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New York State Department of Environmental Conservation

Columbia Mills Site 2017 Annual Groundwater Monitoring Report

NYSDEC Site Number 7-38-012

January 2018

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COLUMBIA MILLS SITE 2017 ANNUAL GROUNDWATER MONITORING REPORT

NYSDEC Site Number 7-38-012

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ACRONYMS AND ABBREVIATIONS

ABP	Amphibian Breeding Pond
AMSL	Above Mean Sea Level
DO	Dissolved Oxygen
DUP	Duplicate
MW	Monitoring Well
NYSDEC	New York State Department of Environmental Conservation
O&M	Operation and Maintenance
PCBs	Poly-chlorinated Biphenyls
PFAS	Perfluorinated Alkyl Substances
PFOA	Perfluorooctanoic acid
PPRS	Pore-pressure Relief System
PRR	Periodic Review Report
REDOX	Oxidation-Reduction Potential
SMP	Site Management Plan
TDS	Total Dissolved Solids
ug/L	Micrograms per liter
ng/L	Nanograms per liter
USEPA	United States Environmental Protection Agency

1 INTRODUCTION

The NYSDEC has issued a Work Assignment (# D007618-10) to ARCADIS CE, Inc. (Arcadis) for Operation, Maintenance, and Monitoring at the Columbia Mills Site (NYSDEC Site Number 7-38-012) in Minetto, New York. Arcadis has prepared this Report in accordance with the Draft Site Management Plan (SMP) (Arcadis 2017) to summarize site activities, including fourth quarter 2017 groundwater sampling results.

2 SITE DESCRIPTION

The Columbia Mills site is located on Route 48, Minetto, Oswego County, New York (Figure 2-1), across Route 48 from the western bank of the Oswego Canal. A capped, closed landfill is located in the western portion of the site. The landfill is surrounded by a six-foot chain-link fence. Groundwater quality in the vicinity of the landfill is monitored by sampling of eight groundwater monitoring wells on a five-quarter basis.

3 OPERATION AND MAINTENANCE

O&M activities were conducted on October 31 and November 1, 2017 in accordance with the Draft SMP and in consultation with NYSDEC.

3.1 Observations and Activities

A Post-Closure Operation and Maintenance (O&M) checklist (Appendix A) was used to document the status of the landfill. A visual inspection of the landfill cap was performed to assess the landfill for burrowing rodents, erosion and settlement or woody vegetation. No active burrowing rodent holes, erosion, or cap settlement was observed. The landfill cap was not mowed; however, no woody vegetation was observed on the cover system.

Photographs taken during the November inspection are also provided in Appendix A.

The outlet structure for the Amphibian Breeding Pond (ABP) was clogged with branches and other debris. The outlet was cleared, and normal flow restored.

An approximately 20-foot section of geotextile fabric in the landfill access road was exposed. No other areas of damage or erosion of were observed during the inspection.

The measuring point elevation for groundwater monitoring well MW-1D was re-surveyed by Arcadis on October 31, 2017. The survey was required due to damage and subsequent repair of the well as described in the Columbia Mills Site 2015 Annual Groundwater Monitoring Report (Arcadis 2015).

3.2 Leachate Collection System Operation Overview

A schematic of the leachate collection system is provided on Figure 3-1. Figure 3-2 provides a process flow diagram of the leachate collection system. As shown on Figure 3-2, a combination Pore-pressure Relief System (PPRS)/leachate collection system is located along the perimeter of the landfill cell. The system can convey leachate to a 10,000-gallon sub-surface leachate collection tank, the Town of Minetto sanitary sewer, or the ABP (via the combination sampling sump). A valve located at the inlet to the collection tank controls flow into the tank. Valves located up-gradient of the leachate collection tank can direct flow to the Town of Minetto sanitary sewer or ABP. Currently, at the direction of the NYSDEC, leachate is being directed to Town of Minetto sanitary sewer.

As shown on Figure 3-1 and 3-2, groundwater from the PPRSs (north and south of the landfill cell) discharges into a pre-cast concrete combination sampling sump located on the west side of the landfill. Valves within the sampling sump control groundwater flow into the sump and allow flow through the PPRSs. The valves can be closed if sampling indicates the presence of contamination in groundwater from the PPRS collection lines.

3.3 Leachate Collection System Sampling

Leachate collection system samples were collected from the north and south PPRS and leachate inlet pipes in the combination sampling sump (Figure 3-1) to evaluate the potential presence of polychlorinated

biphenyls (PCBs) in the leachate (currently discharged to the Town of Minetto sanitary sewer). At the direction of NYSDEC, the samples collected during the 2017 sampling event were also analyzed for perfluorinated alkyl substances (PFAS), and 1,4-dioxane.

3.3.1 Sampling Procedures

Leachate flow was temporarily diverted from the Town of Minetto sanitary sewer to the combination sampling sump. Leachate and PPRS samples were then collected from the respective inlet pipes to the combination sampling sump (leachate, north PPRS, and south PPRS) (Figure 3-1) using a peristaltic pump with dedicated sample tubing. Leachate flow was restored to the Town of Minetto sanitary sewer after sampling was complete.

Prior to collecting samples, pH, conductivity, turbidity, dissolved oxygen (DO), temperature, salinity, total dissolved solids (TDS), and oxidation-reduction potential (REDOX) were measured using a Horiba U-52 water quality meter and recorded on field sampling logs (Appendix B). Samples were submitted to TestAmerica in Amherst, New York for analysis of PCBs by United States Environmental Protection Agency (USEPA) Method 8082, PFAS by USEPA Method 537 modified, and 1,4-dioxane by USEPA Method 8260.

3.3.2 Sampling Results

Leachate collection system sampling results are summarized in Table 3-1 and Table 3-2. Analytical reporting forms are provided in Appendix C.

As shown in Table 3-1, none of the samples collected from the leachate collection system contained PCBs at concentrations greater than the indicated laboratory quantitation limits. PFAS was detected at an estimated concentration of 0.99 nanograms per liter (ng/L) in the sample collected from South PPRS (Table 3-2). None of the samples collected from the leachate collection system contained 1,4-dioxane.

4 GROUNDWATER MONITORING PROGRAM

4.1 Groundwater Monitoring

Groundwater monitoring wells were sampled on October 31 and November 1, 2017 to provide information on groundwater quality, monitor contaminant migration in the groundwater at the site, and assess hydrogeologic site conditions, including groundwater flow. Groundwater monitoring is performed on a five-quarter basis in accordance with the Draft SMP. The next groundwater sampling event will be conducted during the first quarter 2019.

4.2 Well Inspection

Existing on-site groundwater monitoring wells and piezometers (Figure 4-1) were evaluated for integrity and suitability for groundwater monitoring and water levels. The condition of each well and piezometer was recorded on well inspection logs (Appendix B). As shown in Appendix B, (and the photographs in Appendix A) the integrity of the groundwater monitoring wells and piezometers was acceptable, and no repair or maintenance is required at this time. However, new markers should be placed at wells MW-1D, MW-4S and MW-4D to help better identify these locations during mowing operations.

4.2.1 Groundwater Flow

Prior to collecting samples, groundwater levels were measured to the nearest hundredth of a foot and recorded on a groundwater level data form (Appendix D). Table 4-1 summarizes the groundwater levels and elevations from the site. As shown in Table 4-1, groundwater elevations in shallow overburden and bedrock wells ranged from approximately 310 feet amsl to approximately 325 feet amsl; groundwater elevations in deep bedrock wells ranged from approximately 305 feet amsl to approximately 325 feet amsl. As shown in Table 4-1, well clusters MW-1S/1D and 2S/2D had higher groundwater elevations in the deep groundwater monitoring zone compared to the shallow groundwater monitoring zone, indicating an upward hydraulic gradient at these locations. Table 4-1 shows that well clusters MW-3S/3D and MW-4S/4D had downward hydraulic gradient.

Shallow and deep potentiometric surfaces map are provided on Figure 4-2 and Figure 4-3, respectfully. As shown on Figure 4-2 and Figure 4-3, the direction of groundwater flow in the vicinity of the landfill is generally northeast toward the ABP and the Oswego Canal.

4.3 Groundwater Sampling

Groundwater samples from monitoring wells MW-1S, MW-1D, MW-2S, MW-2D, MW-3S, MW-3D, MW-4S, and MW-4D were collected using low-flow groundwater purging and sampling procedures in accordance with the Draft SMP. However, additional precautions were required when collecting PFAS samples. One sample (MW-X-DUP) was collected from MW-1D and submitted as a field duplicate. Prior to collecting groundwater samples, pH, conductivity, turbidity, DO, temperature, salinity, TDS, and REDOX were measured using a Horiba U-52 water quality meter and recorded on groundwater sampling purge logs. Groundwater sampling purge logs are presented in Appendix B. As shown in Appendix B,

MW-3D was pumped dry during purging. Groundwater samples were collected from MW-3D after allowing the wells to recharge for approximately 24 hours. Groundwater samples were submitted to TestAmerica for analysis of PCBs by USEPA Method 8082, PFAS by USEPA Method 537 modified, and 1,4-dioxane by USEPA Method 8260. Analytical reporting forms are provided in Appendix C.

4.3.1 Groundwater Sampling Results

Table 4-2 shows that no PCBs were detected in any of the groundwater samples collected during the 2017 sampling event. As shown in Table 4-2, only one groundwater sample (MW-3S collected in 2007) has ever contained a total PCB concentration greater than the respective NYSDEC Class GA Standard of 0.09 ug/L.

Perfluorooctanoic acid (PFOA) was detected in samples collected from monitoring wells MW-2D (0.95 ng/L), MW-3S (43.4 ng/L) and MW-3D (0.89 ng/L). However, as shown in Table 4-3, none of these concentrations exceed the current USEPA Public Health Advisory Limit of 70 ng/L.

As shown on Table 4-3, 1,4-dioxane was not detected in any of the groundwater samples collected during this event.

5 RECOMMENDATIONS

- Annual O&M should continue to be conducted as described in the Draft SMP.
- The landfill cap should be mowed on an annual basis to prevent the establishment of woody vegetation.
- The exposed area of geotextile in the landfill access road should be repaired and additional road material should be placed over the geotextile. The area should then be regraded to limit further erosion of the roadway.
- New markers should be placed at several wells to help identify locations when the site is mowed.

6 SUMMARY

The landfill and site were inspected on October 31, 2017 and appear to be in acceptable condition. Debris was cleared from the ABP outlet to restore normal flow. Although the landfill cap did not appear to be mowed, no woody vegetation was established on the landfill. A section of geotextile in the landfill access road was exposed.

The measuring point for Monitoring well MW-1D was resurveyed following well repairs completed in 2015.

The groundwater monitoring wells and piezometers are generally in acceptable condition. Based on the water level survey, groundwater flow across the site is generally toward the northeast.

No PCBs or 1,4-dioxane were detected in the Leachate, PPRS, or groundwater samples collected during the 2017 monitoring event.

PFAS was detected in samples from monitoring wells MW-2D, MW-3S, and MW-3D, and the South PPRS sample from the leachate collection system. None of the PFAS concentrations were greater than the current USEPA Public Health Advisory Limit.

Annual O&M should continue to be conducted as described in the Draft SMP.

The landfill access road should be repaired and graded to limit erosion.

Markers should be placed at several wells to help identify them during mowing operations.

The next groundwater sampling event is scheduled to be conducted during the first quarter 2019.

7 REFERENCES

Arcadis, 2017, Site Management Plan (Draft), Columbia Mills Site, Oswego County, Minetto, New York. NYSDEC Site Number 7-38-012. Prepared for NYSDEC, Division of Environmental Remediation by Arcadis CE, Inc., July 11, 2017.

TABLES

Table 3-1
Summary of Leachate Collection System Sampling Results - PCBs
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date Units	NYSDEC Class AA/GA Standard	Leachate 6/19/2009 ug/L	Leachate 3/25/2010 ug/L	Leachate 6/22/2011 ug/L	Leachate 7/30/2012 ug/L	Leachate 10/17/2013 ug/L	Leachate 4/23/2015 ug/L	Leachate 10/31/2017 ug/L
Analyte								
PCB-1016	-	0.53 U	0.53 U	0.5 U	0.47 U	0.49 U	0.5 U	0.4 U
PCB-1221	-	0.53 U	0.53 U	0.5 U	0.47 U	0.49 U	0.5 U	0.4 U
PCB-1232	-	0.53 U	0.53 U	0.5 U	0.47 U	0.49 U	0.5 U	0.4 U
PCB-1242	-	0.53 U	0.53 U	0.5 U	0.47 U	0.49 U	0.5 U	0.4 U
PCB-1248	-	0.53 U	0.53 U	0.5 U	0.47 U	0.49 U	0.5 U	0.4 U
PCB-1254	-	0.53 U	0.53 U	0.5 U	0.47 U	0.49 U	0.5 U	0.4 U
PCB-1260	-	0.53 U	0.53 U	0.5 U	0.47 U	0.49 U	0.5 U	0.4 U
PCB-1262	-	NR	NR	NR	NR	NR	NR	0.4 U
PCB-1268	-	NR	NR	NR	NR	NR	NR	0.4 U
Total PCBs	0.09	-	-	-	-	-	-	-

Notes:
U - Analyte not detected
NR - Not reported

Table 3-1
Summary of Leachate Collection System Sampling Results - PCBs
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date Units	NYSDEC Class AA/GA Standard	North PPRS 6/19/2009 ug/L	North PPRS 3/25/2010 ug/L	North PPRS 6/22/2011 ug/L	North PPRS 10/17/2013 ug/L	North PPRS 4/23/2015 ug/L	North PPRS 10/31/2017 ug/L
Analyte							
PCB-1016	-	0.5 U	0.5 U	0.5 U	0.48 U	0.5 U	0.4 U
PCB-1221	-	0.5 U	0.5 U	0.5 U	0.48 U	0.5 U	0.4 U
PCB-1232	-	0.5 U	0.5 U	0.5 U	0.48 U	0.5 U	0.4 U
PCB-1242	-	0.5 U	0.5 U	0.5 U	0.48 U	0.5 U	0.4 U
PCB-1248	-	0.5 U	0.5 U	0.5 U	0.48 U	0.5 U	0.4 U
PCB-1254	-	0.5 U	0.5 U	0.5 U	0.48 U	0.5 U	0.4 U
PCB-1260	-	0.5 U	0.5 U	0.5 U	0.48 U	0.5 U	0.4 U
PCB-1262	-	NR	NR	NR	NR	NR	0.4 U
PCB-1268	-	NR	NR	NR	NR	NR	0.4 U
Total PCBs	0.09	-	-	-	-	-	-

Notes:
U - Analyte not detected
NR - Not reported

Table 3-1
Summary of Leachate Collection System Sampling Results - PCBs
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date Units	NYSDEC Class AA/GA Standard	South PPRS 6/19/2009 ug/L	South PPRS 3/25/2010 ug/L	South PPRS 6/22/2011 ug/L	South PPRS 7/30/2012 ug/L	South PPRS 10/17/2013 ug/L	South PPRS 4/23/2015 ug/L	South PPRS 10/31/2017 ug/L
Analyte								
PCB-1016	-	0.5 U	0.5 U	0.5 U	0.49 U	0.49 U	0.5 U	0.4 U
PCB-1221	-	0.5 U	0.5 U	0.5 U	0.49 U	0.49 U	0.5 U	0.4 U
PCB-1232	-	0.5 U	0.5 U	0.5 U	0.49 U	0.49 U	0.5 U	0.4 U
PCB-1242	-	0.5 U	0.5 U	0.5 U	0.49 U	0.49 U	0.5 U	0.4 U
PCB-1248	-	0.5 U	0.5 U	0.5 U	0.49 U	0.49 U	0.5 U	0.4 U
PCB-1254	-	0.5 U	0.5 U	0.5 U	0.49 U	0.49 U	0.5 U	0.4 U
PCB-1260	-	0.5 U	0.5 U	0.5 U	0.49 U	0.49 U	0.5 U	0.4 U
PCB-1262	-	NR	NR	NR	NR	NR	NR	0.4 U
PCB-1268	-	NR	NR	NR	NR	NR	NR	0.4 U
Total PCBs	0.09	-	-	-	-	-	-	-

