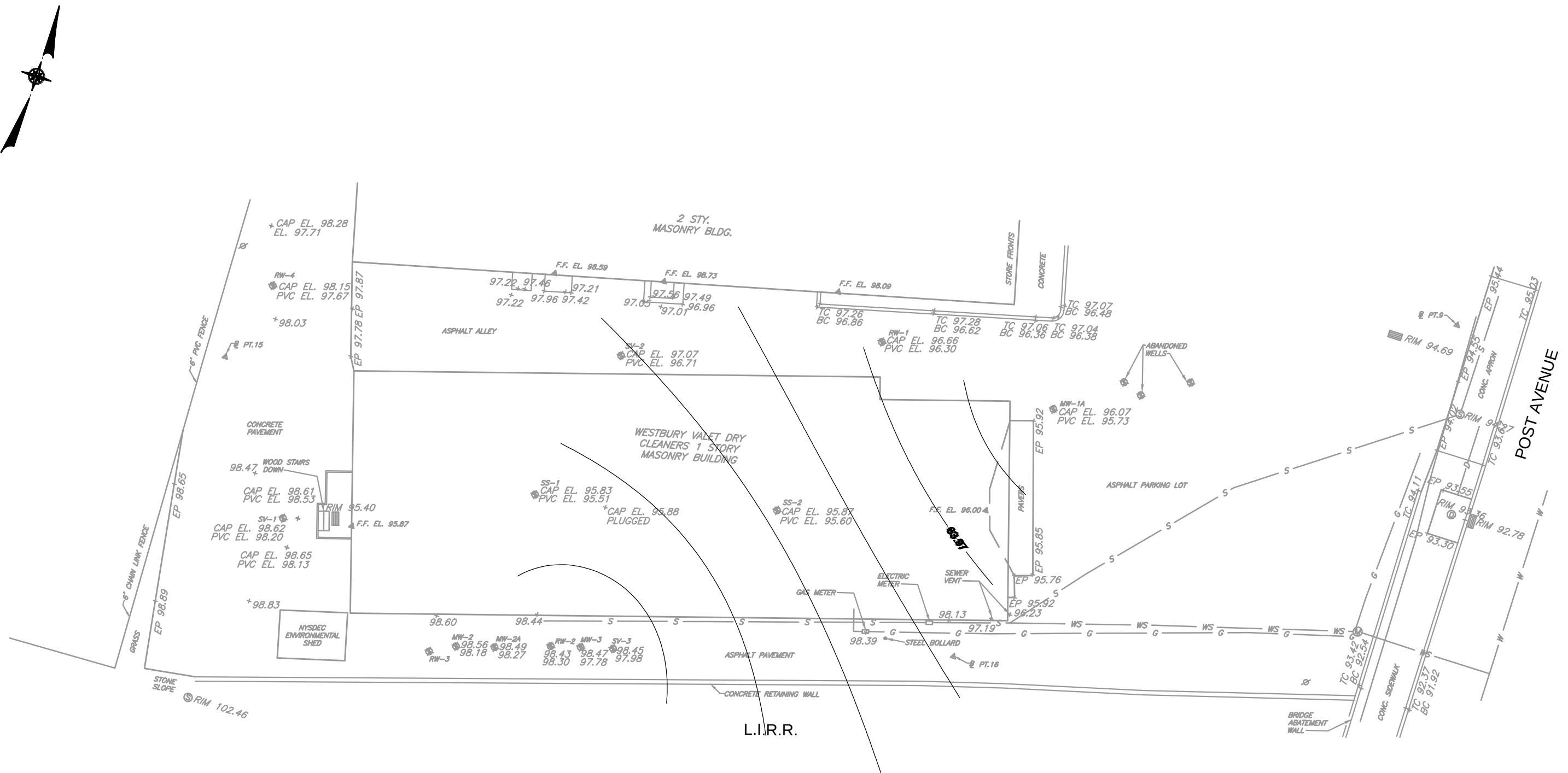


Table A-1: Groundwater Elevation Measurements

WELL	LOCATION		GROUND ELEVATION (U.S. Survey Ft.)	TOP OF PVC RISER (U.S. Survey Ft.)	DATE	
					9/17/2018	
	NORTH	EAST			DTW	ELEV
MW-01A	192449.03	2113998.69	96.07	95.73	31.72	64.01
MW-02A	192388.2	2113928.94	98.49	98.27	34.38	63.89
MW-03	192392.28	2113941.42	98.3	97.78	33.91	63.87

NOTES

-- Not measured

U.S.: United States

Ft.: Feet

DTW: Depth to water

ELEV: Elevation

Vertical Datum: North American Vertical Datum 88

Horizontal Datum: North American Datum 83

ATTACHMENT B
ELECTRICAL APPROVAL CERTIFICATE

Electrical Inspectors, Inc.

NYBFU

New York Board of Fire Underwriters
300 East Meadow Avenue
East Meadow, NY 11554
Office: (516) 794-0400 (631) 650-0200
Website: www.eiiny.com

2018-1061514

Westbury, Village of

Inspector: 126

Issue Date: 7/19/2018



Mail To:

Charles J. Hoyler Electrical Contractors Inc.
Charles J. Hoyler
PO Box 727
Babylon NY 11702
License # Westbury 468 Hempstead 1929

Property Address:

NYS DEC
123 Post Avenue
Westbury NY 11590

ELECTRICAL APPROVAL CERTIFICATE

Section: Block: Lot: Permit:

AREAS LISTED BELOW ARE APPROVED BY Inspection
AND FOUND TO BE IN COMPLIANCE WITH THE BUILDING CODE OF NYS
AND CURRENT PROMULGATED NEC

*No visual defects were found for the electrical inspection provided. No obvious unsatisfactory conditions
were found in the areas herein below only.*

Commercial Inspection Final Approved 7/18/18

New Service Overhead 1-Meter 100 Amps Three Phase 1-100 Amp 20 Circuit Panel 8 Used.*

This electrical inspection and certificate does not take into account any FEMA, NYS and local flood elevation requirements. It is the responsibility of the property owner to determine if flood elevation requirements apply. NYBFU and EI are not responsible for any Flood Elevation requirements. Therefore this electrical certificate is only for compliance of NYS Electrical and NEC Codes.

Richard M. Bivone
President

Philip F. Goehring, Jr.
Chief Electrical Inspector



This document features a tamper proof Quick

marked when certificate was issued.

ATTACHMENT C

**MONITORING WELL, SOIL VAPOR AND
SUB-SLAB VAPOR POINT CONSTRUCTION LOGS**



D&B ENGINEERS
AND
ARCHITECTS, P.C.

Well Construction Log

Site 123 Post Avenue – OU1 Job No. 3150-41 Well No. MW-1A
Total Depth (ft) 40 Surface Elevation 96.07 Top Riser Elevation 95.73

Water Level (ft) 64.08 Date Installed 8/13/2018

Riser Dia. 2 in. Material sch 40 PVC Length 30 ft.
Screen Dia. 2 in. Material sch 40 PVC Length 10 ft. Slot Size 0.010 in

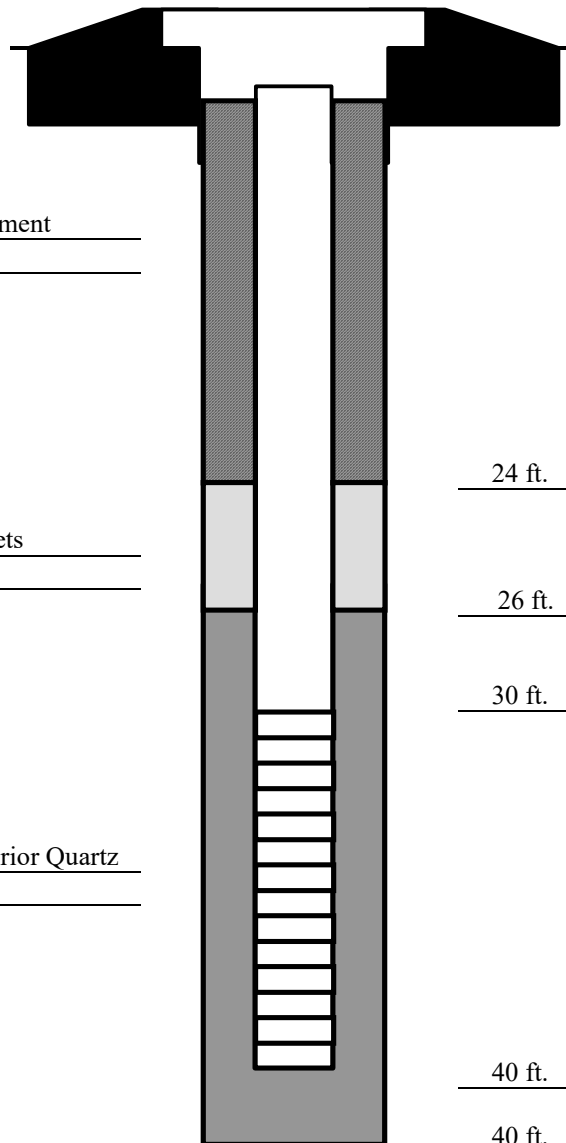
SCHEMATIC

Flush Mount
Manhole

Grout Type Bentonite / Cement
Mixture

Seal Type Bentonite pellets

Sand Pack Type Fillpro Superior Quartz
Size #1



24 ft. Top Seal

26 ft. Top Sand Pack

30 ft. Top Screen

40 ft. Bottom Screen

40 ft. Total Depth of Boring



D&B ENGINEERS
AND
ARCHITECTS, P.C.

Well Construction Log

Site 123 Post Avenue – OU1 Job No. 3150-41 Well No. MW-2A
Total Depth (ft) 42 Surface Elevation 98.49 Top Riser Elevation 98.27

Water Level (ft) 63.62 Date Installed 8/13/2018

Riser Dia. 2 in. Material sch 40 PVC Length 32 ft.
Screen Dia. 2 in. Material sch 40 PVC Length 10 ft. Slot Size 0.010 in

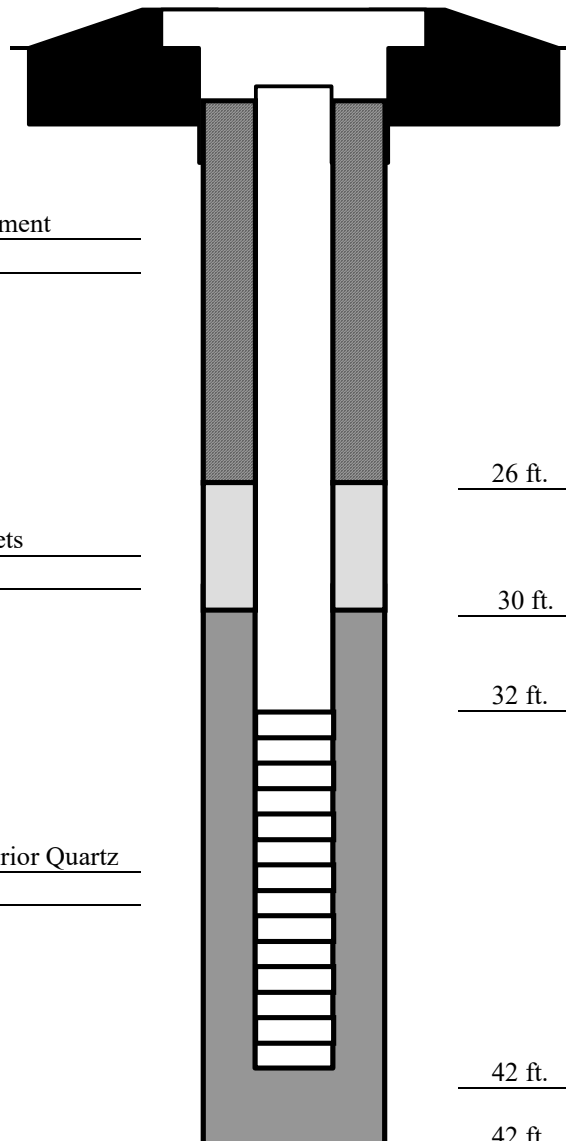
SCHEMATIC

Flush Mount
Manhole

Grout Type Bentonite / Cement
Mixture

Seal Type Bentonite pellets

Sand Pack Type Fillpro Superior Quartz
Size #1



26 ft. Top Seal

30 ft. Top Sand Pack

32 ft. Top Screen

42 ft. Bottom Screen

42 ft. Total Depth of Boring



D&B ENGINEERS
AND
ARCHITECTS, P.C.

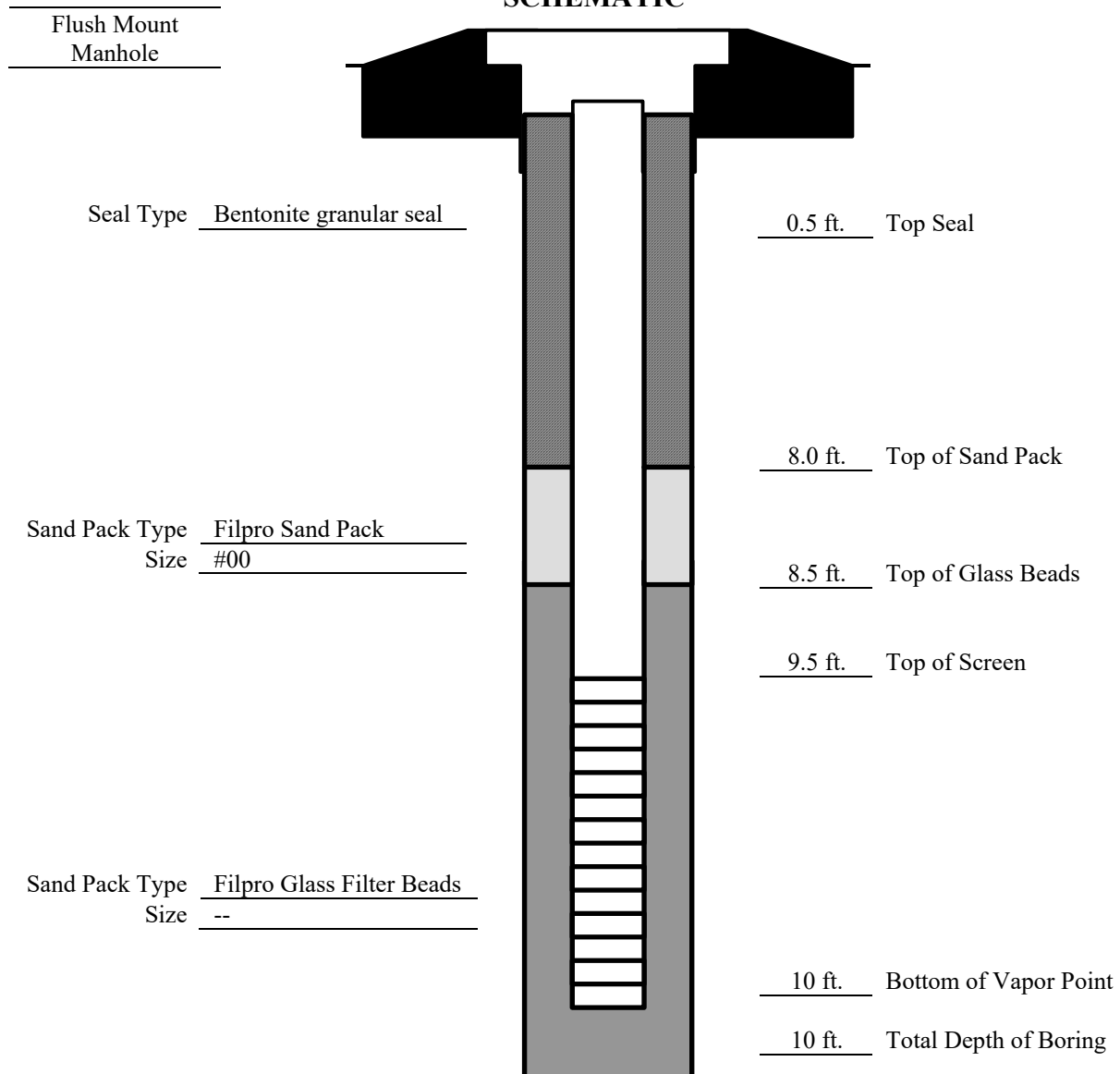
Soil Vapor Point - Construction Log

Site 123 Post Avenue – OU1 Job No. 3150-41 Soil Vapor No. SV-1
Total Depth 10 ft. Surface Elevation 98.62 Top Riser Elevation 98.20

Date Installed 8/14/2018

Tubing Dia. -- Material Teflon-tubing Length 9.5 ft.
Screen Dia. 0.25 in. Material Stainless Steel Length 0.5 ft.