Notes:
U - Analyte not detected
NR - Not reported

Table 3-1
Summary of Leachate Collection System Sampling Results - PCBs
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date Units	NYSDEC Class AA/GA Standard	Tank 10/2/2008 ug/L	Tank 3/25/2010 ug/L
Analyte			
PCB-1016	-	0.53 U	0.53 U
PCB-1221	-	1.1 U	0.53 U
PCB-1232	-	0.53 U	0.53 U
PCB-1242	-	0.53 U	0.53 U
PCB-1248	-	0.53 U	0.53 U
PCB-1254	-	0.53 U	0.53 U
PCB-1260	-	0.53 U	0.53 U
PCB-1262	-	NR	NR
PCB-1268	-	NR	NR
Total PCBs	0.09	-	-

Notes:
U - Analyte not detected
NR - Not reported

Table 3-2
Summary of Leachate Collection System Sampling Results - PFAS and 1,4-Dioxane
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date	USEPA Health Advisory Limit	Leachate 10/31/2017	North PPRS 10/31/2017	South PPRS 10/31/2017
Perfluorobutanesulfonic acid (PFBS) (ng/L)		2.0 U	2.0 U	0.99 J
Perfluorohexanesulfonic acid (PFHxS) (ng/L)		2.0 U	2.0 U	2.0 U
Perfluoroheptanoic acid (PFHpA) (ng/L)		2.0 U	2.0 U	2.0 U
Perfluorooctanoic acid (PFOA) (ng/L)	70	2.0 U	2.0 U	2.0 U
Perfluorooctanesulfonic acid (PFOS) (ng/L)	70	2.0 U	2.0 U	2.0 U
Perfluorononanoic acid (PFNA) (ng/L)		2.0 U	2.0 U	2.0 U
1,4-Dioxane (ug/L)	--	0.4 U	0.4 U	0.4 U

Notes:
U - Analyte not detected
J - Estimated value

Table 4-1
Summary of Groundwater Elevations
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Well	Measuring Point Elevation [1] (feet)	8/6/2007		10/1/2008		6/17/2009		3/24/2010		6/22/2011		7/25/2012		10/17/2013		4/22/2015		10/31/2017	
		DTW (feet)	Elevation (feet)	DTW (feet)	Elevation (feet)	DTW (feet)	Elevation (feet)	DTW (feet)	Elevation (feet)	DTW (feet)	Elevation (feet)	DTW (feet)	Elevation (feet)	DTW (feet)	Elevation (feet)	DTW (feet)	Elevation (feet)	DTW (feet)	Elevation (feet)
MW-1S	324.85	6.94	317.91	4.91	319.94	4.81	320.04	2.98	321.87	5.20	319.65	6.92	317.93	5.28	319.57	3.07	321.78	2.89	321.96
MW-1D	325.20[2]	3.70	321.44	1.96	323.18	1.80	323.34	0.67	324.47	2.23	322.91	3.50	321.64	2.10	323.04	1.04	324.10	0.10	325.10
MW-2S	335.93	13.90	322.03	13.22	322.71	11.66	324.27	9.43	326.50	12.10	323.83	13.46	322.47	13.07	322.86	9.95	325.98	10.55	325.38
MW-2D	335.90	13.95	321.95	13.39	322.51	11.77	324.13	9.19	326.71	11.80	324.10	13.62	322.28	13.43	322.47	9.56	326.34	11.28	324.62
MW-3S	316.02	6.42	309.60	5.71	310.31	5.76	310.26	5.94	310.08	5.48	310.54	6.67	309.35	6.52	309.50	5.05	310.97	6.34	309.68
MW-3D	315.79	8.23	307.56	16.52	299.27	22.03	293.76	20.78	295.01	16.21	299.58	17.71	298.08	16.75	299.04	14.88	300.91	10.34	305.45
MW-4S	321.63	12.20	309.43	12.21	309.42	11.70	309.93	8.41	313.22	11.69	309.94	12.27	309.36	11.02	310.61	9.13	312.50	9.19	312.44
MW-4D	321.26	11.44	309.82	11.29	309.97	11.13	310.13	10.17	311.09	11.12	310.14	11.51	309.75	11.05	310.21	10.37	310.89	10.34	310.92
LFP-1	NA	19.15	-	18.74	-	18.36	-	18.00	-	18.30	-	18.91	-	18.55	-	17.17	-	NM	-
LFP-2	NA	16.40	-	16.45	-	NM	-	13.12	-	Dry	-	16.00	-	15.86	-	12.76	-	NM	-
LFP-3	NA	14.75	-	14.20	-	14.18	-	13.85	-	14.20	-	14.59	-	14.00	-	13.76	-	NM	-
LFP-4	NA	13.57	-	13.40	-	13.24	-	13.28	-	13.25	-	13.33	-	13.28	-	13.15	-	NM	-
LFP-5	NA	17.30	-	17.32	-	17.26	-	16.61	-	16.92	-	17.15	-	17.06	-	16.55	-	NM	-
LFP-6	NA	14.50	-	14.19	-	13.44	-	12.40	-	13.40	-	14.15	-	13.73	-	12.51	-	NM	-
LFP-7	NA	NM	-	Dry	-	NM	-	Dry	-	Dry	-	Dry	-	Dry	-	Dry	-	NM	-
LFP-8	NA	13.92	-	13.54	-	13.21	-	12.39	-	13.30	-	13.74	-	13.72	-	12.39	-	NM	-
LFP-9	NA	18.20	-	18.00	-	17.93	-	17.79	-	17.85	-	18.13	-	17.93	-	17.67	-	NM	-
LFP-10	NA	15.18	-	14.90	-	14.90	-	14.81	-	14.89	-	15.18	-	14.88	-	14.73	-	NM	-
LFP-11	NA	23.77	-	23.18	-	22.89	-	22.41	-	22.85	-	23.55	-	22.95	-	22.15	-	NM	-
LFP-12	NA	NM	-	Dry	-	Dry	-	Dry	-	Dry	-	Dry	-	Dry	-	14.56	-	NM	-
LFP-13	NA	Dry	-	6.33	-	6.50	-	5.48	-	6.60	-	7.48	-	5.75	-	5.92	-	NM	-
LFP-14	NA	26.37	-	26.00	-	25.83	-	25.49	-	25.80	-	26.23	-	25.96	-	25.40	-	NM	-

Notes
(1) - Source: Malcolm Pirnie Inc. Project Number 0266319
Table 2-2, Monitoring Well and Piezometer Construction Summary
(2) - Elevation from Arcadis Survey performed on October 31, 2017.
NA - Not Available
NM - Not Measured

Table 4-2
Summary of Groundwater Sampling Results - PCBs
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date Units	NYSDEC Class GA Standards	MW-1S 8/7/2007 ug/L	MW-1S 10/1/2008 ug/L	MW-1S 6/18/2009 ug/L	MW-1S 3/24/2010 ug/L	MW-1S 6/22/2011 ug/L	MW-1S 7/29/2012 ug/L	MW-1S 10/16/2013 ug/L	MW-1S 4/22/2015 ug/L	MW-1S 10/31/2017 ug/L
Analyte										
PCB-1016	-	0.54 U	0.53 U	0.52 U	0.53 U	0.5 U	0.49 U	0.48 U	0.47 U	0.4 U
PCB-1221	-	1.1 U	1.1 U	0.52 U	0.53 U	0.5 U	0.49 U	0.48 U	0.47 U	0.4 U
PCB-1232	-	0.54 U	0.53 U	0.52 U	0.53 U	0.5 U	0.49 U	0.48 U	0.47 U	0.4 U
PCB-1242	-	0.54 U	0.53 U	0.52 U	0.53 U	0.5 U	0.49 U	0.48 U	0.47 U	0.4 U
PCB-1248	-	0.54 U	0.53 U	0.52 U	0.53 U	0.5 U	0.49 U	0.48 U	0.47 U	0.4 U
PCB-1254	-	0.54 U	0.53 U	0.52 U	0.53 U	0.5 U	0.49 U	0.48 U	0.47 U	0.4 U
PCB-1260	-	0.54 U	0.53 U	0.52 U	0.53 U	0.5 U	0.49 U	0.48 U	0.47 U	0.4 U
PCB-1262	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
PCB-1268	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
Total PCBs	0.09	-	-	-	-	-	-	-	-	-

Notes:

- Concentration exceeds corresponding NYSDEC Class GA Standard

1 - DUP collected from MW-1D
U - Analyte not detected
J - Estimated value
M - Manual integrated compound
B - Analyte was detected in Method Blank.
NS - No sample. Container damaged.

Table 4-2
Summary of Groundwater Sampling Results - PCBs
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date Units	NYSDEC Class GA Standards	MW-1D 8/7/2007 ug/L	MW-1D 10/1/2008 ug/L	MW-1D 6/18/2009 ug/L	MW-1D 3/24/2010 ug/L	MW-1D 6/22/2011 ug/L	MW-1D 7/29/2012 ug/L	MW-1D 10/16/2013 ug/L	MW-1D 4/22/2015 ug/L	DUP-1[(1)] 4/22/2015 ug/L	MW-1D 10/31/2017 ug/L	DUP-1[(1)] 10/31/2017 ug/L
Analyte												
PCB-1016	-	0.54 U	0.52 U	0.5 U	0.5 U	0.5 U	0.49 U	0.48 U	0.48 U	0.48 U	0.4 U	0.4 U
PCB-1221	-	1.1 U	1.0 U	0.5 U	0.5 U	0.5 U	0.49 U	0.48 U	0.48 U	0.48 U	0.4 U	0.4 U
PCB-1232	-	0.54 U	0.52 U	0.5 U	0.5 U	0.5 U	0.49 U	0.48 U	0.48 U	0.48 U	0.4 U	0.4 U
PCB-1242	-	0.54 U	0.52 U	0.5 U	0.5 U	0.5 U	0.49 U	0.48 U	0.48 U	0.48 U	0.4 U	0.4 U
PCB-1248	-	0.54 U	0.52 U	0.5 U	0.5 U	0.5 U	0.49 U	0.48 U	0.48 U	0.48 U	0.4 U	0.4 U
PCB-1254	-	0.54 U	0.52 U	0.5 U	0.5 U	0.5 U	0.49 U	0.48 U	0.48 U	0.48 U	0.4 U	0.4 U
PCB-1260	-	0.54 U	0.52 U	0.5 U	0.5 U	0.5 U	0.49 U	0.48 U	0.48 U	0.48 U	0.4 U	0.4 U
PCB-1262	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U	0.4 U
PCB-1268	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U	0.4 U
Total PCBs	0.09	-	-	-	-	-	-	-	-	-	-	-

Notes:

- Concentration exceeds corresponding NYSDEC Class GA Standard

1 - DUP collected from MW-1D
U - Analyte not detected
J - Estimated value
M - Manual integrated compound
B - Analyte was detected in Method Blank.
NS - No sample. Container damaged.

Table 4-2
Summary of Groundwater Sampling Results - PCBs
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date Units	NYSDEC Class GA Standards	MW-2S 8/7/2007 ug/L	MW-2S 10/2/2008 ug/L	MW-2S 6/18/2009 ug/L	MW-2S 3/24/2010 ug/L	MW-2S 6/22/2011 ug/L	MW-2S 7/29/2012 ug/L	MW-2S 10/16/2013 ug/L	MW-2S 4/22/2015 ug/L	MW-2S 11/1/2017 ug/L
Analyte										
PCB-1016	-	0.56 U	0.54 U	0.5 U	NS	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1221	-	1.1 U	1.1 U	0.5 U	NS	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1232	-	0.56 U	0.54 U	0.5 U	NS	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1242	-	0.56 U	0.54 U	0.5 U	NS	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1248	-	0.56 U	0.54 U	0.5 U	NS	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1254	-	0.56 U	0.54 U	0.5 U	NS	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1260	-	0.56 U	0.54 U	0.5 U	NS	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1262	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
PCB-1268	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
Total PCBs	0.09	-	-	-	-	-	-	-	-	-

Notes:

- Concentration exceeds corresponding NYSDEC Class GA Standard

1 - DUP collected from MW-1D
U - Analyte not detected
J - Estimated value
M - Manual integrated compound
B - Analyte was detected in Method Blank.
NS - No sample. Container damaged.

Table 4-2
Summary of Groundwater Sampling Results - PCBs
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date Units	NYSDEC Class GA Standards	MW-2D 8/7/2007 ug/L	MW-2D 10/1/2008 ug/L	MW-2D 6/18/2009 ug/L	MW-2D 3/24/2010 ug/L	MW-2D 6/25/2011 ug/L	MW-2D 7/29/2012 ug/L	MW-2D 10/16/2013 ug/L	MW-2D 4/22/2015 ug/L	MW-2D 11/1/2017 ug/L
Analyte										
PCB-1016	-	0.56 U	0.55 U	0.5 U	0.53 U	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1221	-	1.1 U	1.1 U	0.5 U	0.53 U	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1232	-	0.56 U	0.55 U	0.5 U	0.53 U	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1242	-	0.56 U	0.55 U	0.5 U	0.53 U	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1248	-	0.56 U	0.55 U	0.5 U	0.53 U	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1254	-	0.56 U	0.55 U	0.5 U	0.53 U	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1260	-	0.56 U	0.55 U	0.5 U	0.53 U	0.5 U	0.47 U	0.49 U	0.48 U	0.4 U
PCB-1262	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
PCB-1268	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
Total PCBs	0.09	-	-	-	-	-	-	-	-	-

Notes:

- Concentration exceeds corresponding NYSDEC Class GA Standard

1 - DUP collected from MW-1D
U - Analyte not detected
J - Estimated value
M - Manual integrated compound
B - Analyte was detected in Method Blank.
NS - No sample. Container damaged.

Table 4-2
Summary of Groundwater Sampling Results - PCBs
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date Units	NYSDEC Class GA Standards	MW-3S 8/8/2007 ug/L	MW-3S 10/2/2008 ug/L	MW-3S 6/19/2009 ug/L	MW-3S 3/25/2010 ug/L	MW-3S 6/23/2011 ug/L	MW-3S 8/1/2012 ug/L	MW-3S 10/16/2013 ug/L	MW-3S 4/23/2015 ug/L	MW-3S 10/31/2017 ug/L
Analyte										
PCB-1016	-	0.50 U	0.53 U	0.5 U	0.5 U	0.63 U	0.91 U	0.5 U	0.48 U	0.4 U
PCB-1221	-	1.0 U	1.1 U	0.5 U	0.5 U	0.63 U	0.91 U	0.5 U	0.48 U	0.4 U
PCB-1232	-	0.50 U	0.53 U	0.5 U	0.5 U	0.63 U	0.91 U	0.5 U	0.48 U	0.4 U
PCB-1242	-	0.50 U	0.53 U	0.5 U	0.5 U	0.63 U	0.91 U	0.5 U	0.48 U	0.4 U
PCB-1248	-	0.40 J M	0.53 U	0.5 U	0.5 U	0.63 U	0.91 U	0.5 U	0.48 U	0.4 U
PCB-1254	-	0.50 U	0.53 U	0.5 U	0.5 U	0.63 U	0.91 U	0.5 U	0.48 U	0.4 U
PCB-1260	-	0.19 JMB	0.53 U	0.5 U	0.5 U	0.63 U	0.91 U	0.5 U	0.48 U	0.4 U
PCB-1262	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
PCB-1268	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
Total PCBs	0.09	**0.59**	-	-	-	-	-	-	-	-

Notes:

- Concentration exceeds corresponding NYSDEC Class GA Standard

1 - DUP collected from MW-1D
U - Analyte not detected
J - Estimated value
M - Manual integrated compound
B - Analyte was detected in Method Blank.
NS - No sample. Container damaged.