SCHEMATIC





D&B ENGINEERS
AND
ARCHITECTS, P.C.

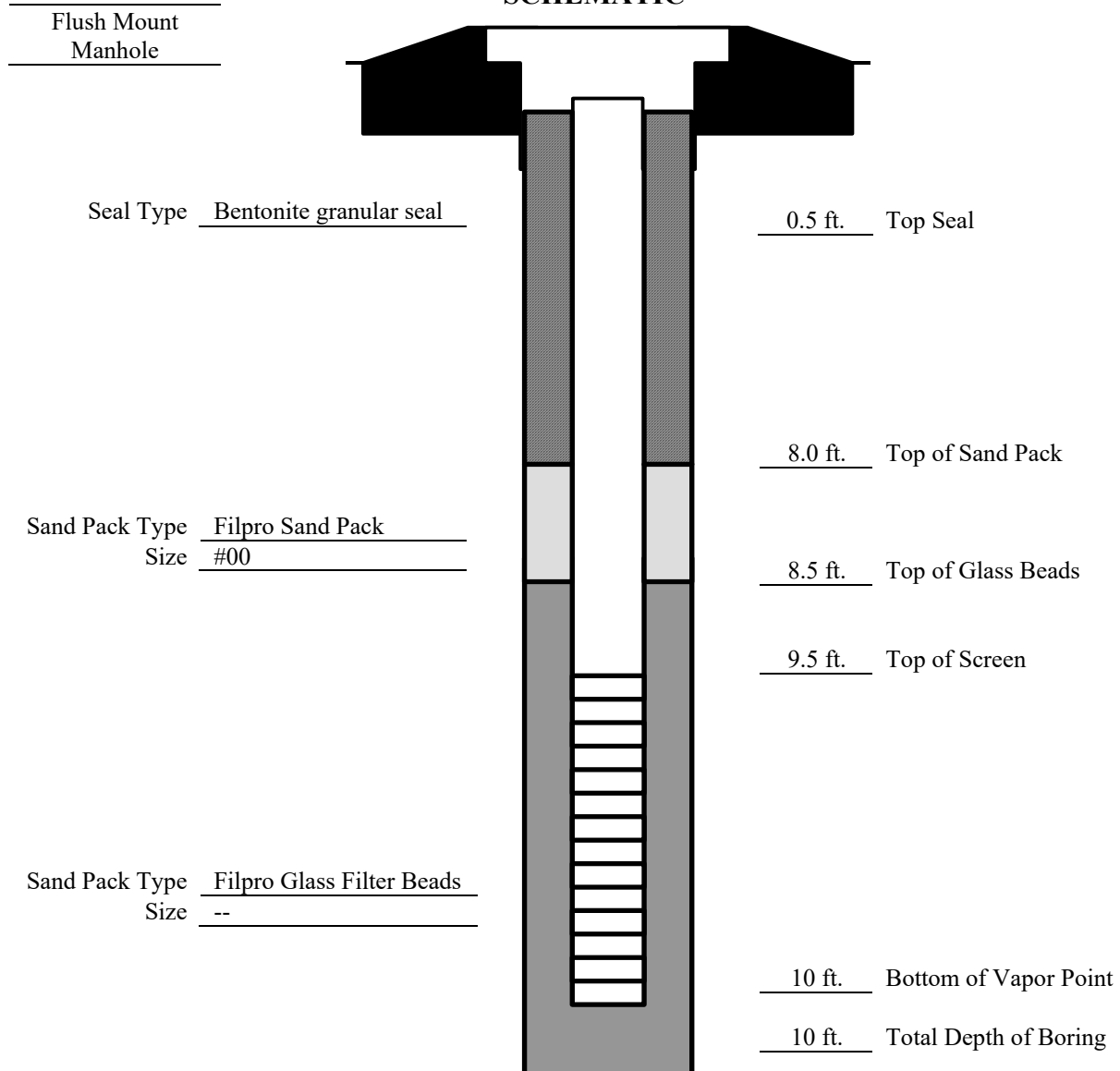
Soil Vapor Point - Construction Log

Site 123 Post Avenue – OU1 Job No. 3150-41 Soil Vapor No. SV-2
Total Depth 10 ft. Surface Elevation 97.07 Top Riser Elevation 96.71

Date Installed 8/14/2018

Tubing Dia. -- Material Teflon-tubing Length 9.5 ft.
Screen Dia. 0.25 in. Material Stainless Steel Length 0.5 ft.

SCHEMATIC





D&B ENGINEERS
AND
ARCHITECTS, P.C.