Table 4-2
Summary of Groundwater Sampling Results - PCBs
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date Units	NYSDEC Class GA Standards	MW-3D 8/8/2007 ug/L	MW-3D 10/2/2008 ug/L	MW-3D 6/19/2009 ug/L	MW-3D 3/25/2010 ug/L	MW-3D 6/23/2011 ug/L	MW-3D 8/1/2012 ug/L	MW-3D 10/16/2013 ug/L	MW-3D 4/23/2015 ug/L	MW-3D 11/1/2017 ug/L
Analyte										
PCB-1016	-	0.5 U	0.93 U	0.54 U	0.54 U	0.5 U	1.2 U	0.77 U	0.73 U	0.4 U
PCB-1221	-	1.0 U	1.9 U	0.54 U	0.54 U	0.5 U	1.2 U	0.77 U	0.73 U	0.4 U
PCB-1232	-	0.5 U	0.93 U	0.54 U	0.54 U	0.5 U	1.2 U	0.77 U	0.73 U	0.4 U
PCB-1242	-	0.5 U	0.93 U	0.54 U	0.54 U	0.5 U	1.2 U	0.77 U	0.73 U	0.4 U
PCB-1248	-	0.5 U	0.93 U	0.54 U	0.54 U	0.5 U	1.2 U	0.77 U	0.73 U	0.4 U
PCB-1254	-	0.5 U	0.93 U	0.54 U	0.54 U	0.5 U	1.2 U	0.77 U	0.73 U	0.4 U
PCB-1260	-	0.5 U	0.93 U	0.54 U	0.54 U	0.5 U	1.2 U	0.77 U	0.73 U	0.4 U
PCB-1262	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
PCB-1268	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
Total PCBs	0.09	-	-	-	-	-	-	-	-	-

Notes:

- Concentration exceeds corresponding NYSDEC Class GA Standard

1 - DUP collected from MW-1D
U - Analyte not detected
J - Estimated value
M - Manual integrated compound
B - Analyte was detected in Method Blank.
NS - No sample. Container damaged.

Table 4-2
Summary of Groundwater Sampling Results - PCBs
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date Units	NYSDEC Class GA Standards	MW-4S 8/7/2007 ug/L	MW-4S 10/1/2008 ug/L	MW-4S 6/18/2009 ug/L	MW-4S 3/24/2010 ug/L	MW-4S 6/22/2011 ug/L	MW-4S 8/1/2012 ug/L	MW-4S 10/16/2013 ug/L	MW-4S 4/23/2015 ug/L	MW-4S 11/1/2017 ug/L
Analyte										
PCB-1016	-	0.56 U	0.54 U	0.5 U	0.54 U	0.5 U	0.47 U	0.49 U	0.49 U	0.4 U
PCB-1221	-	1.1 U	1.1 U	0.5 U	0.54 U	0.5 U	0.47 U	0.49 U	0.49 U	0.4 U
PCB-1232	-	0.56 U	0.54 U	0.5 U	0.54 U	0.5 U	0.47 U	0.49 U	0.49 U	0.4 U
PCB-1242	-	0.56 U	0.54 U	0.5 U	0.54 U	0.5 U	0.47 U	0.49 U	0.49 U	0.4 U
PCB-1248	-	0.56 U	0.54 U	0.5 U	0.54 U	0.5 U	0.47 U	0.49 U	0.49 U	0.4 U
PCB-1254	-	0.56 U	0.54 U	0.5 U	0.54 U	0.5 U	0.47 U	0.49 U	0.49 U	0.4 U
PCB-1260	-	0.56 U	0.54 U	0.5 U	0.54 U	0.5 U	0.47 U	0.49 U	0.49 U	0.4 U
PCB-1262	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
PCB-1268	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
Total PCBs	0.09	-	-	-	-	-	-	-	-	-

Notes:

- Concentration exceeds corresponding NYSDEC Class GA Standard

1 - DUP collected from MW-1D
U - Analyte not detected
J - Estimated value
M - Manual integrated compound
B - Analyte was detected in Method Blank.
NS - No sample. Container damaged.

Table 4-2
Summary of Groundwater Sampling Results - PCBs
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

Sample Date Units	NYSDEC Class GA Standards	MW-4D 8/7/2007 ug/L	MW-4D 10/1/2008 ug/L	MW-4D 6/18/2009 ug/L	MW-4D 3/24/2010 ug/L	MW-4D 6/22/2011 ug/L	MW-4D 7/30/2012 ug/L	MW-4D 10/16/2013 ug/L	MW-4D 4/23/2015 ug/L	MW-4D 11/1/2017 ug/L
Analyte										
PCB-1016	-	0.61 U	0.52 U	0.5 U	0.52 U	0.5 U	0.47 U	0.48 U	0.47 U	0.4 U
PCB-1221	-	1.2 U	1.0 U	0.5 U	0.52 U	0.5 U	0.47 U	0.48 U	0.47 U	0.4 U
PCB-1232	-	0.61 U	0.52 U	0.5 U	0.52 U	0.5 U	0.47 U	0.48 U	0.47 U	0.4 U
PCB-1242	-	0.61 U	0.52 U	0.5 U	0.52 U	0.5 U	0.47 U	0.48 U	0.47 U	0.4 U
PCB-1248	-	0.61 U	0.52 U	0.5 U	0.52 U	0.5 U	0.47 U	0.48 U	0.47 U	0.4 U
PCB-1254	-	0.61 U	0.52 U	0.5 U	0.52 U	0.5 U	0.47 U	0.48 U	0.47 U	0.4 U
PCB-1260	-	0.61 U	0.52 U	0.5 U	0.52 U	0.5 U	0.47 U	0.48 U	0.47 U	0.4 U
PCB-1262	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
PCB-1268	-	NR	NR	NR	NR	NR	NR	NR	NR	0.4 U
Total PCBs	0.09	-	-	-	-	-	-	-	-	-

Notes:

- Concentration exceeds corresponding NYSDEC Class GA Standard

1 - DUP collected from MW-1D
U - Analyte not detected
J - Estimated value
M - Manual integrated compound
B - Analyte was detected in Method Blank.
NS - No sample. Container damaged.

Table 4-3
Summary of Groundwater Sampling Results - PFAS and 1,4-Dioxane
Columbia Mills
Minetto, New York
NYSDEC Site No. 7-38-012

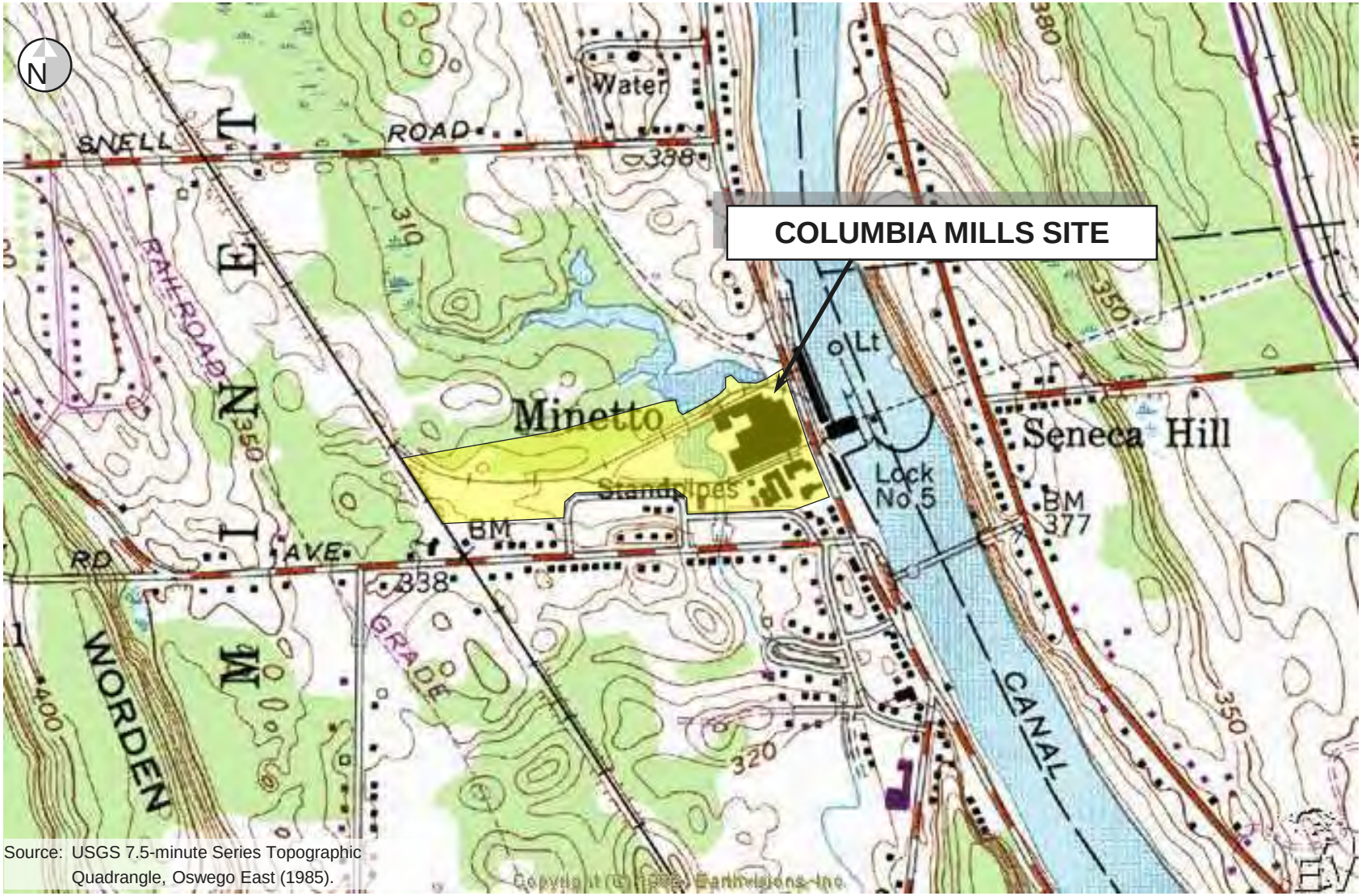
Sample Date	USEPA Health Advisory Limit	MW-1S 10/31/2017	MW-1D 10/31/2017	DUP-1[(1)] 10/31/2017	MW-2S 11/1/2017	MW-2D 11/1/2017	MW-3S 10/31/2017	MW-3D 4/23/2015	MW-4S 11/1/2017	MW-4D 11/1/2017
Perfluorobutanesulfonic acid (PFBS) (ng/L)		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Perfluorohexanesulfonic acid (PFHxS) (ng/L)		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Perfluoroheptanoic acid (PFHpA) (ng/L)		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	25.9	2.0 U	2.0 U	2.0 U
Perfluorooctanoic acid (PFOA) (ng/L)	70	2.0 U	2.0 U	2.0 U	2.0 U	0.95 J	43.4	0.89 J	2.0 U	2.0 U
Perfluorooctanesulfonic acid (PFOS) (ng/L)	70	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Perfluorononanoic acid (PFNA) (ng/L)		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.48 J	2.0 U	2.0 U	2.0 U
1,4-Dioxane (ug/L)	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U

Notes:
1 - DUP collected from MW-1D
U - Analyte not detected
J - Estimated value

FIGURES

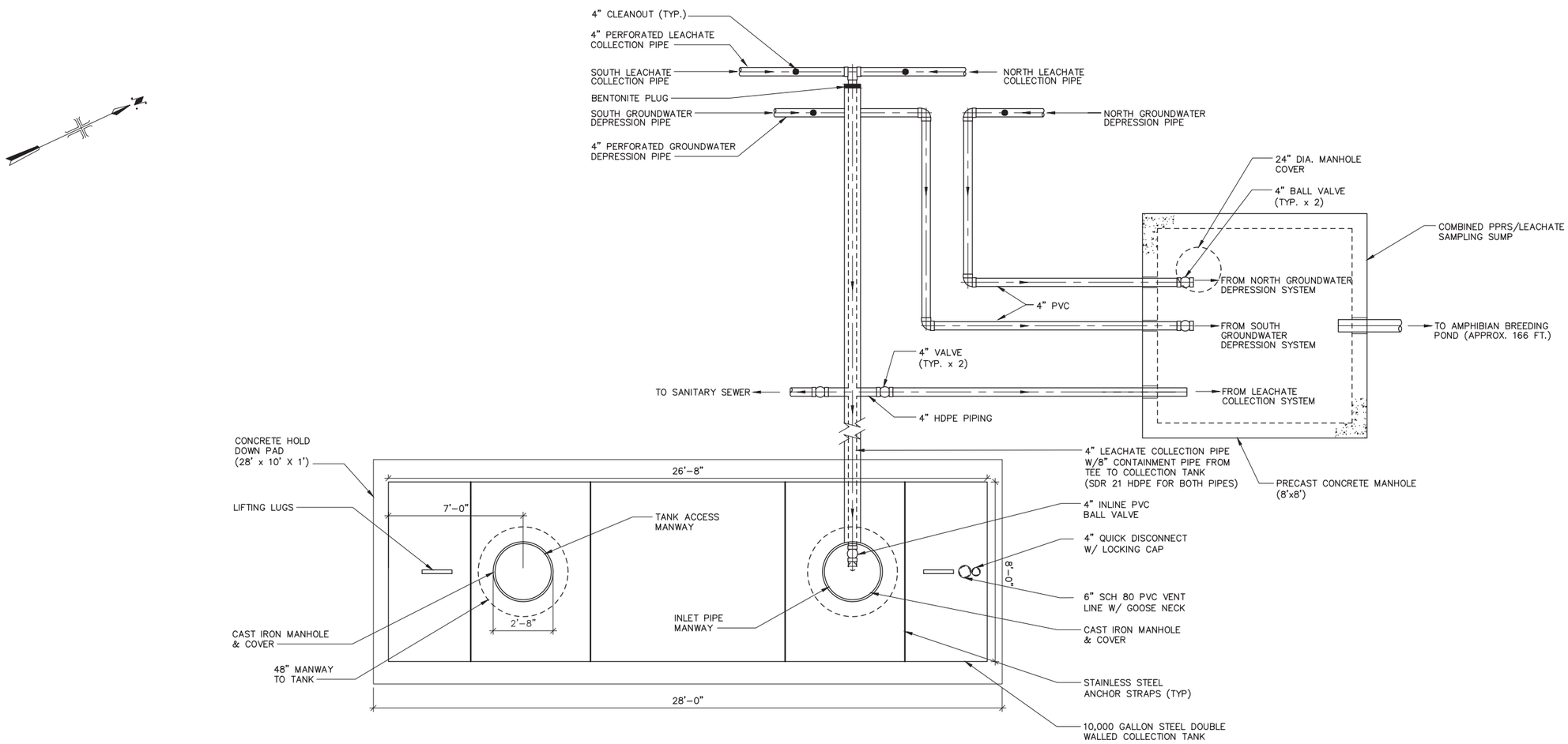
Figure 2-1
Site Location

Columbia Mills Site
NYSDEC Site 7-38-012



0 2,000 ft

G:\PROJECT\0266363\FILE\Reports\2010 Report\Figure 2-1.pptx



LEACHATE COLLECTION TANK PIPING PLAN VIEW

SCALE: 3/16" = 1'-0"

SOURCE: MALCOLM PIRNIE REMEDIAL LANDFILL DESIGN DRAWINGS (MARCH 1995) AND 2009 MALCOM PIRNIE DYE TESTING AT THE SITE.

ARCADIS
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NYSDEC STANDBY CONTRACT NO. D00443-7
NYSDEC SITE NO. 7-38-012
COLUMBIA MILLS SITE
MINETTO, NEW YORK

LEACHATE COLLECTION SYSTEM SCHEMATIC

SCALE AS SHOWN

ARCADIS-US, INC.

SEPTEMBER 2011

FIGURE 3-1

N

DISCHARGE STRUCTURE

AMPHIBIAN BREEDING POND

COMBINED PPRS/LEACHATE SAMPLING SUMP

NORTH PORE PRESSURE RELEIF SYSTEM

PPRS FLOW CONTROLED BY SEPARATE VALVES

LANDFILL CELL

LEACHATE COLLECTION TANK

Barrett Dr

SOUTH PORE PRESSURE RELEIF SYSTEM

LEACHATE FLOW DIRECTED TO COLLECTON TANK, SAMPLING SUMP, OR SANITARY SEWER DEPENDING ON VALVE CONFIGURATION

TOWN OF MINETTO SANITARY SEWER

Chase Dr

Unnamed Street

County Route 24

LEGEND

- PROPERTY LINE
- PORE PRESSURE RELEIF SYSTEM NETWORK
- LEACHATE COLLECTION NETWORK
- COMBINED PPRS/LEACHATE
- FLOW DIRECTION
- FLOW CONTROL VALVE

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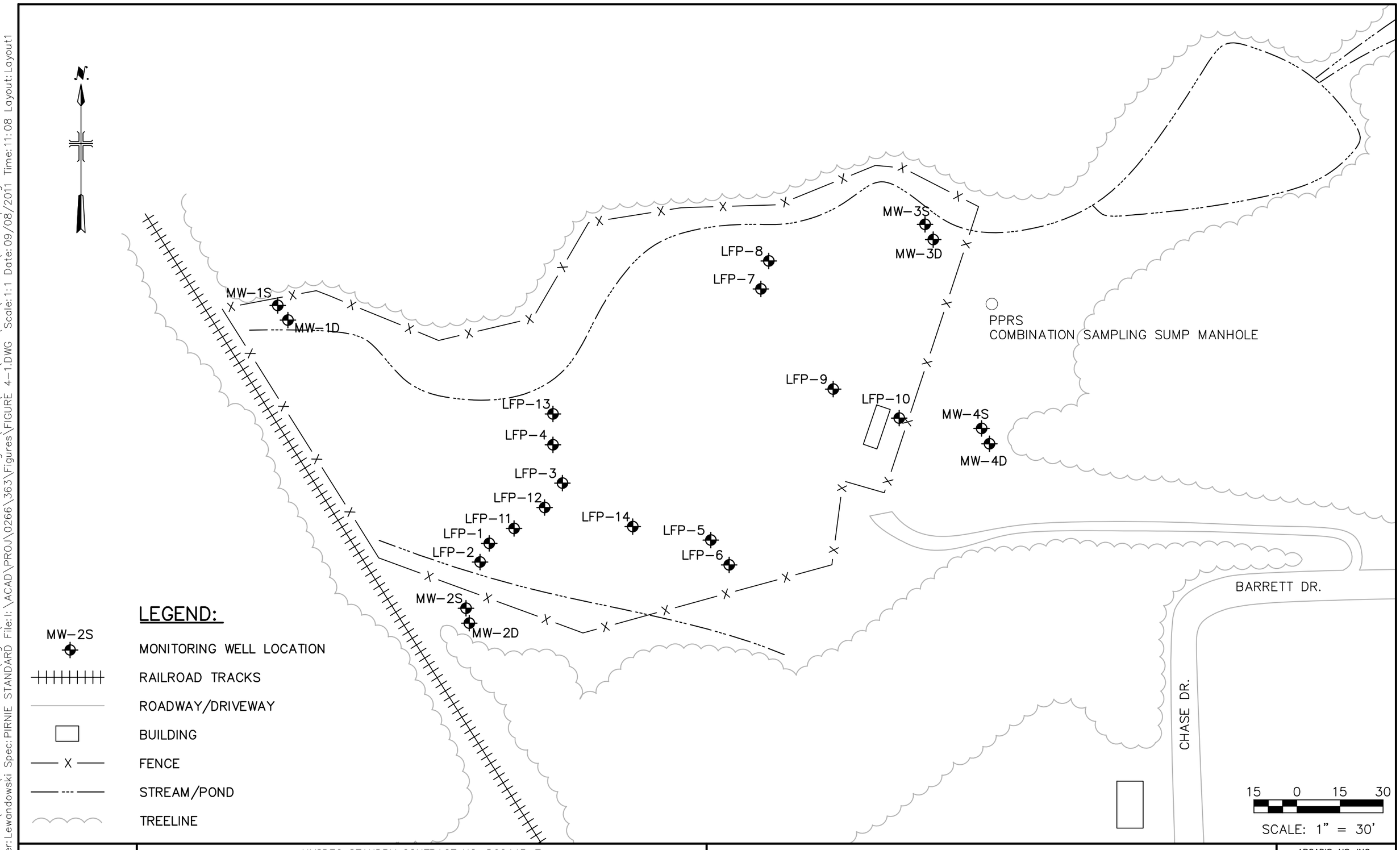
COLUMBIA MILLS SITE
MINETTO, NEW YORK
NYSDEC SITE NUMBER 7-38-012

PROCESS FLOW DIAGRAM
(NOT TO SCALE)

OCTOBER 2011

FIGURE 3-2



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NYSDEC STANDBY CONTRACT NO. D00443-7
NYSDEC SITE NO. 7-38-012
COLUMBIA MILLS SITE
MINETTO, NEW YORK

GROUNDWATER MONITORING WELL LOCATIONS

SCALE: 1" = 40'

ARCADIS-US, INC.

FIGURE 4-1

N.

321.96
MW-1S
MW-1D

309.68
MW-3S
MW-3D

312.44
MW-4S
MW-4D

MW-2S
325.38
MW-2D

LFP-1
LFP-2
LFP-3
LFP-4
LFP-5
LFP-6
LFP-7
LFP-8
LFP-9
LFP-10
LFP-11
LFP-12
LFP-13
LFP-14

322
324
320
318
316
314
312
310

COMBINATION SAMPLING
SUMP MANHOLE

BARRETT DR.

CHASE DR.

LEGEND:

- MW-2S — MONITORING WELL LOCATION
- 325.98 — GROUNDWATER ELEVATION
- 324 — POTENTIOMETRIC CONTOUR
- RAILROAD TRACKS
- ROADWAY/DRIVEWAY
- BUILDING
- FENCE
- STREAM/POND
- TREELINE
- GROUNDWATER FLOW DIRECTION

50 0 50 100
SCALE: 1" = 100'

ARCADIS

NYSDEC STANDBY CONTRACT NO. D007618-10
NYSDEC SITE NO. 7-38-012
COLUMBIA MILLS SITE
MINETTO, NEW YORK

SHALLOW POTENTIOMETRIC SURFACE

SCALE: AS SHOWN

OCTOBER 2017

FIGURE 4-2

USER: HAUSMANN FILENAME: G:\ACAD\PROJ\00266405.0000\FIGURES\SHALLOW POT OCT 2017.DWG SAVE DATE: 1/25/2018 5:50 AM PLOT DATE: 1/25/2018 5:52 AM

N.

MW-1S
MW-1D
325.04
MW-2S
MW-2D
324.62
MW-3S
MW-3D
305.45
MW-4S
MW-4D
310.92
LFP-1
LFP-2
LFP-3
LFP-4
LFP-5
LFP-6
LFP-7
LFP-8
LFP-9
LFP-10
LFP-11
LFP-12
LFP-13
LFP-14
324
322
320
318
316
314
312
310
308
306
COMBINATION SAMPLING SUMP MANHOLE
BARRETT DR.
CHASE DR.

LEGEND:

- MW-2S — MONITORING WELL LOCATION
- 325.98 — GROUNDWATER ELEVATION
- 324 — POTENTIOMETRIC CONTOUR
- RAILROAD TRACKS
- ROADWAY/DRIVEWAY
- BUILDING
- FENCE
- STREAM/POND
- TREELINE
- GROUNDWATER FLOW DIRECTION

50 0 50 100

SCALE: 1" = 100'

ARCADIS

NYSDEC STANDBY CONTRACT NO. D007618-10
NYSDEC SITE NO. 7-38-012
COLUMBIA MILLS SITE
MINETTO, NEW YORK

DEEP POTENTIOMETRIC SURFACE

SCALE: AS SHOWN

OCTOBER 2017

FIGURE 4-3

USER: HAUSMANN FILENAME: C:\ACAD\PROJ\00266405.0000\FIGURES\DEEP POT OCT 2017.DWG SAVE DATE: 1/24/2018 7:13 AM PLOT DATE: 1/24/2018 7:13 AM

APPENDIX A

Post Closure Inspection Forms and Site Photographs

COLUMBIA MILLS SITE LANDFILL

Post-Closure Operation and Maintenance Checklist

Inspected by: Jasmine Mullins

Date: 11/1/2017 Time: 1330

Weather Conditions: Partly Cloudy @ 40°F

LANDFILL COVER SYSTEM

Erosion		YES	✓	NO
Holes or Cracks in Cover		YES	✓	NO
Cap Settlement		YES	✓	NO
Ponded Water or Wet Areas		YES	✓	NO
Burrowing Rodents		YES	✓	NO
Sparse Vegetation/Bare Soil		YES	✓	NO
Brush or Other Woody Vegetation,		YES	✓	NO
Excessive Weeds in Grass		YES	✓	NO
Grass Mowed		YES	✓	NO

LANDFILL VENTS

Damage		YES	✓	NO
Obstructions		YES	✓	NO

DRAINAGE DITCHES

Erosion		YES	✓	NO
Obstructions		YES	✓	NO
Sediment Accumulation		YES	✓	NO
Evidence of Surcharging		YES	✓	NO
Presence of Brush	✓	YES		NO

Comments:

Continued

FENCING

Warning Signs	✓	OK		OTHER
Gates and Locks	✓	OK		OTHER
Posts	✓	OK		OTHER
Top Tension Wire	✓	OK		OTHER
Barbed Wire		OK	✓	OTHER

MONITORING WELLS

Capped and Locked	✓	YES		NO
Casing Damage	✓	YES		NO
ID Visible	✓	YES		NO

PIEZOMETERS

Riser Damage	✓	YES		NO
Capped	✓	YES		NO
ID Visible		YES	✓	NO

AMPIBIAN BREEDING POND

Discharge Pipe from Sampling Sump	✓	OK		OTHER
Discharge Weir	✓	OK		OTHER
Erosion		YES	✓	NO
Obstructions	✓	YES		NO

Comments: Barbed wire has not been installed. Monitoring wells MW-4S & MW-4D are bent/damaged at top of casing but still functional. Weeds removed from discharge weir.

Continued

PORE-PRESSURE RELIEF SYSTEM

Cleanout Damage		YES	✓	NO
Cleanouts Capped	✓	YES		NO
North PPRS - Est. Flow Rate			<5	GPM
South PPRS - Est. Flow Rate			<5	GPM
Sediment Accumulation in Sampling Sump		YES	✓	NO
Discharge to ABP Blocked		YES	✓	NO

LEACHATE COLLECTION SYSTEM

Current Discharge Location		Sample Sump		Storage Tank	✓	Sanitary Sewer
Sample Sump Condition			✓	OK		OTHER
Tank Level			19.48 ft	DTW	21.5 ft	DTB
Control Valve Operation:	Sample Sump		✓	OK		OTHER
	Storage Tank		N/A	OK		OTHER
	Sanitary Sewer		✓	OK		OTHER
Estimated Flow Rate					<5	GPM

Comments: _____

DATE 11/1/2017 **INSPECTOR'S SIGNATURE** _____

Appendix A
Site Photographs

Columbia Mills Site
NYSDEC Site #7-38-012
Minetto, New York

Amphibian Breeding Pond

ABP Discharge Structure (cleaned)

Appendix A
Site Photographs

Columbia Mills Site
NYSDEC Site #7-38-012
Minetto, New York

Exposed road fabric for access road

Appendix A
Site Photographs

Columbia Mills Site
NYSDEC Site #7-38-012
Minetto, New York

East side of landfill, facing west.

East side of landfill, facing southwest

Appendix A
Site Photographs

Columbia Mills Site
NYSDEC Site #7-38-012
Minetto, New York

Northwest corner of landfill, facing east

East side of landfill, facing east

Appendix A
Site Photographs

Columbia Mills Site
NYSDEC Site #7-38-012
Minetto, New York

MW-1S – Concrete collar shows frost heaving

MW-1D

Appendix A
Site Photographs

Columbia Mills Site
NYSDEC Site #7-38-012
Minetto, New York

MW-2S

MW-2D

Appendix A
Site Photographs

Columbia Mills Site
NYSDEC Site #7-38-012
Minetto, New York

MW-3S

MW-3D

Appendix A
Site Photographs

Columbia Mills Site
NYSDEC Site #7-38-012
Minetto, New York

MW-4S with evidence of historic mower damage to protective casing

MW-4D

APPENDIX B

Field Sampling Logs

Groundwater Monitoring Well Inspection

ARCADIS Design & Consultancy for natural and built assets

Site/Project Name: Columbia Mills Project Number: 00266405.0000

Date of Inspection: 10/31/17 Inspector: J. Mullins

Well Designation: MW-15

Well Location: NW corner of LF

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	2.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	5 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: Fair - Frost heaved		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: ____
Well ID. Visible?	Yes [X]	No [ ]	Describe: Paint marker
Lock Present and Functional?	Yes [X]	No [ ]	Describe: ____
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: ok		
Integrity of Cap Seal	Describe: Slip cap - ok		
Surface Water in Casing?	Yes [X]	No [ ]	Describe: ____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [X]	Expansion Plug [ ] 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	0.0 ppm		
Depth to Water (to top of casing)	2.89 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [X]
Total Well Depth (to top of casing)	16.80 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Hard		

Additional Comments:

Groundwater Monitoring Well Inspection

ARCADIS Design & Consultancy for natural and built assets

Site/Project Name: Columbia Mills Project Number: 00266405.0000

Date of Inspection: 10/31/17 Inspector: J. Mullins

Well Designation: MW-7D

Well Location: NW corner of LF

Outward Appearance

Flushmount Diameter	___ inches	N/A [✓]	
Approximate Stickup Height	≈2.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ___
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [✓]	Bentonite [ ]	Not apparent [ ] Other ___
Integrity of Surface Seal/Apron	Describe: Good, intact		
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [✓]	Describe:
Well ID. Visible?	Yes [✓]	No [ ]	Describe: On Casing
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	0.0 ppm		
Depth to Water (to top of casing)	9.10 feet (nearest 0.01)	Depth to LNAPL	— feet (nearest 0.01) N/A [✓]
Total Well Depth (to top of casing)	28.06 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: HARD Bottom		

Additional Comments:

Groundwater Monitoring Well Inspection

ARCADIS Design & Consultancy for natural and built assets

Site/Project Name: Columbia Mills Project Number: 00266405.0000

Date of Inspection: 11/1/17 Inspector: J. Mullins

Well Designation: MW-25

Well Location: SW corner of LF; outside of Fenceline

Outward Appearance

Flushmount Diameter	____ inches	N/A [✓]	
Approximate Stickup Height	~2.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	5 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓] Other ____
Integrity of Surface Seal/Apron	Describe: Covered by soil/grass		
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [✓]	Describe: ____
Well ID. Visible?	Yes [✓]	No [ ]	Describe: On Casing
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	0.0 ppm		
Depth to Water (to top of casing)	10.55 feet (nearest 0.01)	Depth to LNAPL	— feet (nearest 0.01) N/A [✓]
Total Well Depth (to top of casing)	17.46 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Hard Bottom		

Additional Comments:

Groundwater Monitoring Well Inspection

ARCADIS Design & Consultancy for natural and built assets

Site/Project Name: Columbia Mills Project Number: 00266405.0000

Date of Inspection: 11/1/17 Inspector: J. Mullins

Well Designation: MW-2D

Well Location: SW corner of LF; outside of Fence Line

Outward Appearance

Flushmount Diameter	____ inches	N/A [✓]	
Approximate Stickup Height	≈2.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: GOOD		
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: COVERED BY SOIL/GRASS		
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [✓]	Describe: ____
Well ID. Visible?	Yes [✓]	No [ ]	Describe: On Casing
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	0.0 ppm		
Depth to Water (to top of casing)	11.28 feet (nearest 0.01)	Depth to LNAPL	— feet (nearest 0.01) N/A [✓]
Total Well Depth (to top of casing)	27.44 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: HARD BOTTOM		

Additional Comments:

Groundwater Monitoring Well Inspection

ARCADIS Design & Consultancy for natural and built assets

Site/Project Name: Columbia Mills Project Number: 00266405.0000

Date of Inspection: 10/31/17 Inspector: J. Mullins

Well Designation: MW-35

Well Location: Inside NE corner of Fence Line

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	2 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	5 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: covered by Grass		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [X]	No [ ] Describe:	Tree Posts
Well ID. Visible?	Yes [X]	No [ ] Describe:	Paint marks
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 [X]	Expansion Plug [ ] 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	0.0 ppm		
Depth to Water (to top of casing)	6.34 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [X]
Total Well Depth (to top of casing)	17.73 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Firm		

Additional Comments:

Groundwater Monitoring Well Inspection

ARCADIS Design & Consultancy for natural and built assets

Site/Project Name: Columbia Mills Project Number: 00266405.0000

Date of Inspection: 10/31/17 Inspector: J. Mullins

Well Designation: MW-3D

Well Location: INSIDE NE CORNER OF FENCE LINE

Outward Appearance

Flushmount Diameter	____ inches	N/A [ ]	
Approximate Stickup Height	≈ 2.5 feet	N/A [✓]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	5 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓] Other ____
Integrity of Surface Seal/Apron	Describe: COVERED BY SOIL/GRASS		
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	0.0 ppm		
Depth to Water (to top of casing)	10.34 feet (nearest 0.01)	Depth to LNAPL	— feet (nearest 0.01) N/A [✓]
Total Well Depth (to top of casing)	26.55 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: HARD BOTTOM		

Additional Comments:

Groundwater Monitoring Well Inspection

ARCADIS Design & Consultancy for natural and built assets

Site/Project Name: Columbia Mills Project Number: 00266405.0000

Date of Inspection: 11/1/17 Inspector: J. Mullins

Well Designation: MW-45

Well Location: SE of LF; outside fence line

Outward Appearance

Flushmount Diameter	____ inches	N/A [✓]	
Approximate Stickup Height	≈2.0 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Top of Casing Bent/Damaged		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	5 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓] Other ____
Integrity of Surface Seal/Apron	Describe: COVERED BY SOIL/GRASS		
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: FAIR			
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	0.0 ppm			
Depth to Water (to top of casing)	9.19 feet (nearest 0.01)	Depth to LNAPL	— feet (nearest 0.01)	N/A [✓]
Total Well Depth (to top of casing)	14.16 feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: HARD BOTTOM			

Additional Comments:

Groundwater Monitoring Well Inspection

ARCADIS Design & Consultancy for natural and built assets

Site/Project Name: Columbia Mills Project Number: 00266405.0000

Date of Inspection: 11/1/17 Inspector: J. Mullins

Well Designation: MW-4D

Well Location: SE of LF, outside fence line

Outward Appearance

Flushmount Diameter	____ inches	N/A [✓]	
Approximate Stickup Height	≈2.0 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Top of Casing Bent/Damaged		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	5 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓] Other ____
Integrity of Surface Seal/Apron	Describe: COVERED BY SOIL/GRASS		
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: FAIR		
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	0.0 ppm		
Depth to Water (to top of casing)	10.31 feet (nearest 0.01)	Depth to LNAPL	— feet (nearest 0.01) N/A [✓]
Total Well Depth (to top of casing)	27.12 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: SOFT/FIRM BOTTOM		

Additional Comments:

LOW FLOW SAMPLING PURGE LOG

WELL NUMBER: MW-1S DATE: 10/31/2017

PROJECT NAME: Columbia Mills
PROJECT NUMBER: 00266405.0000
SAMPLERS: JM/JW

A: Total Casing and Screen Length: 16.77 ft

B: Casing Internal Diameter: 2-inch

C: Water Level Below Top of Casing: 2.89 ft

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1450	1455	1505	1510	1515	1520						
Depth to Water (ft)	3.25	3.37	3.39	3.40	3.41	3.42						
Gallons	0.00	0.50	0.75	1.25	1.50	1.80						
pH	6.74	7.13	7.23	7.26	7.30	7.32						
Conductivity (mS/cm)	0.479	0.471	0.470	0.470	0.470	0.470						
Turbidity (ntu)	100	4.3	0.0	0.0	0.0	0.0						
Dissolved Oxygen (mg/l)	0.0	0.0	0.0	0.0	0.0	0.0						
Temperature (^{o}C)	12.93	13.03	13.04	13.04	13.01	12.96						
Redox (mV)	-15	-14	-19	-20	-22	-24						

Notes: Collected sample and MS/MSD at 1525.

LOW FLOW SAMPLING PURGE LOG

WELL NUMBER: MW-1D DATE: 10/31/2017

PROJECT NAME: Columbia Mills
PROJECT NUMBER: 00266405.0000
SAMPLERS: JM/JW

A: Total Casing and Screen Length: 28.06 ft

B: Casing Internal Diameter: 2-inch

C: Water Level Below Top of Casing: 0.10 ft

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1450	1455	1500	1505	1510	1515	1520					
Depth to Water (ft)	0.10	0.45	0.65	0.85	0.95	1.05	1.15					
Gallons	0.00	0.2	0.40	0.6	0.80	1.0	1.2					
pH	7.72	7.72	7.48	7.43	7.41	7.39	7.39					
Conductivity (mS/cm)	0.391	0.392	0.374	0.359	0.351	0.342	0.342					
Turbidity (ntu)	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Dissolved Oxygen (mg/l)	6.15	3.97	3.89	3.25	3.04	2.67	2.67					
Temperature (^{o}C)	12.89	12.74	12.71	12.67	12.63	12.52	12.52					
Redox (mV)	-86	-144	-141	-139	-139	-137	-137					

Notes: Collected sample and MW-X-DUP at 1525.

LOW FLOW SAMPLING PURGE LOG

ARCADIS Design & Consultancy for natural and built assets

WELL NUMBER: MW-2S DATE: 11/1/2017

PROJECT NAME: Columbia Mills
PROJECT NUMBER: 00266405.0000
SAMPLERS: JM/JW

A: Total Casing and Screen Length: 17.48 ft

B: Casing Internal Diameter: 2-inch

C: Water Level Below Top of Casing: 10.55 ft

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	0950	0955	1000	1005	1010	1015	1020					
Depth to Water (ft)	10.55	12.16	12.81	12.96	12.99	12.99	13.00					
Gallons	0.0	0.2	0.4	0.6	0.8	1.0	1.2					
pH	6.51	6.46	6.47	6.52	6.62	6.64	6.65					
Conductivity (mS/cm)	0.445	0.336	0.303	0.303	0.311	0.327	0.327					
Turbidity (ntu)	4.74	4.00	2.05	2.05	2.08	2.08	2.05					
Dissolved Oxygen (mg/l)	10.11	10.27	10.15	10.12	10.03	9.90	9.90					
Temperature (^{o}C)	9.34	12.54	12.70	12.64	12.58	12.63	12.63					
Redox (mV)	204	151	150	150	149	146	146					

Notes: Collected sample at 1025.

LOW FLOW SAMPLING PURGE LOG

WELL NUMBER: MW-2D DATE: 11/1/2017

PROJECT NAME: Columbia Mills
PROJECT NUMBER: 00266405.0000
SAMPLERS: JM/JW

A: Total Casing and Screen Length: 27.44 ft

B: Casing Internal Diameter: 2-inch

C: Water Level Below Top of Casing: 11.28 ft

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1000	1005	1010	1015	1020	1025	1030					
Depth to Water (ft)	11.28	13.01	14.09	15.05	15.75	16.14	16.44					
Gallons	0.0	0.2	0.4	0.6	0.8	1.0	1.2					
pH	6.45	6.90	7.00	7.03	7.03	7.03	7.02					
Conductivity (mS/cm)	0.579	0.531	0.523	0.522	0.517	0.510	0.509					
Turbidity (ntu)	2.83	2.83	2.00	1.00	0.00	0.00	0.00					
Dissolved Oxygen (mg/l)	0.30	0.25	0.25	0.20	0.10	0.00	0.00					
Temperature (^{o}C)	10.53	11.11	11.28	11.38	11.54	11.65	11.66					
Redox (mV)	184	148	139	136	128	117	116					

Notes: Collected sample at 1040.

LOW FLOW SAMPLING PURGE LOG

ARCADIS Design & Consultancy for natural and built assets

WELL NUMBER: MW-3S DATE: 10/31/2017

PROJECT NAME: Columbia Mills
PROJECT NUMBER: 00266405.0000
SAMPLERS: JM/JW

A: Total Casing and Screen Length: 17.73 ft.

B: Casing Internal Diameter: 2-inch

C: Water Level Below Top of Casing: 6.34 ft.

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1645	1650	1655	1700	1705	1710						
Depth to Water (ft)	7.01	9.85	11.82	13.13	13.85	14.58						
Gallons	0.00	0.50	0.75	1.00	1.50	1.75						
pH	7.44	7.67	7.80	7.84	7.85	7.83						
Conductivity (mS/cm)	0.491	0.554	0.547	0.566	0.566	0.568						
Turbidity (ntu)	0.0	0.0	0.0	0.0	0.0	0.0						
Dissolved Oxygen (mg/l)	0.00	0.00	4.80	4.99	4.98	5.01						
Temperature (^{o}C)	12.71	12.58	13.09	13.09	13.06	13.09						
Redox (mV)	-117	-42	-49	-51	-51	-50						

Notes: Collected sample at 1710.

LOW FLOW SAMPLING PURGE LOG

WELL NUMBER: MW-3D DATE: 10/31/2017

PROJECT NAME: Columbia Mills
PROJECT NUMBER: 00266405.0000
SAMPLERS: JM/JW

A: Total Casing and Screen Length: 26.55 ft.

B: Casing Internal Diameter: 2-inch

C: Water Level Below Top of Casing: 10.34 ft.

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1650	1655	1700	1705	1710	1715	1720	1725	1730	1735		
Depth to Water (ft)	10.34	13.40	16.64	17.58	18.91	19.63	20.95	22.05	24.25			
Gallons	0.0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.3			
pH	7.86	7.85	7.84	7.86	7.90	7.90	7.94	7.93	7.92			
Conductivity (mS/cm)	0.629	0.638	0.636	0.633	0.628	0.620	0.619	0.613	0.612			
Turbidity (ntu)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Dissolved Oxygen (mg/l)	4.46	1.79	2.12	3.18	3.22	3.31	3.54	3.64	3.46			
Temperature (^{o}C)	13.00	13.15	13.20	13.16	12.91	13.16	13.33	13.15	12.88			
Redox (mV)	-134	-136	-137	-131	-115	-109	-93	-79	-77			

Well purged dry

Notes: Collected sample at 1255 on 11/1/2017.

LOW FLOW SAMPLING PURGE LOG

WELL NUMBER: MW-4S DATE: 11/1/2017

PROJECT NAME: Columbia Mills
PROJECT NUMBER: 00266405.0000
SAMPLERS: JM/JW

A: Total Casing and Screen Length: 14.16 ft.

B: Casing Internal Diameter: 2-inch

C: Water Level Below Top of Casing: 9.19 ft.

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1145	1150	1155	1200	1205	1210	1215					
Depth to Water (ft)	9.19	10.75	10.85	10.96	11.05	11.20	11.30					
Gallons	0.00	0.20	0.40	0.60	0.75	0.90	1.00					
pH	7.01	7.00	7.03	7.03	7.03	7.02	7.02					
Conductivity (mS/cm)	0.595	0.587	0.586	0.584	0.583	0.582	0.581					
Turbidity (ntu)	3.13	2.00	0.00	0.00	0.00	0.00	0.00					
Dissolved Oxygen (mg/l)	4.13	3.65	2.96	2.79	2.72	2.70	2.69					
Temperature (^{o}C)	12.53	12.95	13.46	13.42	13.29	13.29	13.31					
Redox (mV)	-113	-86	-110	-116	-117	-114	-109					

Notes: Collected sample at 1220.

LOW FLOW SAMPLING PURGE LOG

WELL NUMBER: MW-4D DATE: 11/1/2017

PROJECT NAME: Columbia Mills
PROJECT NUMBER: 00266405.0000
SAMPLERS: JM/JW

A: Total Casing and Screen Length: 27.12 ft.

B: Casing Internal Diameter: 2-inch

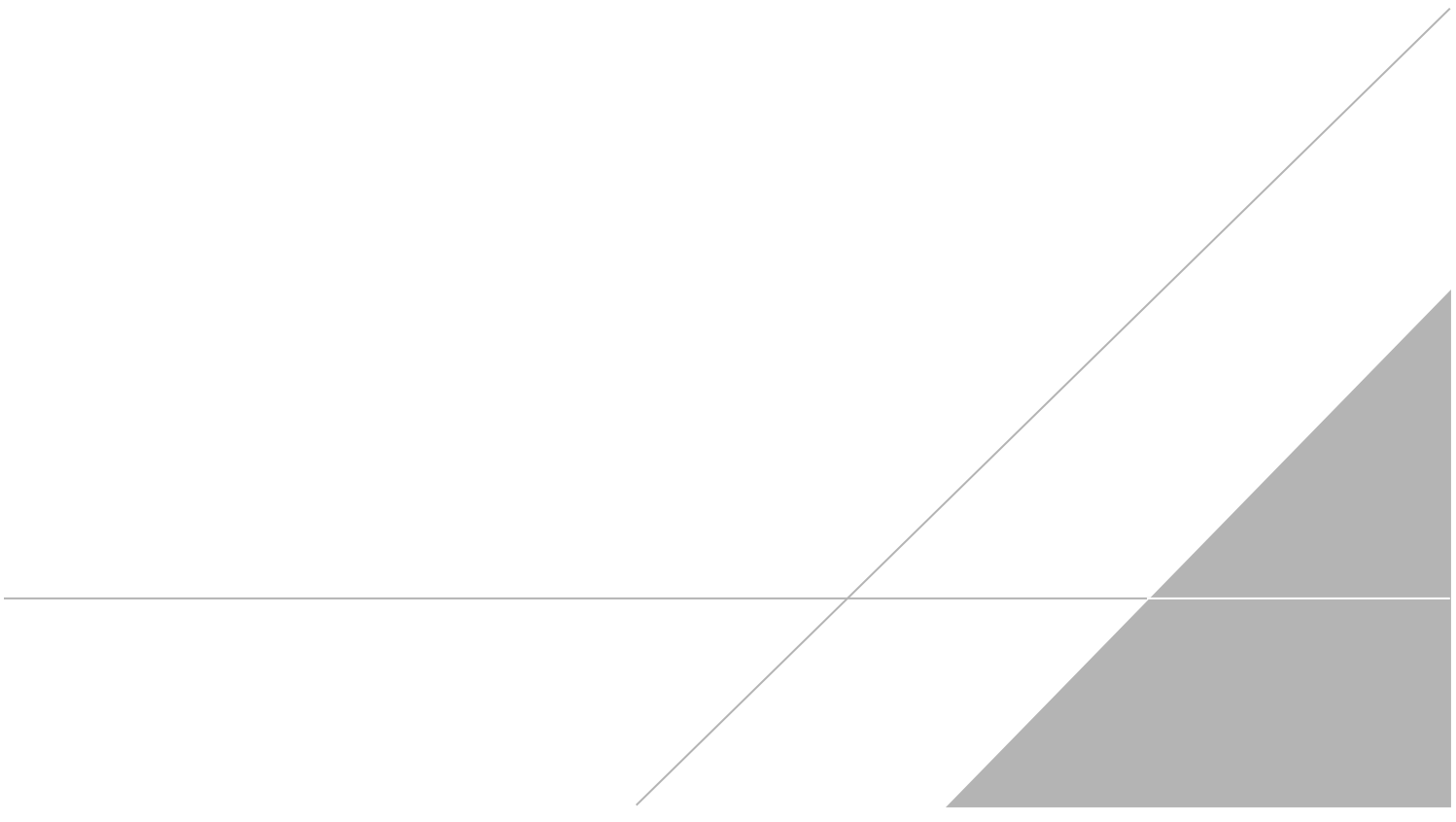
C: Water Level Below Top of Casing: 10.34 ft.