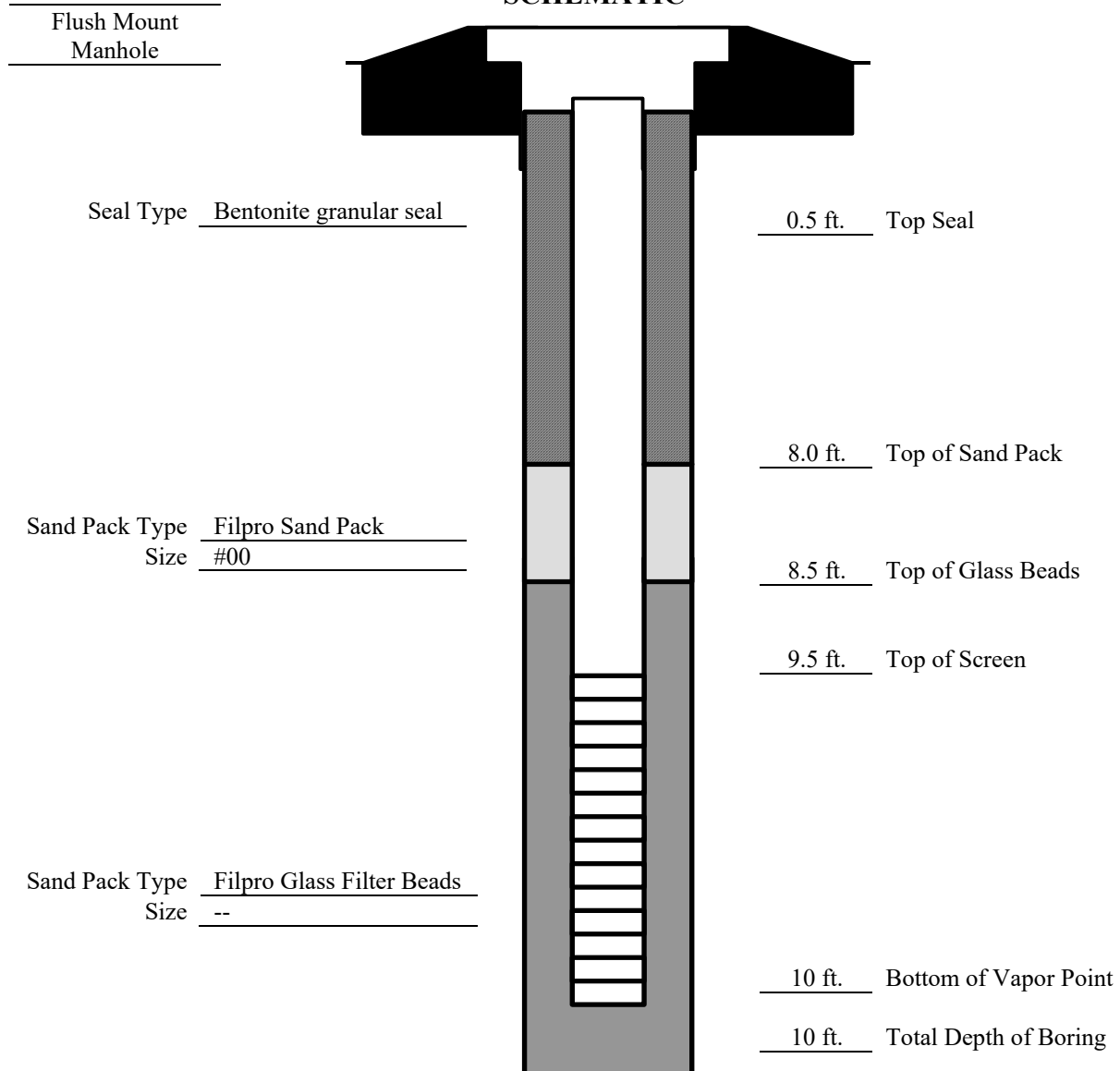
Soil Vapor Point - Construction Log

Site 123 Post Avenue – OU1 Job No. 3150-41 Soil Vapor No. SV-3
Total Depth 10 ft. Surface Elevation 98.45 Top Riser Elevation 97.98

Date Installed 8/14/2018

Tubing Dia. -- Material Teflon-tubing Length 9.5 ft.
Screen Dia. 0.25 in. Material Stainless Steel Length 0.5 ft.

SCHEMATIC





D&B ENGINEERS
AND
ARCHITECTS, P.C.

Sub-Slab Vapor Point - Construction Log

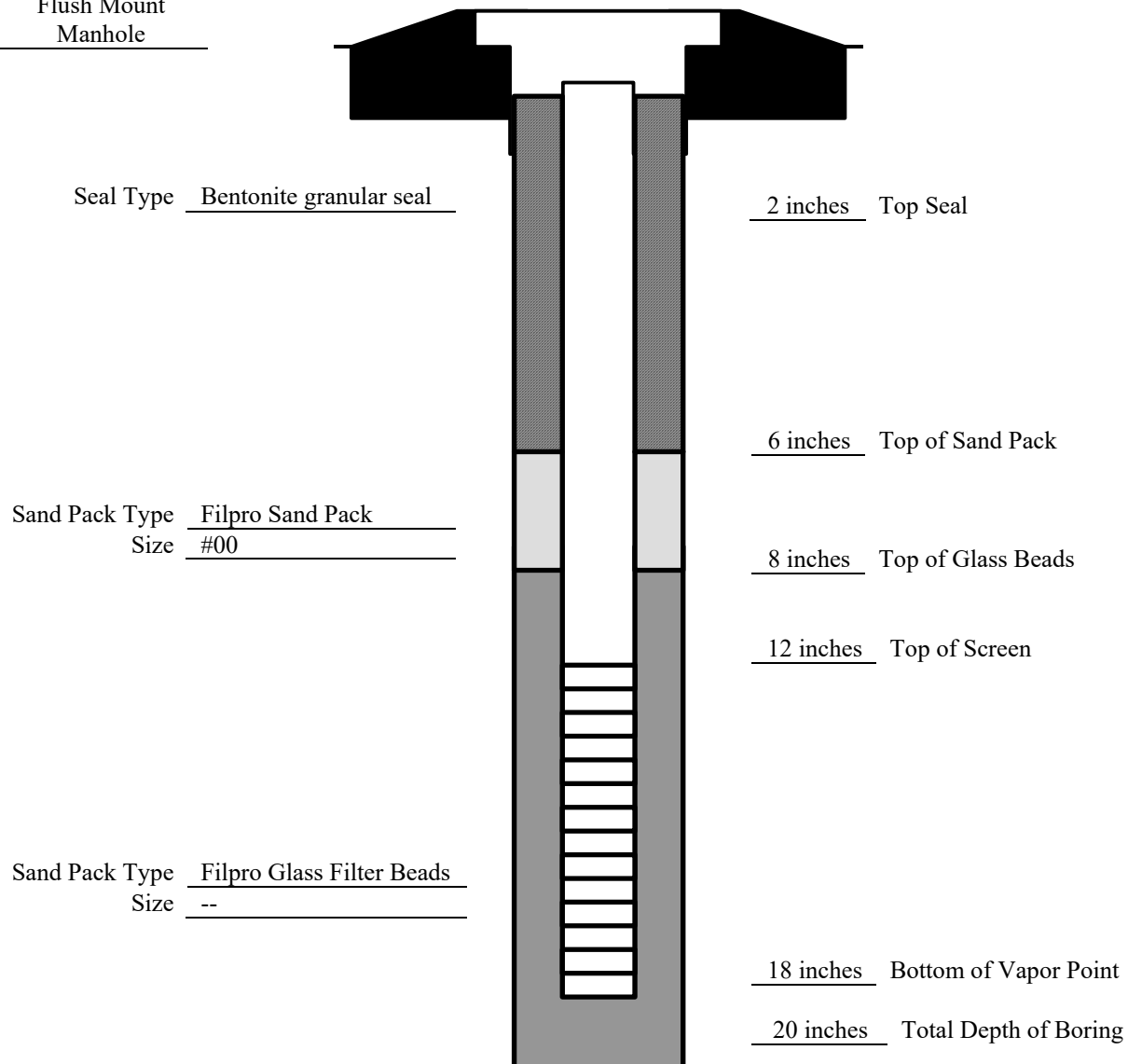
Site 123 Post Avenue – OU1 Job No. 3150-41 Soil Vapor No. SS-1
Total Depth 20 inches Surface Elevation 95.83 Top Riser Elevation 95.51

Date Installed 8/14/2018

Tubing Dia. -- Material Teflon-tubing Length 12 inches
Screen Dia. 0.25 in. Material Stainless Steel Length 6 inches

SCHEMATIC

Flush Mount
Manhole





D&B ENGINEERS
AND
ARCHITECTS, P.C.