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1150	1155	1200	1205	1210	1215	1220					
Depth to Water (ft)	10.34	11.08	11.24	11.29	11.31	11.32	11.33					
Gallons	0.00	0.20	0.40	0.50	0.60	0.80	0.95					
pH	7.89	7.88	7.79	7.67	7.63	7.59	7.58					
Conductivity (mS/cm)	0.625	0.631	0.627	0.630	0.632	0.640	0.644					
Turbidity (ntu)	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Dissolved Oxygen (mg/l)	4.83	2.15	1.95	1.55	1.06	0.85	0.80					
Temperature (^{o}C)	12.37	12.41	12.55	12.55	12.63	12.66	12.68					
Redox (mV)	-110	-93	-109	-110	-121	-125	-128					

Notes: Collected sample at 1230.

APPENDIX C

Analytical Reporting Forms



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 460-144244-1

Job Description: NY Standby - Columbia Mills 2017

Contract Number: TAAT092507-R010110

For:
ARCADIS U.S. Inc
855 Route 146
Suite 210
Clifton Park, NY 12065

Attention: Jasmine Mullins

Approved for release.
Judy L Stone
Senior Project Manager
11/22/2017 5:48 PM

Judy L Stone, Senior Project Manager
10 Hazelwood Drive, Amherst, NY, 14228-2298
(484)685-0868
judy.stone@testamericainc.com
11/22/2017

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Job Narrative
460-144244-1

Comments
No additional comments.

Receipt
The samples were received on 11/2/2017 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.4º C and 3.9º C.

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

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

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

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

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

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: NY Standby - Columbia Mills 2017

TestAmerica Job ID: 460-144244-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-144244-1	MW-1S	Water	10/31/17 15:25	11/02/17 09:10
460-144244-2	MW-1D	Water	10/31/17 15:25	11/02/17 09:10
460-144244-3	MW-2S	Water	11/01/17 10:25	11/02/17 09:10
460-144244-4	MW-2D	Water	11/01/17 10:40	11/02/17 09:10
460-144244-5	MW-3S	Water	10/31/17 17:10	11/02/17 09:10
460-144244-6	MW-3D	Water	11/01/17 12:55	11/02/17 09:10
460-144244-7	MW-4S	Water	11/01/17 12:20	11/02/17 09:10
460-144244-8	MW-4D	Water	11/01/17 12:30	11/02/17 09:10
460-144244-9	NPPRS	Water	10/31/17 12:50	11/02/17 09:10
460-144244-10	SPPRS	Water	10/31/17 12:30	11/02/17 09:10
460-144244-11	EB-PROBE	Water	10/31/17 11:10	11/02/17 09:10
460-144244-12	EB-TUBING	Water	10/31/17 11:25	11/02/17 09:10
460-144244-13	FB-X	Water	11/01/17 13:15	11/02/17 09:10
460-144244-14	Leachate	Water	10/31/17 12:05	11/02/17 09:10
460-144244-15	MW-X-DUP	Water	10/31/17 00:00	11/02/17 09:10
460-144244-16	Trip Blank	Water	11/01/17 00:00	11/02/17 09:10

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: NY Standby - Columbia Mills 2017

TestAmerica Job ID: 460-144244-1

Client Sample ID: MW-1S — Lab Sample ID: 460-144244-1

No Detections.

Client Sample ID: MW-1D — Lab Sample ID: 460-144244-2

No Detections.

Client Sample ID: MW-2S — Lab Sample ID: 460-144244-3

No Detections.

Client Sample ID: MW-2D — Lab Sample ID: 460-144244-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.95	J	2.00	0.75	ng/L	1		WS-LC-0025 At1	Total/NA

Client Sample ID: MW-3S — Lab Sample ID: 460-144244-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	25.9		2.00	0.80	ng/L	1		WS-LC-0025 At1	Total/NA
Perfluorooctanoic acid (PFOA)	43.4		2.00	0.75	ng/L	1		WS-LC-0025 At1	Total/NA
Perfluorononanoic acid (PFNA)	1.48	J	2.00	0.65	ng/L	1		WS-LC-0025 At1	Total/NA

Client Sample ID: MW-3D — Lab Sample ID: 460-144244-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.89	J	2.00	0.75	ng/L	1		WS-LC-0025 At1	Total/NA

Client Sample ID: MW-4S — Lab Sample ID: 460-144244-7

No Detections.

Client Sample ID: MW-4D — Lab Sample ID: 460-144244-8

No Detections.

Client Sample ID: NPPRS — Lab Sample ID: 460-144244-9

No Detections.

Client Sample ID: SPPRS — Lab Sample ID: 460-144244-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.99	J	2.00	0.92	ng/L	1		WS-LC-0025 At1	Total/NA

Client Sample ID: EB-PROBE — Lab Sample ID: 460-144244-11

No Detections.

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: NY Standby - Columbia Mills 2017

TestAmerica Job ID: 460-144244-1

Client Sample ID: EB-TUBING — Lab Sample ID: 460-144244-12

No Detections.

Client Sample ID: FB-X — Lab Sample ID: 460-144244-13

No Detections.

Client Sample ID: Leachate — Lab Sample ID: 460-144244-14

No Detections.

Client Sample ID: MW-X-DUP — Lab Sample ID: 460-144244-15

No Detections.

Client Sample ID: Trip Blank — Lab Sample ID: 460-144244-16

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: NY Standby - Columbia Mills 2017

TestAmerica Job ID: 460-144244-1

Method	Method Description	Protocol	Laboratory
8260C SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL EDI
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL EDI
WS-LC-0025 At1	Fluorinated Alkyl Substances	TAL-SAC	TAL SAC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-SAC = TestAmerica Laboratories, West Sacramento, Facility Standard Operating Procedure.

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Client Sample ID: MW-1S

Date Collected: 10/31/17 15:25
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-1
Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 13:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*71 - 144*		*11/03/17 13:09*	*1*
4-Bromofluorobenzene	*92*		*72 - 133*		*11/03/17 13:09*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 11:08	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 11:08	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 11:08	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 11:08	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 11:08	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 11:08	1
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 11:08	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 11:08	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 11:08	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 11:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*40*		*10 - 150*	*11/04/17 09:36*	*11/06/17 11:08*	*1*
DCB Decachlorobiphenyl	*40*		*10 - 150*	*11/04/17 09:36*	*11/06/17 11:08*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 01:04	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 01:04	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 01:04	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 01:04	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 01:04	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 01:04	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*102*		*25 - 150*	*11/20/17 09:48*	*11/21/17 01:04*	*1*
13C4-PFHpA	*100*		*25 - 150*	*11/20/17 09:48*	*11/21/17 01:04*	*1*
13C4 PFOA	*97*		*25 - 150*	*11/20/17 09:48*	*11/21/17 01:04*	*1*
13C4 PFOS	*99*		*25 - 150*	*11/20/17 09:48*	*11/21/17 01:04*	*1*
13C5 PFNA	*95*		*25 - 150*	*11/20/17 09:48*	*11/21/17 01:04*	*1*

Client Sample ID: MW-1D

Date Collected: 10/31/17 15:25
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-2
Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 13:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*71 - 144*		*11/03/17 13:33*	*1*
4-Bromofluorobenzene	*90*		*72 - 133*		*11/03/17 13:33*	*1*

Client Sample ID: MW-1D
Date Collected: 10/31/17 15:25
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-2
Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:03	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:03	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:03	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:03	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:03	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 20:03	1
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 20:03	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 20:03	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 20:03	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*54*		*10 - 150*	*11/04/17 09:36*	*11/06/17 20:03*	*1*
DCB Decachlorobiphenyl	*54*		*10 - 150*	*11/04/17 09:36*	*11/06/17 20:03*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 01:59	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 01:59	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 01:59	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 01:59	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 01:59	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 01:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*99*		*25 - 150*	*11/20/17 09:48*	*11/21/17 01:59*	*1*
13C4-PFHpA	*99*		*25 - 150*	*11/20/17 09:48*	*11/21/17 01:59*	*1*
13C4 PFOA	*98*		*25 - 150*	*11/20/17 09:48*	*11/21/17 01:59*	*1*
13C4 PFOS	*98*		*25 - 150*	*11/20/17 09:48*	*11/21/17 01:59*	*1*
13C5 PFNA	*98*		*25 - 150*	*11/20/17 09:48*	*11/21/17 01:59*	*1*

Client Sample ID: MW-2S
Date Collected: 11/01/17 10:25
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-3
Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*71 - 144*		*11/03/17 13:57*	*1*
4-Bromofluorobenzene	*90*		*72 - 133*		*11/03/17 13:57*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:27	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:27	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:27	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:27	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:27	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 20:27	1

Client Sample ID: MW-2S

Date Collected: 11/01/17 10:25
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-3

Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 20:27	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 20:27	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 20:27	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*62*		*10 - 150*	*11/04/17 09:36*	*11/06/17 20:27*	*1*
DCB Decachlorobiphenyl	*62*		*10 - 150*	*11/04/17 09:36*	*11/06/17 20:27*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 02:18	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 02:18	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 02:18	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 02:18	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 02:18	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 02:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*106*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:18*	*1*
13C4-PFHpA	*106*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:18*	*1*
13C4 PFOA	*104*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:18*	*1*
13C4 PFOS	*106*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:18*	*1*
13C5 PFNA	*101*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:18*	*1*

Client Sample ID: MW-2D

Date Collected: 11/01/17 10:40
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-4

Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*71 - 144*		*11/03/17 14:21*	*1*
4-Bromofluorobenzene	*88*		*72 - 133*		*11/03/17 14:21*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:50	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:50	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:50	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:50	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:50	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 20:50	1
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 20:50	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 20:50	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 20:50	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 20:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*49*		*10 - 150*	*11/04/17 09:36*	*11/06/17 20:50*	*1*

Client Sample ID: MW-2D
Lab Sample ID: 460-144244-4
Date Collected: 11/01/17 10:40
Matrix: Water
Date Received: 11/02/17 09:10

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*47*		*10 - 150*	*11/04/17 09:36*	*11/06/17 20:50*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 02:36	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 02:36	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 02:36	1
Perfluorooctanoic acid (PFOA)	**0.95**	**J**	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 02:36	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 02:36	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 02:36	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*108*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:36*	*1*
13C4-PFHpA	*107*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:36*	*1*
13C4 PFOA	*107*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:36*	*1*
13C4 PFOS	*105*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:36*	*1*
13C5 PFNA	*108*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:36*	*1*

Client Sample ID: MW-3S
Lab Sample ID: 460-144244-5
Date Collected: 10/31/17 17:10
Matrix: Water
Date Received: 11/02/17 09:10

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*121*		*71 - 144*		*11/03/17 14:45*	*1*
4-Bromofluorobenzene	*93*		*72 - 133*		*11/03/17 14:45*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 21:14	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 21:14	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 21:14	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 21:14	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 21:14	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 21:14	1
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 21:14	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 21:14	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 21:14	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*37*		*10 - 150*	*11/04/17 09:36*	*11/06/17 21:14*	*1*
DCB Decachlorobiphenyl	*35*		*10 - 150*	*11/04/17 09:36*	*11/06/17 21:14*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 02:54	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 02:54	1

Client Sample ID: MW-3S

Date Collected: 10/31/17 17:10
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-5
Matrix: Water

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	**25.9**		2.00	0.80	ng/L		11/20/17 09:48	11/21/17 02:54	1
Perfluorooctanoic acid (PFOA)	**43.4**		2.00	0.75	ng/L		11/20/17 09:48	11/21/17 02:54	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 02:54	1
Perfluorononanoic acid (PFNA)	**1.48**	**J**	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 02:54	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*102*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:54*	*1*
13C4-PFHpA	*104*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:54*	*1*
13C4 PFOA	*102*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:54*	*1*
13C4 PFOS	*101*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:54*	*1*
13C5 PFNA	*102*		*25 - 150*	*11/20/17 09:48*	*11/21/17 02:54*	*1*

Client Sample ID: MW-3D

Date Collected: 11/01/17 12:55
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-6
Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*71 - 144*		*11/03/17 15:08*	*1*
4-Bromofluorobenzene	*87*		*72 - 133*		*11/03/17 15:08*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 21:37	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 21:37	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 21:37	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 21:37	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 21:37	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 21:37	1
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 21:37	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 21:37	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 21:37	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*46*		*10 - 150*	*11/04/17 09:36*	*11/06/17 21:37*	*1*
DCB Decachlorobiphenyl	*45*		*10 - 150*	*11/04/17 09:36*	*11/06/17 21:37*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 03:31	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 03:31	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 03:31	1
Perfluorooctanoic acid (PFOA)	**0.89**	**J**	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 03:31	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 03:31	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 03:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*102*		*25 - 150*	*11/20/17 09:48*	*11/21/17 03:31*	*1*

Client Sample ID: MW-3D
Lab Sample ID: 460-144244-6
Date Collected: 11/01/17 12:55
Matrix: Water
Date Received: 11/02/17 09:10

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4-PFHpA	*99*		*25 - 150*	*11/20/17 09:48*	*11/21/17 03:31*	*1*
13C4 PFOA	*101*		*25 - 150*	*11/20/17 09:48*	*11/21/17 03:31*	*1*
13C4 PFOS	*102*		*25 - 150*	*11/20/17 09:48*	*11/21/17 03:31*	*1*
13C5 PFNA	*99*		*25 - 150*	*11/20/17 09:48*	*11/21/17 03:31*	*1*

Client Sample ID: MW-4S
Lab Sample ID: 460-144244-7
Date Collected: 11/01/17 12:20
Matrix: Water
Date Received: 11/02/17 09:10

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 15:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*71 - 144*		*11/03/17 15:32*	*1*
4-Bromofluorobenzene	*88*		*72 - 133*		*11/03/17 15:32*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:00	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:00	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:00	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:00	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:00	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 22:00	1
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 22:00	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 22:00	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 22:00	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*45*		*10 - 150*	*11/04/17 09:36*	*11/06/17 22:00*	*1*
DCB Decachlorobiphenyl	*39*		*10 - 150*	*11/04/17 09:36*	*11/06/17 22:00*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 03:49	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 03:49	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 03:49	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 03:49	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 03:49	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 03:49	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*105*		*25 - 150*	*11/20/17 09:48*	*11/21/17 03:49*	*1*
13C4-PFHpA	*104*		*25 - 150*	*11/20/17 09:48*	*11/21/17 03:49*	*1*
13C4 PFOA	*104*		*25 - 150*	*11/20/17 09:48*	*11/21/17 03:49*	*1*
13C4 PFOS	*103*		*25 - 150*	*11/20/17 09:48*	*11/21/17 03:49*	*1*
13C5 PFNA	*104*		*25 - 150*	*11/20/17 09:48*	*11/21/17 03:49*	*1*

Client Sample ID: MW-4D

Date Collected: 11/01/17 12:30
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-8

Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*71 - 144*		*11/03/17 15:56*	*1*
4-Bromofluorobenzene	*91*		*72 - 133*		*11/03/17 15:56*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:24	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:24	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:24	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:24	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:24	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 22:24	1
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 22:24	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 22:24	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 22:24	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*45*		*10 - 150*	*11/04/17 09:36*	*11/06/17 22:24*	*1*
DCB Decachlorobiphenyl	*34*		*10 - 150*	*11/04/17 09:36*	*11/06/17 22:24*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 04:08	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 04:08	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 04:08	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 04:08	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 04:08	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 04:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*100*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:08*	*1*
13C4-PFHpA	*102*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:08*	*1*
13C4 PFOA	*100*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:08*	*1*
13C4 PFOS	*99*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:08*	*1*
13C5 PFNA	*98*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:08*	*1*

Client Sample ID: NPPRS

Date Collected: 10/31/17 12:50
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-9

Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 16:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*71 - 144*		*11/03/17 16:20*	*1*
4-Bromofluorobenzene	*88*		*72 - 133*		*11/03/17 16:20*	*1*

Client Sample ID: NPPRS
Lab Sample ID: 460-144244-9
Date Collected: 10/31/17 12:50
Matrix: Water
Date Received: 11/02/17 09:10