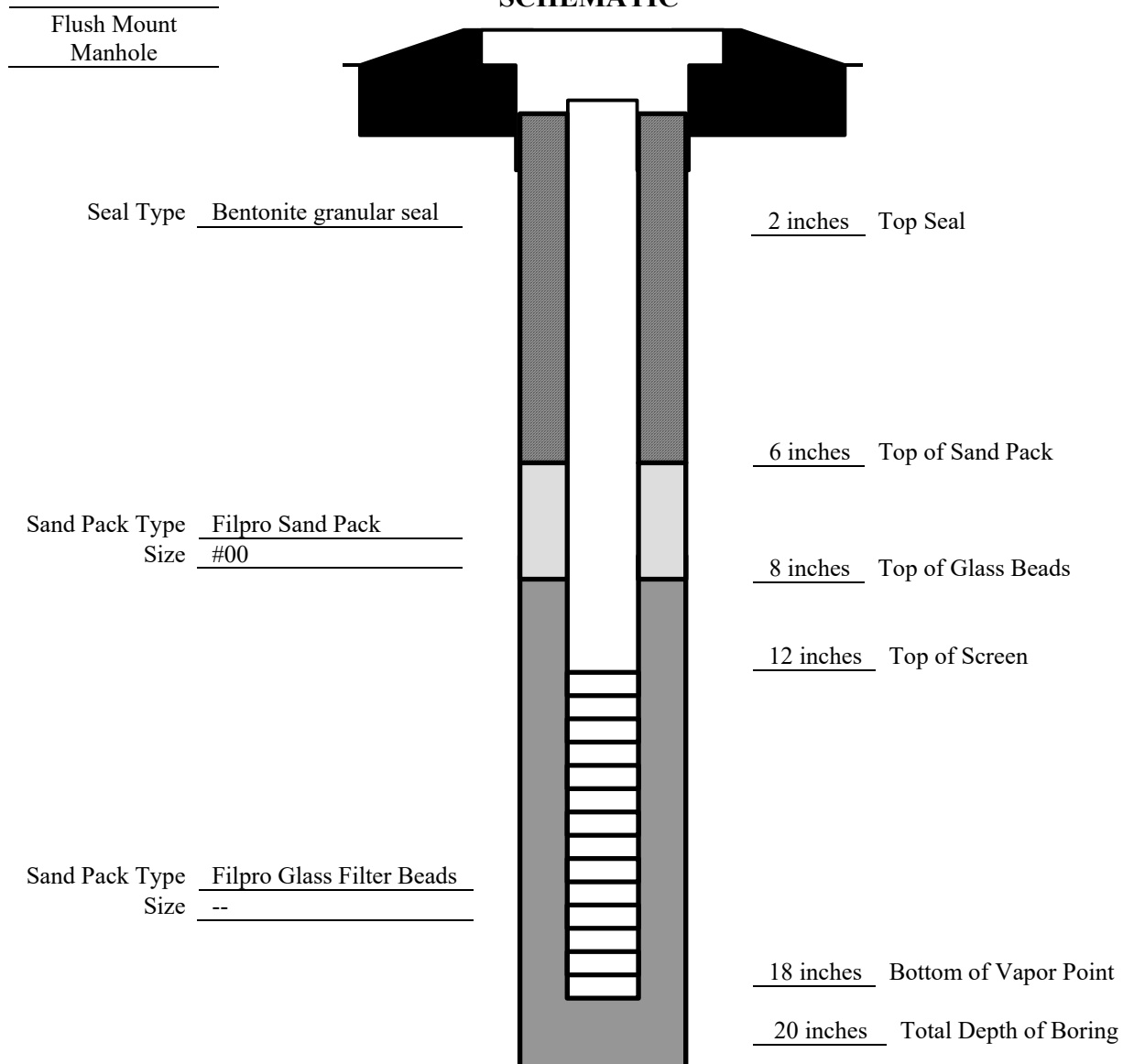
Sub-Slab Vapor Point - Construction Log

Site 123 Post Avenue – OU1 Job No. 3150-41 Soil Vapor No. SS-2
Total Depth 20 inches Surface Elevation 95.87 Top Riser Elevation 95.60

Date Installed 8/14/2018

Tubing Dia. -- Material Teflon-tubing Length 12 inches
Screen Dia. 0.25 in. Material Stainless Steel Length 6 inches

SCHEMATIC



ATTACHMENT D

MONITORING WELL DEVELOPMENT LOGS

FIELD OBSERVATION LOG MONITORING WELL DEVELOPMENT RECORD

SITE 123 Post Avenue – OU1

DATE: 8/15/2018

WELL ID: MW-1A

PERSONNEL: Tara Judge

Depth of well (from top of casing) 40 ft.

Initial static water level (from top of casing) 31.51 ft.

Headspace readings 0.0 ppm

Purging Method

Airlift

Bailer

Submersible

Pump

Centrifugal

Pos. Displ.

Peristaltic

Pump (Low Flow)

Well Volume Calculation:

2 in. casing: 8.49 ft. of water x 0.16 = 1.38 gallons

3 in. casing: ft. of water x 0.36 = gallons

4 in. casing: ft. of water x 0.65 = gallons

volume of water removed:

55 gal.

>3 volumes: yes X

no

purged dry? yes

no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Surge pump to bottom of screen.	19.16	6.17	0.498	+1000	6.37	238
	18.73	6.56	0.544	+1000	6.57	176
Set pump in screen zone	17.72	6.75	0.505	+1000	5.91	164
	17.59	6.66	0.504	189	5.72	154
	17.59	6.57	0.508	65.5	5.73	134
	17.67	6.49	0.576	1000	5.81	128
	17.54	6.52	0.558	1000	6.06	157
	17.37	6.45	0.554	120	5.59	166
Surge to bottom	17.71	6.44	0.540	1000	6.70	173
	17.41	6.40	0.518	1000	6.56	185
	17.42	6.43	0.490	1000	6.16	189
Surge to bottom	17.38	6.41	0.520	1000	6.26	190
	17.38	6.35	0.726	1000	4.76	154
	17.33	6.40	0.528	395	5.74	169
Surge through screen zone	17.50	6.42	0.524	98.5	5.54	146
	17.55	6.45	0.525	59.4	5.36	128
	17.69	6.51	0.517	25	6.32	124
	17.43	6.60	0.515	11.2	6.70	124
	17.39	6.65	0.518	17.1	6.45	105
	17.30	6.64	0.519	9.2	6.33	116

Method:

Purge Start: 7:27 am

Purge Stop: 8:55 am

Pump: Submersible Grundos pump

Meters: Horiba U52 and water level

Observations

Weather/Temperature: Sunny 70-90 degrees F

Description: Clear at end of purging.

Free Product? yes no X describe

Sheen? yes no X describe

Odor? yes no X describe

Comments: Purge water contained in (1) 55-gallon drum.

Periodic surging was performed throughout the screened zone.

FIELD OBSERVATION LOG MONITORING WELL DEVELOPMENT RECORD

SITE 123 Post Avenue – OU1

DATE: 8/15/2018

WELL ID: MW-2A

PERSONNEL: Tara Judge

Depth of well (from top of casing) 42 ft.

Initial static water level (from top of casing) 34.17 ft.

Headspace readings 0.0 ppm

Purging Method

Airlift _____
Bailer _____
Submersible _____
Pump X

Centrifugal _____
Pos. Displ. _____
Peristaltic _____
Pump (Low Flow) _____

Well Volume Calculation:

2 in. casing: 6.64 ft. of water x 0.16 = 1.08 gallons
3 in. casing: _____ ft. of water x 0.36 = _____ gallons
4 in. casing: _____ ft. of water x 0.65 = _____ gallons

volume of water removed:

55 gal.

>3 volumes: yes X

no _____

purged dry? yes _____

no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Pump set to bottom of screen zone.	18.35	6.93	0.775	1000	3.53	161
Stopped pumping to clear obstruction.	17.42	6.88	0.866	668	1.99	159
	18.32	6.90	0.842	1000	3.17	158
Pump surged to bottom.	18.40	6.69	0.851	1000	2.62	174
	17.56	6.75	0.873	1000	2.80	165
	17.88	6.68	0.868	322	3.15	162
	17.96	6.65	0.876	1000	2.60	171
Surged through screen zone	17.89	6.62	0.879	739	2.50	171
	17.56	6.66	0.883	248	2.68	161
	18.07	6.63	0.848	1000	2.63	166
	18.15	6.57	0.850	947	2.06	170
Surged to bottom.	18.09	6.75	0.867	1000	3.01	172
	18.10	6.64	0.870	467	2.76	168
	18.00	6.75	0.866	132	2.99	160
Surged through screen zone	18.03	6.65	0.847	630	3.52	162
	18.00	6.66	0.854	160	3.89	160
	17.88	6.72	0.850	36.8	2.99	158
	17.71	6.70	0.851	21.9	2.89	159

Method:

Purge Start: 10:53 am

Purge Stop: 12:03 am

Pump: Submersible Grundfos Pump

Meters: Horiba U52 and water level

Observations

Weather/Temperature: Sunny, 70-90 degrees F

Description: Clear at end of purging.

Free Product? yes _____ no X describe
Sheen? yes _____ no X describe
Odor? yes _____ no X describe

Comments: Purge water contained in (1) 55-gallon drum.

Periodic surging was performed throughout the screened zone.

FIELD OBSERVATION LOG MONITORING WELL DEVELOPMENT RECORD

SITE 123 Post Avenue – OU1

DATE: 8/15/2018

WELL ID: MW-3

PERSONNEL: Tara Judge

Depth of well (from top of casing) 42 ft.

Initial static water level (from top of casing) 33.68 ft.