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:48	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:48	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:48	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:48	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:48	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 22:48	1
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 22:48	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 22:48	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 22:48	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 22:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*55*		*10 - 150*	*11/04/17 09:36*	*11/06/17 22:48*	*1*
DCB Decachlorobiphenyl	*56*		*10 - 150*	*11/04/17 09:36*	*11/06/17 22:48*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 04:26	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 04:26	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 04:26	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 04:26	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 04:26	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 04:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*106*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:26*	*1*
13C4-PFHpA	*109*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:26*	*1*
13C4 PFOA	*107*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:26*	*1*
13C4 PFOS	*104*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:26*	*1*
13C5 PFNA	*108*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:26*	*1*

Client Sample ID: SPPRS
Lab Sample ID: 460-144244-10
Date Collected: 10/31/17 12:30
Matrix: Water
Date Received: 11/02/17 09:10

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*71 - 144*		*11/03/17 16:44*	*1*
4-Bromofluorobenzene	*87*		*72 - 133*		*11/03/17 16:44*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 14:03	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 14:03	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 14:03	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 14:03	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 14:03	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/07/17 14:03	1

Client Sample ID: SPPRS
Lab Sample ID: 460-144244-10
Date Collected: 10/31/17 12:30
Matrix: Water
Date Received: 11/02/17 09:10

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/07/17 14:03	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/07/17 14:03	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/07/17 14:03	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 14:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*46*		*10 - 150*	*11/04/17 09:36*	*11/07/17 14:03*	*1*
DCB Decachlorobiphenyl	*47*		*10 - 150*	*11/04/17 09:36*	*11/07/17 14:03*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	**0.99**	**J**	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 04:44	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 04:44	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 04:44	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 04:44	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 04:44	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 04:44	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*112*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:44*	*1*
13C4-PFHpA	*117*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:44*	*1*
13C4 PFOA	*112*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:44*	*1*
13C4 PFOS	*112*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:44*	*1*
13C5 PFNA	*112*		*25 - 150*	*11/20/17 09:48*	*11/21/17 04:44*	*1*

Client Sample ID: EB-PROBE
Lab Sample ID: 460-144244-11
Date Collected: 10/31/17 11:10
Matrix: Water
Date Received: 11/02/17 09:10

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 12:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*71 - 144*		*11/03/17 12:21*	*1*
4-Bromofluorobenzene	*91*		*72 - 133*		*11/03/17 12:21*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 05:03	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 05:03	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 05:03	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 05:03	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 05:03	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 05:03	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*102*		*25 - 150*	*11/20/17 09:48*	*11/21/17 05:03*	*1*
13C4-PFHpA	*102*		*25 - 150*	*11/20/17 09:48*	*11/21/17 05:03*	*1*
13C4 PFOA	*101*		*25 - 150*	*11/20/17 09:48*	*11/21/17 05:03*	*1*
13C4 PFOS	*100*		*25 - 150*	*11/20/17 09:48*	*11/21/17 05:03*	*1*

Client Sample ID: EB-PROBE
Lab Sample ID: 460-144244-11
Date Collected: 10/31/17 11:10
Matrix: Water
Date Received: 11/02/17 09:10

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C5 PFNA	*98*		*25 - 150*	*11/20/17 09:48*	*11/21/17 05:03*	*1*

Client Sample ID: EB-TUBING
Lab Sample ID: 460-144244-12
Date Collected: 10/31/17 11:25
Matrix: Water
Date Received: 11/02/17 09:10

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 12:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*71 - 144*		*11/03/17 12:45*	*1*
4-Bromofluorobenzene	*90*		*72 - 133*		*11/03/17 12:45*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 05:21	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 05:21	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 05:21	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 05:21	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 05:21	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 05:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*99*		*25 - 150*	*11/20/17 09:48*	*11/21/17 05:21*	*1*
13C4-PFHpA	*100*		*25 - 150*	*11/20/17 09:48*	*11/21/17 05:21*	*1*
13C4 PFOA	*97*		*25 - 150*	*11/20/17 09:48*	*11/21/17 05:21*	*1*
13C4 PFOS	*96*		*25 - 150*	*11/20/17 09:48*	*11/21/17 05:21*	*1*
13C5 PFNA	*98*		*25 - 150*	*11/20/17 09:48*	*11/21/17 05:21*	*1*

Client Sample ID: FB-X
Lab Sample ID: 460-144244-13
Date Collected: 11/01/17 13:15
Matrix: Water
Date Received: 11/02/17 09:10

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 11:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*71 - 144*		*11/03/17 11:57*	*1*
4-Bromofluorobenzene	*91*		*72 - 133*		*11/03/17 11:57*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 05:39	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 05:39	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 05:39	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 05:39	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 05:39	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 05:39	1

Client Sample ID: FB-X
Lab Sample ID: 460-144244-13
Date Collected: 11/01/17 13:15
Matrix: Water
Date Received: 11/02/17 09:10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	104		25 - 150	11/20/17 09:48	11/21/17 05:39	1
13C4-PFHpA	105		25 - 150	11/20/17 09:48	11/21/17 05:39	1
13C4 PFOA	105		25 - 150	11/20/17 09:48	11/21/17 05:39	1
13C4 PFOS	103		25 - 150	11/20/17 09:48	11/21/17 05:39	1
13C5 PFNA	104		25 - 150	11/20/17 09:48	11/21/17 05:39	1

Client Sample ID: Leachate
Lab Sample ID: 460-144244-14
Date Collected: 10/31/17 12:05
Matrix: Water
Date Received: 11/02/17 09:10

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/04/17 08:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		71 - 144		11/04/17 08:02	1
4-Bromofluorobenzene	93		72 - 133		11/04/17 08:02	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 03:11	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 03:11	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 03:11	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 03:11	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 03:11	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/07/17 03:11	1
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/07/17 03:11	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/07/17 03:11	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/07/17 03:11	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 03:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	42		10 - 150	11/04/17 09:36	11/07/17 03:11	1
DCB Decachlorobiphenyl	40		10 - 150	11/04/17 09:36	11/07/17 03:11	1

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 05:58	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 05:58	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 05:58	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 05:58	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 05:58	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 05:58	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	104		25 - 150	11/20/17 09:48	11/21/17 05:58	1
13C4-PFHpA	106		25 - 150	11/20/17 09:48	11/21/17 05:58	1
13C4 PFOA	102		25 - 150	11/20/17 09:48	11/21/17 05:58	1
13C4 PFOS	102		25 - 150	11/20/17 09:48	11/21/17 05:58	1
13C5 PFNA	104		25 - 150	11/20/17 09:48	11/21/17 05:58	1

Client Sample ID: MW-X-DUP
Lab Sample ID: 460-144244-15
Date Collected: 10/31/17 00:00
Matrix: Water
Date Received: 11/02/17 09:10

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 17:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*71 - 144*		*11/03/17 17:32*	*1*
4-Bromofluorobenzene	*87*		*72 - 133*		*11/03/17 17:32*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 03:35	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 03:35	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 03:35	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 03:35	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 03:35	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/07/17 03:35	1
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/07/17 03:35	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/07/17 03:35	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/07/17 03:35	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/07/17 03:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*46*		*10 - 150*	*11/04/17 09:36*	*11/07/17 03:35*	*1*
DCB Decachlorobiphenyl	*45*		*10 - 150*	*11/04/17 09:36*	*11/07/17 03:35*	*1*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 06:16	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 06:16	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 06:16	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 06:16	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 06:16	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 06:16	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*115*		*25 - 150*	*11/20/17 09:48*	*11/21/17 06:16*	*1*
13C4-PFHpA	*116*		*25 - 150*	*11/20/17 09:48*	*11/21/17 06:16*	*1*
13C4 PFOA	*112*		*25 - 150*	*11/20/17 09:48*	*11/21/17 06:16*	*1*
13C4 PFOS	*111*		*25 - 150*	*11/20/17 09:48*	*11/21/17 06:16*	*1*
13C5 PFNA	*114*		*25 - 150*	*11/20/17 09:48*	*11/21/17 06:16*	*1*

Client Sample ID: Trip Blank
Lab Sample ID: 460-144244-16
Date Collected: 11/01/17 00:00
Matrix: Water
Date Received: 11/02/17 09:10

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 11:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*71 - 144*		*11/03/17 11:33*	*1*
4-Bromofluorobenzene	*92*		*72 - 133*		*11/03/17 11:33*	*1*

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: NY Standby - Columbia Mills 2017

TestAmerica Job ID: 460-144244-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	12DCE (71-144)	BFB (72-133)
460-144244-1	MW-1S	116	92
460-144244-1 MS	MW-1S	105	95
460-144244-1 MSD	MW-1S	101	90
460-144244-2	MW-1D	115	90
460-144244-3	MW-2S	116	90
460-144244-4	MW-2D	113	88
460-144244-5	MW-3S	121	93
460-144244-6	MW-3D	112	87
460-144244-7	MW-4S	117	88
460-144244-8	MW-4D	119	91
460-144244-9	NPPRS	116	88
460-144244-10	SPPRS	116	87
460-144244-11	EB-PROBE	112	91
460-144244-12	EB-TUBING	116	90
460-144244-13	FB-X	111	91
460-144244-14	Leachate	108	93
460-144244-15	MW-X-DUP	118	87
460-144244-16	Trip Blank	111	92
LCS 460-474314/3	Lab Control Sample	107	92
LCS 460-474523/4	Lab Control Sample	111	90
LCS 460-475006/3	Lab Control Sample	98	90
LCSD 460-474314/4	Lab Control Sample Dup	111	91
LCSD 460-474523/5	Lab Control Sample Dup	111	90
LCSD 460-475006/4	Lab Control Sample Dup	100	94
MB 460-474314/8	Method Blank	114	91
MB 460-474523/8	Method Blank	107	89
MB 460-475006/7	Method Blank	101	90

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCB1 (10-150)	DCB2 (10-150)
460-144244-1	MW-1S	40	40
460-144244-1 MS	MW-1S	44	43
460-144244-1 MSD	MW-1S	46	43
460-144244-2	MW-1D	54	54
460-144244-3	MW-2S	62	62
460-144244-4	MW-2D	49	47
460-144244-5	MW-3S	37	35
460-144244-6	MW-3D	46	45
460-144244-7	MW-4S	45	39
460-144244-8	MW-4D	45	34
460-144244-9	NPPRS	55	56

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: NY Standby - Columbia Mills 2017

TestAmerica Job ID: 460-144244-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	DCB1 (10-150)	DCB2 (10-150)								
460-144244-10	SPPRS	46	47								
460-144244-14	Leachate	42	40								
460-144244-15	MW-X-DUP	46	45								
LCS 460-474606/2-A	Lab Control Sample	88	91								
MB 460-474606/1-A	Method Blank	82	89								

Surrogate Legend

DCB = DCB Decachlorobiphenyl

Isotope Dilution Summary

Client: ARCADIS U.S. Inc
Project/Site: NY Standby - Columbia Mills 2017

TestAmerica Job ID: 460-144244-1

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		3O2 PFHx	3C4-PFHp	3C4 PFO/	3C4 PFOS	3C5 PFNA			
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)			
460-144244-1	MW-1S	102	100	97	99	95			
460-144244-1 MS	MW-1S	98	100	97	96	97			
460-144244-1 MSD	MW-1S	100	103	99	99	98			
460-144244-2	MW-1D	99	99	98	98	98			
460-144244-3	MW-2S	106	106	104	106	101			
460-144244-4	MW-2D	108	107	107	105	108			
460-144244-5	MW-3S	102	104	102	101	102			
460-144244-6	MW-3D	102	99	101	102	99			
460-144244-7	MW-4S	105	104	104	103	104			
460-144244-8	MW-4D	100	102	100	99	98			
460-144244-9	NPPRS	106	109	107	104	108			
460-144244-10	SPPRS	112	117	112	112	112			
460-144244-11	EB-PROBE	102	102	101	100	98			
460-144244-12	EB-TUBING	99	100	97	96	98			
460-144244-13	FB-X	104	105	105	103	104			
460-144244-14	Leachate	104	106	102	102	104			
460-144244-15	MW-X-DUP	115	116	112	111	114			
LCS 320-195744/2-A	Lab Control Sample	97	99	93	95	92			
MB 320-195744/1-A	Method Blank	105	106	102	103	102			

Surrogate Legend

18O2 PFHxS = 18O2 PFHxS
13C4-PFHpA = 13C4-PFHpA
13C4 PFOA = 13C4 PFOA
13C4 PFOS = 13C4 PFOS
13C5 PFNA = 13C5 PFNA

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 460-474314/8
Matrix: Water
Analysis Batch: 474314

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/03/17 10:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*71 - 144*		*11/03/17 10:45*	*1*
4-Bromofluorobenzene	*91*		*72 - 133*		*11/03/17 10:45*	*1*

Lab Sample ID: LCS 460-474314/3
Matrix: Water
Analysis Batch: 474314

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			5.00	4.66		ug/L		93	66 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*71 - 144*
4-Bromofluorobenzene	*92*		*72 - 133*

Lab Sample ID: LCSD 460-474314/4
Matrix: Water
Analysis Batch: 474314

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			5.00	5.01		ug/L		100	66 - 135	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*71 - 144*
4-Bromofluorobenzene	*91*		*72 - 133*

Lab Sample ID: MB 460-474523/8
Matrix: Water
Analysis Batch: 474523

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/04/17 00:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*71 - 144*		*11/04/17 00:02*	*1*
4-Bromofluorobenzene	*89*		*72 - 133*		*11/04/17 00:02*	*1*

Lab Sample ID: LCS 460-474523/4
Matrix: Water
Analysis Batch: 474523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			5.00	4.44		ug/L		89	66 - 135		

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-474523/4
Matrix: Water
Analysis Batch: 474523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*71 - 144*
4-Bromofluorobenzene	*90*		*72 - 133*

Lab Sample ID: LCSD 460-474523/5
Matrix: Water
Analysis Batch: 474523

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			5.00	4.80		ug/L		96	66 - 135	8	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*71 - 144*
4-Bromofluorobenzene	*90*		*72 - 133*

Lab Sample ID: MB 460-475006/7
Matrix: Water
Analysis Batch: 475006

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.40	U	0.40	0.20	ug/L			11/06/17 23:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*71 - 144*		*11/06/17 23:14*	*1*
4-Bromofluorobenzene	*90*		*72 - 133*		*11/06/17 23:14*	*1*

Lab Sample ID: LCS 460-475006/3
Matrix: Water
Analysis Batch: 475006

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			5.00	4.54		ug/L		91	66 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*71 - 144*
4-Bromofluorobenzene	*90*		*72 - 133*

Lab Sample ID: LCSD 460-475006/4
Matrix: Water
Analysis Batch: 475006

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			5.00	4.65		ug/L		93	66 - 135	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*71 - 144*
4-Bromofluorobenzene	*94*		*72 - 133*

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 460-144244-1 MS
Matrix: Water
Analysis Batch: 475006

Client Sample ID: MW-1S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	0.40	U	5.00	5.28		ug/L		106	66 - 135

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*71 - 144*
4-Bromofluorobenzene	*95*		*72 - 133*

Lab Sample ID: 460-144244-1 MSD
Matrix: Water
Analysis Batch: 475006

Client Sample ID: MW-1S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	0.40	U	5.00	4.00		ug/L		80	66 - 135	28	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*71 - 144*
4-Bromofluorobenzene	*90*		*72 - 133*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 460-474606/1-A
Matrix: Water
Analysis Batch: 474852

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 474606

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 09:33	1
Aroclor 1221	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 09:33	1
Aroclor 1232	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 09:33	1
Aroclor 1242	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 09:33	1
Aroclor 1248	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 09:33	1
Aroclor 1254	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 09:33	1
Aroclor 1260	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 09:33	1
Aroclor-1262	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 09:33	1
Aroclor 1268	0.40	U	0.40	0.099	ug/L		11/04/17 09:36	11/06/17 09:33	1
Polychlorinated biphenyls, Total	0.40	U	0.40	0.10	ug/L		11/04/17 09:36	11/06/17 09:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*10 - 150*	*11/04/17 09:36*	*11/06/17 09:33*	*1*
DCB Decachlorobiphenyl	*89*		*10 - 150*	*11/04/17 09:36*	*11/06/17 09:33*	*1*