Headspace readings 0.0 ppm

Purging Method

Airlift

Bailer

Submersible

Pump

X

Centrifugal

Pos. Displ.

Peristaltic

Pump (Low Flow)

Well Volume Calculation:

2 in. casing: 8.04 ft. of water x 0.16 = 1.31 gallons

3 in. casing: ft. of water x 0.36 = gallons

4 in. casing: ft. of water x 0.65 = gallons

volume of water removed:

55 gal.

>3 volumes: yes X

no

purged dry? yes

no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Start pumping	19.62	6.77	0.761	1000	2.12	144
Set pump to bottom of screen	18.45	6.58	0.708	1000	2.30	169
	17.97	6.55	0.689	653	2.32	175
Surge through screen zone	17.45	6.55	0.686	155	2.83	172
	17.96	6.46	0.752	1000	2.03	160
	17.94	6.51	0.664	944	3.52	161
Surge through screen zone	17.80	6.38	0.792	1000	2.07	171
	17.66	6.45	0.661	597	3.61	171
	17.53	6.47	0.655	77.7	3.76	163
Surge through screen zone	17.66	6.48	0.684	1000	3.71	156
	17.57	6.44	0.645	340	3.34	169
	17.52	6.47	0.638	79.0	3.30	161
	17.49	6.46	0.638	39.5	3.61	159
	17.43	6.49	0.634	30	3.78	153
	17.30	6.48	0.630	140	3.51	149
Surge through screen zone	18.84	6.49	0.650	1000	4.50	152
	18.11	6.57	0.621	1000	4.31	165
	17.70	6.54	0.609	188	3.62	167
	17.92	6.48	0.610	62.4	3.69	168
	17.62	6.50	0.610	26	3.69	160
	17.60	6.51	0.610	18	3.31	161

Method:

Purge Start: 9:20 am

Purge Stop: 10:40 am

Pump: Submersible Grundfos Pump

Meters: Horiba U52 and water level

Observations

Weather/Temperature: Sunny, 70-90 degrees F

Description: Clear at end of purging.

Free Product? yes no X describe

Sheen? yes no X describe

Odor? yes no X describe

Comments: Purge water contained in (1) 55-gallon drum.

Periodic surging was performed throughout the screened zone.

ATTACHMENT E
SVE SYSTEM FIELD LOGS

123 Post Ave, Westbury, NY
123 Post Ave Cleaners
SVE Field Logs

	Flow (cfm)				Vacuum (inch)				PID (ppm)				Pre-Blower	Pre-Blower	Post-Blower	Post-Blower	Post-Blower	Moist-Sep	Post Blower Temp
Date/Time	RW-1S	RW-2S	RW-3S	RW-4S	RW-1S	RW-2S	RW-3S	RW-4S	RW-1S	RW-2S	RW-3S	RW-4S	Vacuum (inch)	Flow (cfm)	Pressure (inch)	Flow (cfm)	PID (ppm)	Vac (inch)	°F
9/17/18 5:00 PM	39	65	--	52	-4	-5	-7	-8	2	5.1	19.2	9.2	--	190	--	210	11.2	-30	117.2
9/26/18 4:30 PM	39	65	65	50	-5	-5.5	-6.5	-9	1.6	1.4	4.9	4.8	--	190	--	197.7	3.7	-32	122.5
AVERAGE	39.00	65.00	65.00	51.00	-4.50	-5.25	-6.75	-8.50	1.80	3.25	12.05	7.00	--	190.00	--	203.85	7.45	-31.00	119.85

ATTACHMENT F
SVE DOWNTIME TABLE

Table1
New York State Department of Environmental Conservation
NYSDEC Site No. 130088 - 123 Post Avenue Site
Westbury, New York
System Downtime Summary

Shut-Off Date/Time	Restart Date/Time	Component Restarted	Cause	Action Taken
--	9/17/18 15:45	SVE	System Start-up	Maintenance and Restart of on-site SVE system.

ATTACHMENT G
TABULATED ANALYTICAL RESULTS

123 Post Avenue Site
Air Effluent Sample
Volatile Organic Compounds (VOCs)

Sample ID Sampling Date Units	EFFLUENT 09/17/18 ug/m ³
1,1,1-Trichloroethane	180
1,1,2,2-Tetrachloroethane	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	U
1,1,2-Trichloroethane	U
1,1-Dichloroethane	130
1,1-Dichloroethene	U
1,2,4-Trichlorobenzene	U
1,2,4-Trimethylbenzene	U
1,2-Dibromoethane (Ethylene Dibromide)	U
1,2-Dichlorobenzene	U
1,2-Dichloroethane	U
1,2-Dichloropropane	U
1,2-Dichlorotetrafluoroethane	U
1,3,5-Trimethylbenzene (Mesitylene)	U
1,3-Butadiene	U
1,3-Dichlorobenzene	U
1,4-Dichlorobenzene	U
1,4-Dioxane (P-Dioxane)	U
2,2,4-Trimethylpentane	U
2-Chlorotoluene	U
2-Hexanone	U
4-Ethyltoluene	U
Acetone	U
Allyl Chloride (3-Chloropropene)	U
Benzene	U
Benzyl Chloride	U
Bromodichloromethane	U
Bromoethene	U
Bromoform	U
Bromomethane	U
Butane	U
Carbon Disulfide	U
Carbon Tetrachloride	U
Chlorobenzene	U
Chlorodifluoromethane	U
Chloroethane	U
Chloroform	28 J
Chloromethane	U
Cis-1,2-Dichloroethylene	550
Cis-1,3-Dichloropropene	U
Cyclohexane	U
Cymene	U
Dibromochloromethane	U
Dichlorodifluoromethane	U
Dichloroethylenes	580
Ethylbenzene	U
Hexachlorobutadiene	U
Isopropanol	U
Isopropylbenzene (Cumene)	U
M,P-Xylenes	U
Methyl Ethyl Ketone (2-Butanone)	U

See next page for footnotes.

123 Post Avenue Site
Air Effluent Sample
Volatile Organic Compounds (VOCs)

Sample ID Sampling Date Units	EFFLUENT 09/17/18 ug/m ³
VOCs continued	
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	U
Methyl Methacrylate	U
Methylene Chloride	U
Naphthalene	U
N-Butylbenzene	U
N-Heptane	U
N-Hexane	U
N-Propylbenzene	U
O-Xylene (1,2-Dimethylbenzene)	U
Sec-Butylbenzene	U
Styrene	U
T-Butylbenzene	U
Tert-Butyl Alcohol	U
Tert-Butyl Methyl Ether	U
Tetrachloroethylene(PCE)	<u>23000</u> D
Tetrahydrofuran	U
Toluene	U
Trans-1,2-Dichloroethene	29
Trans-1,3-Dichloropropene	U
Trichloroethylene (TCE)	<u>3800</u>
Trichlorofluoromethane	U
Vinyl Chloride	U
Xylenes, Total	U
Total Volatile Organic Compounds	28297.00 ug/m3
AVERAGE AIR DISCHARGE FLOW RATE (CFM)	203.85 CFM
TOTAL VOC DISCHARGE RATE (lbs/hr)	2.16E-02 lbs/hr

Qualifiers:

D: Result reported from a secondary dilution

U: Analyzed but not detected

J: Estimated value

Notes:

ug/m³: Micrograms per cubic meter

lb/hr: pounds per hour

CFM: cubic feet per minute

123 Post Avenue Site
Groundwater Samples
Volatile Organic Compounds

Sample ID Sampling Date Units	MW-1A 9/17/2018 ug/l	MW-2A 9/17/2018 ug/l	MW-3 9/17/2018 ug/l	NYSDEC Class GA Standard or Guidance Value ug/l
VOLATILE ORGANIC COMPOUNDS				
1,1,1-Trichloroethane	U	U	U	5
1,1,2,2-Tetrachloroethane	U	U	U	5
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	5
1,1,2-Trichloroethane	U	U	U	1
1,1-Dichloroethane	U	0.38 J	U	5
1,1-Dichloroethene	U	U	U	5
1,2,4-Trichlorobenzene	U	U	U	5
1,2-Dibromo-3-Chloropropane	U	U	U	0.04
1,2-Dibromoethane	U	U	U	0.0006
1,2-Dichlorobenzene	U	U	U	3
1,2-Dichloroethane	U	U	U	0.6
1,2-Dichloropropane	U	U	U	1
1,3-Dichlorobenzene	U	U	U	3
1,4-Dichlorobenzene	U	U	U	3
2-Hexanone	U	U	U	50
Acetone	U	3.3 J	U	50
Benzene	U	U	U	1
Bromodichloromethane	2.5	1.7	3	50
Bromoform	2.2	U	1	50
Bromomethane	U	U	U	5
Carbon Disulfide	U	U	U	60
Carbon Tetrachloride	U	U	U	5
Chlorobenzene	U	U	U	5
Chloroethane	U	U	U	5
Chloroform	1.4	1.6	2.3	7
Chloromethane	U	U	U	5
Cis-1,2-Dichloroethylene	1	U	U	5
Cis-1,3-Dichloropropene	U	U	U	0.4
Cyclohexane	U	U	U	--
Dibromochloromethane	3.9	1.7	3.4	50
Dichlorodifluoromethane	U	U	U	5
Ethylbenzene	U	U	U	5
Isopropylbenzene	U	U	U	5
Methyl acetate	U	U	U	--
Methyl Ethyl Ketone	U	U	U	50
Methyl Isobutyl Ketone	U	U	U	--
Methylcyclohexane	U	U	U	5
Methylene Chloride	U	U	U	5
Styrene	U	U	U	5
Tert-Butyl Methyl Ether	U	U	U	10
Tetrachloroethylene	1.4	3.4	3.1	5
Toluene	U	U	U	5
Trans-1,2-Dichloroethene	U	U	U	5
Trans-1,3-Dichloropropene	U	U	U	0.4
Trichloroethylene	U	1.4	0.6 J	5
Trichlorofluoromethane	U	U	U	5
Vinyl Chloride	U	U	U	2
Xylenes, Total	U	U	U	5
Total Volatile Compounds	12.4	13.48	13.4	--

Footnotes/Qualifiers:

ug/l: Micrograms per liter

--: No standard

U: Analyzed for but not detected

J: Estimated value or limit

Exceeds Class GA Standard or Guidance Value

**123 Post Avenue Site
Groundwater Samples
PFAs and 1,4-Dioxane**

Sample ID Sampling Date	MW-1A 9/17/2018	MW-2A 9/17/2018	MW-3 9/17/2018
PFAs in ng/l			
2-(N-methyl perfluorooctanesulfonamido) acetic acid	U	U	U
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	U	8.5 J	U
Perfluorobutanesulfonic acid (PFBS)	2.9	4	5.5
Perfluorobutanoic Acid	4.2	9.6	8.1
Perfluorodecane Sulfonic Acid	U	U	U
Perfluorodecanoic acid (PFDA)	0.4 J	1.6 J	1.5 J
Perfluorododecanoic acid (PFDoA)	U	U	1.2 J
Perfluoroheptane Sulfonate (PFHPS)	0.25 J	1.2 J	1 J
Perfluoroheptanoic acid (PFHpA)	3.8	8	13
Perfluorohexanesulfonic acid (PFHxS)	UB	3.1	6
Perfluorohexanoic acid (PFHxA)	5	9.9	12
Perfluorononanoic acid (PFNA)	1.4 J	6.9	3.4
Perfluorooctane Sulfonamide (FOSA)	0.53 J	3.7	4.8
Perfluorooctanesulfonic acid (PFOS)	8.5	210	84
Perfluorooctanoic acid (PFOA)	6.8	20	34
Perfluoropentanoic Acid (PFPeA)	5.7	9.9	12
Perfluorotetradecanoic acid (PFTA)	U	U	U
Perfluorotridecanoic Acid (PFTriA)	U	U	U
Perfluoroundecanoic Acid (PFUnA)	U	U	U
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2)	U	U	U
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)	17	220	9.7 J
1,4-DIOXANE (P-DIOXANE) in ug/l	0.5	U	0.42

Footnotes/Qualifiers:

ng/l: Nanogram per liter

ug/l: Micrograms per liter

U: Analyzed for but not detected

UB: Qualified as non detect due to blank result

J: Estimated value or limit

ATTACHMENT H
GROUNDWATER QUALITY LOGS

FIELD OBSERVATION LOG MONITORING WELL SAMPLE RECORD

SITE 123 Post Avenue – OU1

DATE: 9/17/2018

WELL ID: MW-1A

PERSONNEL: Tara Judge

Depth of well (from top of casing) 40.10

Initial static water level (from top of casing) 31.72

Purging Method

Airlift Centrifugal

Bailer Pos. Displ.

Bladder Pump X Peristaltic Pump (Low Flow)

Well Volume Calculation:

2 in. casing: 8.38 ft. of water x 0.16 = 1.37 gallons

3 in. casing: ft. of water x 0.36 = gallons

4 in. casing: ft. of water x 0.65 = gallons

volume of water removed:

1.32 gal.

>3 volumes: yes

no X

purged dry? yes

no X

Field Tests

Volume (mL)	Temp (C°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	23.30	6.57	0.652	1000	10.50	237
500	19.60	6.30	0.744	1000	7.49	248
1,000	19.14	6.26	0.743	832	6.82	250
1,500	19.05	6.26	0.721	561	6.03	250
2,000	18.51	6.25	0.711	235	5.64	252
2,500	18.29	6.25	0.699	82.1	5.34	250
3,000	18.21	6.25	0.692	81.2	5.29	251
3,500	18.04	6.26	0.692	51	5.12	248
4,000	18.02	6.28	0.691	42	5.00	248
4,500	17.99	6.28	0.692	27	4.99	247
5,000	17.89	6.28	0.692	6.9	4.69	248

Sample ID: MW-1A

Sample Time: 5:00 pm

Pump: Bladder pump with drop screen

Meters: Horiba U52 and water level

Analyzed:

(2) 250mL plastics for PFAS

(2) 1 L for 1,4-Dioxane

(3) 40 mL for VOAs

(2) 1 L Amber for SVOCs

Observations

Weather/Temperature: Partly Cloudy, 60-75 F

Description: Clear, no odor, no sheen

Free Product? yes no X describe

Sheen? yes no X describe

Odor? yes no X describe

Decontaminated the pump, drop screen and changed bladder.

FIELD OBSERVATION LOG MONITORING WELL SAMPLE RECORD

SITE 123 Post Avenue – OU1

DATE: 9/17/2018

WELL ID: MW-2A

PERSONNEL: Tara Judge

Depth of well (from top of casing) 41.31

Initial static water level (from top of casing) 34.38

Purging Method

Airlift _____ Centrifugal _____
 Bailer _____ Pos. Displ. _____
 Submersible _____ Peristaltic _____
 Pump X Pump (Low Flow) _____

Well Volume Calculation:

2 in. casing: 6.93 ft. of water x 0.16 = 1.30 gallons
 3 in. casing: _____ ft. of water x 0.36 = _____ gallons
 4 in. casing: _____ ft. of water x 0.65 = _____ gallons

volume of water removed:

2.9 gal. >3 volumes: yes X no _____ purged dry? yes _____ no X

Field Tests

Volume (mL)	Temp (C°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	18.34	6.37	0.482	1,000	11.37	270
1,000	17.70	6.37	0.530	330	8.77	261
2,000	17.50	6.37	0.565	133	7.51	248
3,000	17.51	6.37	0.575	99.5	7.11	242
4,000	17.45	6.38	0.577	90.0	7.01	240
5,000	17.40	6.39	0.583	50.1	6.58	234
6,000	17.50	6.38	0.588	0.0	3.64	234
7,000	17.63	6.37	0.587	0.0	3.69	235
8,000	17.70	6.36	0.587	50.0	3.29	237
9,000	18.00	6.36	0.589	60.0	3.20	236
10,000	18.51	6.36	0.587	51.0	3.05	236
11,000	18.45	6.38	0.587	55.1	3.00	236

Sample ID: MW-2A

Sample Time: 11:30 am

Pump: Bladder pump with drop screen

Meters: Horiba U52 and water level

Analyzed:

(2) 250mL plastics for PFAS

(2) 1 L for 1,4-Dioxane

(3) 40 mL for VOAs

(2) 1 L Amber for SVOCs

Observations

Weather/Temperature: Partly Cloudy, 60-75 F

Description: Clear, no odor, no sheen

Free Product? yes _____ no X describe

Sheen? yes _____ no X describe

Odor? yes _____ no X describe

Decontaminated the pump, drop screen and changed bladder.

FIELD OBSERVATION LOG MONITORING WELL SAMPLE RECORD

SITE 123 Post Avenue – OU1

DATE: 9/17/2018

WELL ID: MW-3

PERSONNEL: Tara Judge

Depth of well (from top of casing) 42.10

Initial static water level (from top of casing) 33.91

Purging Method

Airlift _____ Centrifugal _____
 Bailer _____ Pos. Displ. _____
 Submersible _____ Peristaltic _____
 Pump X Pump (Low _____
 _____ Flow) _____

Well Volume Calculation:

2 in. casing: 8.19 ft. of water x 0.16 = 1.33 gallons
 3 in. casing: _____ ft. of water x 0.36 = _____ gallons
 4 in. casing: _____ ft. of water x 0.65 = _____ gallons

volume of water removed:

1.19 gal. >3 volumes: yes X no _____ purged dry? yes _____ no X

Field Tests

Volume (mL)	Temp (C°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	22.20	6.70	0.322	1000	5.66	216
500	21.40	6.55	0.327	9111	6.00	221
1,000	20.50	6.48	0.340	149	5.31	225
1,500	19.42	6.43	0.341	165	5.20	228
2,000	19.99	6.51	0.348	490	6.15	225
2,500	18.85	6.35	0.324	168	3.26	239
3,000	18.53	6.36	0.322	149	3.07	235
3,500	18.47	6.34	0.320	141	2.81	236
4,000	18.22	6.39	0.319	115	2.77	235
4,500	18.26	6.34	0.319	108	2.60	238

Sample ID: MW-3

Sample Time: 3:00 pm

Pump: Bladder pump with drop screen

Meters: Horiba U52 and water level

Analyzed: Collected MS/MSD.

(6) 250mL plastics for PFAS

(6) 1 L for 1,4-Dioxane

(9) 40 mL for VOAs

(6) 1 L Amber for SVOCs

Observations

Weather/Temperature: Partly Cloudy, 60-75 F

Description: Clear, no odor, no sheen

Free Product? yes _____ no X describe
 Sheen? yes _____ no X describe
 Odor? yes _____ no X describe

Decontaminated the pump, drop screen and changed bladder.

ATTACHMENT I
DATA VALIDATION CHECKLISTS

DATA REVIEW CHECK LIST

Project Name:	123 Post Ave
Project Number:	3150-41
Sample Date(s):	9/17/2018
Matrix/Number of Samples:	<u>Air/ 1 (Effluent)</u>
Analyzing Laboratory:	TestAmerica Laboratories, South Burlington, VT
Analyses:	<u>Volatile Organic Compounds (VOCs): TO15</u>
Laboratory Report No:	200-45324
	Date:9/28/18

ORGANIC ANALYSES VOCS

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Method blanks		X		X	
3. Laboratory Control Sample (LCS) %R		X		X	
5. Surrogate spike recovery					X
6. Internal standard retention times and areas		X		X	
7. Initial calibration RRF's		X		X	
8. Continuing calibration RRF's and %D's		X		X	
9. Field duplicates RPD					X

VOCs - volatile organic compounds

%D - percent difference

RRF - relative response factor

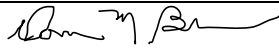
%R - percent recovery

RPD - relative percent difference

Comments:

Performance was acceptable with the following exceptions:

Tetrachloroethene exceed the calibration in the original analysis and was reported from the secondary dilution which was "D" qualified.

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 12/3/2018
VALIDATION PERFORMED BY SIGNATURE:	

DATA VALIDATION CHECKLIST

Project Name:	123 Post Ave		
Project Number:	3150-41		
Sample Date(s):	September 17, 2018		
Sample Team:	Tara Judge		
Matrix/Number of Samples:	<u>Water/ 3</u> <u>Field Duplicate/ 0</u> <u>Trip Blank/ 1</u> <u>Field Blank/ 1</u>		
Analyzing Laboratory:	TestAmerica Laboratories, Buffalo, NY and TestAmerica, Laboratories, Sacramento, CA		
Analyses:	<u>Volatile Organic Compounds (VOCs):</u> by SW846 8260C by NY <u>Per-and Polyfluoroalkyl Substances (PFAS):</u> by EPA 537 (modified) by CA <u>1,4-Dioxane:</u> USEPA SW-846 Method 8270D SIM by NY		
Laboratory Report No:	480-141969	Date:	10/05/18

ANALYTICAL DATA PACKAGE DOCUMENTATION GENERAL INFORMATION

	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by Lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

The data packages have been reviewed in accordance with the NYSDEC 6/05 ASP Quality Assurance/Quality Control (QA/QC) requirements. A validation was conducted on the data package and any applicable qualification of the data was determined using the USEPA National Functional Guidelines of Organic Data Review, January 2017, method performance criteria and D&B Engineers and Architects, P.C. professional judgment. The qualification of data discussed within this data validation checklist did not impact the usability of the sample results.

**Custody Numbers:480-141969
SAMPLE AND ANALYSIS LIST**

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis			
				VOC	1,4-Dioxane	PFAS	MISC
MW-2A	480-141969-1	9/17/2018		X	X	X	
MW-3	480-141969-2	9/17/2018		X	X	X	
MW-1A	480-141969-3	9/17/2018		X	X	X	
TRIP BLANK	480-141969-4	9/17/2018		X		X	
FIELD BLANK	480-141969-5	9/17/2018				X	

**ORGANIC ANALYSES
VOCS, PFAS and 1,4-Dioxane**

	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Holding times		X		X	
2. Blanks					
A. Method blanks		X	X		
B. Trip blanks		X		X	
C. Field blanks		X	X		
3. Matrix spike (MS) %R		X		X	
4. Matrix spike duplicate (MSD) %R		X		X	
5. MS/MSD precision (RPD)		X		X	
6. Laboratory control sample (LCS) %R and RPD		X		X	
7. Surrogate spike recoveries		X		X	
8. Instrument performance check		X		X	
9. Internal standard retention times and areas		X		X	
10. Initial calibration RRF's and %RSD's		X		X	
11. Continuing calibration RRF's and %D's		X		X	
12. Transcriptions – quant report vs. Form I		X		X	

VOCs - volatile organic compounds

%D - percent difference

RRF - relative response factor

%R - percent recovery

%RSD - percent relative standard deviation

RPD - relative percent difference

Comments:

Performance was acceptable, with the following exception:

- Perfluorobutanoic acid (PFBA) and perfluorohexanesulfonic acid (PFHxS) were detected in the FIELD BLANK and method blank. Perfluorohexanesulfonic acid (PFHxS) was qualified as non-detect (UB) in sample MW-1A. The “B” qualifier was removed from the remaining water sample results in which the results were more than ten times that found in the blank.

**DATA VALIDATION AND
QUALIFICATION SUMMARY**

Laboratory Numbers: 480-141969

Sample ID	Analyte(s)	Qualifier	Reason(s)
<u>PFA</u>			
MW-1A	Perfluorohexanesulfonic acid (PFHxS)	UB	Detected in the method blank and/or FIELD BLANK
Water sample	Perfluorobutanoic acid (PFBA) and perfluorohexanesulfonic acid (PFHxS)	B removed	More than ten times that found in the blank

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 12/3/18
VALIDATION PERFORMED BY SIGNATURE:	