Lab Sample ID: LCS 460-474606/2-A
Matrix: Water
Analysis Batch: 474852

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 474606

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor 1016	4.00	4.58		ug/L		114	77 - 150
Aroclor 1016	4.00	4.45		ug/L		111	77 - 150
Aroclor 1260	4.00	4.72		ug/L		118	80 - 150

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 460-474606/2-A
Matrix: Water
Analysis Batch: 474852

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 474606

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor 1260			4.00	4.80		ug/L		120	80 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*88*		*10 - 150*
DCB Decachlorobiphenyl	*91*		*10 - 150*

Lab Sample ID: 460-144244-1 MS
Matrix: Water
Analysis Batch: 474852

Client Sample ID: MW-1S
Prep Type: Total/NA
Prep Batch: 474606

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor 1016	0.40	U	4.00	3.13		ug/L		78	77 - 150		
Aroclor 1016	0.40	U	4.00	2.99	*	ug/L		75	77 - 150		
Aroclor 1260	0.40	U	4.00	2.68	*	ug/L		67	80 - 150		
Aroclor 1260	0.40	U	4.00	2.50	*	ug/L		62	80 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*44*		*10 - 150*
DCB Decachlorobiphenyl	*43*		*10 - 150*

Lab Sample ID: 460-144244-1 MSD
Matrix: Water
Analysis Batch: 474852

Client Sample ID: MW-1S
Prep Type: Total/NA
Prep Batch: 474606

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor 1016	0.40	U	4.00	3.10		ug/L		78	77 - 150	1	30
Aroclor 1016	0.40	U	4.00	2.88	*	ug/L		72	77 - 150	4	30
Aroclor 1260	0.40	U	4.00	2.67	*	ug/L		67	80 - 150	0	30
Aroclor 1260	0.40	U	4.00	2.40	*	ug/L		60	80 - 150	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*46*		*10 - 150*
DCB Decachlorobiphenyl	*43*		*10 - 150*

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-195744/1-A
Matrix: Water
Analysis Batch: 195898

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195744

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.92	ng/L		11/20/17 09:48	11/21/17 00:09	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.87	ng/L		11/20/17 09:48	11/21/17 00:09	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		11/20/17 09:48	11/21/17 00:09	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.75	ng/L		11/20/17 09:48	11/21/17 00:09	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.28	ng/L		11/20/17 09:48	11/21/17 00:09	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.65	ng/L		11/20/17 09:48	11/21/17 00:09	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	105		25 - 150	11/20/17 09:48	11/21/17 00:09	1
13C4-PFHpA	106		25 - 150	11/20/17 09:48	11/21/17 00:09	1
13C4 PFOA	102		25 - 150	11/20/17 09:48	11/21/17 00:09	1
13C4 PFOS	103		25 - 150	11/20/17 09:48	11/21/17 00:09	1
13C5 PFNA	102		25 - 150	11/20/17 09:48	11/21/17 00:09	1

Lab Sample ID: LCS 320-195744/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 195898
Prep Batch: 195744

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanesulfonic acid (PFBS)	17.7	17.01		ng/L		96	72 - 151
Perfluorohexanesulfonic acid (PFHxS)	18.2	17.26		ng/L		95	73 - 157
Perfluoroheptanoic acid (PFHpA)	20.0	19.64		ng/L		98	71 - 138
Perfluorooctanoic acid (PFOA)	20.0	18.94		ng/L		95	70 - 140
Perfluorooctanesulfonic acid (PFOS)	18.6	16.91		ng/L		91	69 - 144
Perfluorononanoic acid (PFNA)	20.0	19.85		ng/L		99	73 - 147

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
18O2 PFHxS	97		25 - 150
13C4-PFHpA	99		25 - 150
13C4 PFOA	93		25 - 150
13C4 PFOS	95		25 - 150
13C5 PFNA	92		25 - 150

Lab Sample ID: 460-144244-1 MS
Client Sample ID: MW-1S
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 195898
Prep Batch: 195744

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanesulfonic acid (PFBS)	2.00	U	16.1	16.18		ng/L		100	55 - 147
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	16.6	15.45		ng/L		93	58 - 138
Perfluoroheptanoic acid (PFHpA)	2.00	U	18.3	17.98		ng/L		99	63 - 135
Perfluorooctanoic acid (PFOA)	2.00	U	18.3	17.00		ng/L		93	63 - 141
Perfluorooctanesulfonic acid (PFOS)	2.00	U	16.9	14.99		ng/L		89	47 - 162
Perfluorononanoic acid (PFNA)	2.00	U	18.3	17.34		ng/L		95	71 - 140

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
18O2 PFHxS	98		25 - 150
13C4-PFHpA	100		25 - 150
13C4 PFOA	97		25 - 150
13C4 PFOS	96		25 - 150
13C5 PFNA	97		25 - 150

Method: WS-LC-0025 At1 - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 460-144244-1 MSD
Matrix: Water
Analysis Batch: 195898

Client Sample ID: MW-1S
Prep Type: Total/NA
Prep Batch: 195744

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanesulfonic acid (PFBS)	2.00	U	16.2	16.17		ng/L		100	55 - 147	0	30
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	16.6	16.07		ng/L		97	58 - 138	4	30
Perfluoroheptanoic acid (PFHpA)	2.00	U	18.3	17.98		ng/L		98	63 - 135	0	30
Perfluorooctanoic acid (PFOA)	2.00	U	18.3	16.91		ng/L		93	63 - 141	1	30
Perfluorooctanesulfonic acid (PFOS)	2.00	U	17.0	14.00		ng/L		83	47 - 162	7	30
Perfluorononanoic acid (PFNA)	2.00	U	18.3	16.93		ng/L		93	71 - 140	2	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
18O2 PFHxS	*100*		*25 - 150*
13C4-PFHpA	*103*		*25 - 150*
13C4 PFOA	*99*		*25 - 150*
13C4 PFOS	*99*		*25 - 150*
13C5 PFNA	*98*		*25 - 150*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.
*	MS or MSD is outside acceptance limits.

LCMS

Qualifier	Qualifier Description
U	Analyzed for but not detected.
J	Indicates an estimated value.

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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

GC/MS VOA

Analysis Batch: 474314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-144244-1	MW-1S	Total/NA	Water	8260C SIM	
460-144244-2	MW-1D	Total/NA	Water	8260C SIM	
460-144244-3	MW-2S	Total/NA	Water	8260C SIM	
460-144244-4	MW-2D	Total/NA	Water	8260C SIM	
460-144244-5	MW-3S	Total/NA	Water	8260C SIM	
460-144244-6	MW-3D	Total/NA	Water	8260C SIM	
460-144244-7	MW-4S	Total/NA	Water	8260C SIM	
460-144244-8	MW-4D	Total/NA	Water	8260C SIM	
460-144244-9	NPPRS	Total/NA	Water	8260C SIM	
460-144244-10	SPPRS	Total/NA	Water	8260C SIM	
460-144244-11	EB-PROBE	Total/NA	Water	8260C SIM	
460-144244-12	EB-TUBING	Total/NA	Water	8260C SIM	
460-144244-13	FB-X	Total/NA	Water	8260C SIM	
460-144244-15	MW-X-DUP	Total/NA	Water	8260C SIM	
460-144244-16	Trip Blank	Total/NA	Water	8260C SIM	
MB 460-474314/8	Method Blank	Total/NA	Water	8260C SIM	
LCS 460-474314/3	Lab Control Sample	Total/NA	Water	8260C SIM	
LCSD 460-474314/4	Lab Control Sample Dup	Total/NA	Water	8260C SIM	

Analysis Batch: 474523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-144244-14	Leachate	Total/NA	Water	8260C SIM	
MB 460-474523/8	Method Blank	Total/NA	Water	8260C SIM	
LCS 460-474523/4	Lab Control Sample	Total/NA	Water	8260C SIM	
LCSD 460-474523/5	Lab Control Sample Dup	Total/NA	Water	8260C SIM	

Analysis Batch: 475006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 460-475006/7	Method Blank	Total/NA	Water	8260C SIM	
LCS 460-475006/3	Lab Control Sample	Total/NA	Water	8260C SIM	
LCSD 460-475006/4	Lab Control Sample Dup	Total/NA	Water	8260C SIM	
460-144244-1 MS	MW-1S	Total/NA	Water	8260C SIM	
460-144244-1 MSD	MW-1S	Total/NA	Water	8260C SIM	

GC Semi VOA

Prep Batch: 474606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-144244-1	MW-1S	Total/NA	Water	3510C	
460-144244-2	MW-1D	Total/NA	Water	3510C	
460-144244-3	MW-2S	Total/NA	Water	3510C	
460-144244-4	MW-2D	Total/NA	Water	3510C	
460-144244-5	MW-3S	Total/NA	Water	3510C	
460-144244-6	MW-3D	Total/NA	Water	3510C	
460-144244-7	MW-4S	Total/NA	Water	3510C	
460-144244-8	MW-4D	Total/NA	Water	3510C	
460-144244-9	NPPRS	Total/NA	Water	3510C	
460-144244-10	SPPRS	Total/NA	Water	3510C	
460-144244-14	Leachate	Total/NA	Water	3510C	
460-144244-15	MW-X-DUP	Total/NA	Water	3510C	

GC Semi VOA (Continued)

Prep Batch: 474606 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 460-474606/1-A	Method Blank	Total/NA	Water	3510C	
LCS 460-474606/2-A	Lab Control Sample	Total/NA	Water	3510C	
460-144244-1 MS	MW-1S	Total/NA	Water	3510C	
460-144244-1 MSD	MW-1S	Total/NA	Water	3510C	

Analysis Batch: 474852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-144244-1	MW-1S	Total/NA	Water	8082A	474606
460-144244-2	MW-1D	Total/NA	Water	8082A	474606
460-144244-3	MW-2S	Total/NA	Water	8082A	474606
460-144244-4	MW-2D	Total/NA	Water	8082A	474606
460-144244-5	MW-3S	Total/NA	Water	8082A	474606
460-144244-6	MW-3D	Total/NA	Water	8082A	474606
460-144244-7	MW-4S	Total/NA	Water	8082A	474606
460-144244-8	MW-4D	Total/NA	Water	8082A	474606
460-144244-9	NPPRS	Total/NA	Water	8082A	474606
460-144244-14	Leachate	Total/NA	Water	8082A	474606
460-144244-15	MW-X-DUP	Total/NA	Water	8082A	474606
MB 460-474606/1-A	Method Blank	Total/NA	Water	8082A	474606
LCS 460-474606/2-A	Lab Control Sample	Total/NA	Water	8082A	474606
460-144244-1 MS	MW-1S	Total/NA	Water	8082A	474606
460-144244-1 MSD	MW-1S	Total/NA	Water	8082A	474606

Analysis Batch: 475107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-144244-10	SPPRS	Total/NA	Water	8082A	474606

LCMS

Prep Batch: 195744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-144244-1	MW-1S	Total/NA	Water	PFAS Prep	
460-144244-2	MW-1D	Total/NA	Water	PFAS Prep	
460-144244-3	MW-2S	Total/NA	Water	PFAS Prep	
460-144244-4	MW-2D	Total/NA	Water	PFAS Prep	
460-144244-5	MW-3S	Total/NA	Water	PFAS Prep	
460-144244-6	MW-3D	Total/NA	Water	PFAS Prep	
460-144244-7	MW-4S	Total/NA	Water	PFAS Prep	
460-144244-8	MW-4D	Total/NA	Water	PFAS Prep	
460-144244-9	NPPRS	Total/NA	Water	PFAS Prep	
460-144244-10	SPPRS	Total/NA	Water	PFAS Prep	
460-144244-11	EB-PROBE	Total/NA	Water	PFAS Prep	
460-144244-12	EB-TUBING	Total/NA	Water	PFAS Prep	
460-144244-13	FB-X	Total/NA	Water	PFAS Prep	
460-144244-14	Leachate	Total/NA	Water	PFAS Prep	
460-144244-15	MW-X-DUP	Total/NA	Water	PFAS Prep	
MB 320-195744/1-A	Method Blank	Total/NA	Water	PFAS Prep	
LCS 320-195744/2-A	Lab Control Sample	Total/NA	Water	PFAS Prep	
460-144244-1 MS	MW-1S	Total/NA	Water	PFAS Prep	
460-144244-1 MSD	MW-1S	Total/NA	Water	PFAS Prep	

LCMS (Continued)

Analysis Batch: 195898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-144244-1	MW-1S	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-2	MW-1D	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-3	MW-2S	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-4	MW-2D	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-5	MW-3S	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-6	MW-3D	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-7	MW-4S	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-8	MW-4D	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-9	NPPRS	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-10	SPPRS	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-11	EB-PROBE	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-12	EB-TUBING	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-13	FB-X	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-14	Leachate	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-15	MW-X-DUP	Total/NA	Water	WS-LC-0025 At1	195744
MB 320-195744/1-A	Method Blank	Total/NA	Water	WS-LC-0025 At1	195744
LCS 320-195744/2-A	Lab Control Sample	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-1 MS	MW-1S	Total/NA	Water	WS-LC-0025 At1	195744
460-144244-1 MSD	MW-1S	Total/NA	Water	WS-LC-0025 At1	195744

Client Sample ID: MW-1S

Lab Sample ID: 460-144244-1

Date Collected: 10/31/17 15:25

Matrix: Water

Date Received: 11/02/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 13:09	SZD	TAL EDI
Total/NA	Prep	3510C			474606	11/04/17 09:36	JNP	TAL EDI
Total/NA	Analysis	8082A		1	474852	11/06/17 11:08	JHP	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 01:04	CBW	TAL SAC

Client Sample ID: MW-1D

Lab Sample ID: 460-144244-2

Date Collected: 10/31/17 15:25

Matrix: Water

Date Received: 11/02/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 13:33	SZD	TAL EDI
Total/NA	Prep	3510C			474606	11/04/17 09:36	JNP	TAL EDI
Total/NA	Analysis	8082A		1	474852	11/06/17 20:03	JHP	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 01:59	CBW	TAL SAC

Client Sample ID: MW-2S

Lab Sample ID: 460-144244-3

Date Collected: 11/01/17 10:25

Matrix: Water

Date Received: 11/02/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 13:57	SZD	TAL EDI
Total/NA	Prep	3510C			474606	11/04/17 09:36	JNP	TAL EDI
Total/NA	Analysis	8082A		1	474852	11/06/17 20:27	JHP	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 02:18	CBW	TAL SAC

Client Sample ID: MW-2D

Lab Sample ID: 460-144244-4

Date Collected: 11/01/17 10:40

Matrix: Water

Date Received: 11/02/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 14:21	SZD	TAL EDI
Total/NA	Prep	3510C			474606	11/04/17 09:36	JNP	TAL EDI
Total/NA	Analysis	8082A		1	474852	11/06/17 20:50	JHP	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 02:36	CBW	TAL SAC

Client Sample ID: MW-3S
Date Collected: 10/31/17 17:10
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 14:45	SZD	TAL EDI
Total/NA	Prep	3510C			474606	11/04/17 09:36	JNP	TAL EDI
Total/NA	Analysis	8082A		1	474852	11/06/17 21:14	JHP	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 02:54	CBW	TAL SAC

Client Sample ID: MW-3D
Date Collected: 11/01/17 12:55
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 15:08	SZD	TAL EDI
Total/NA	Prep	3510C			474606	11/04/17 09:36	JNP	TAL EDI
Total/NA	Analysis	8082A		1	474852	11/06/17 21:37	JHP	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 03:31	CBW	TAL SAC

Client Sample ID: MW-4S
Date Collected: 11/01/17 12:20
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 15:32	SZD	TAL EDI
Total/NA	Prep	3510C			474606	11/04/17 09:36	JNP	TAL EDI
Total/NA	Analysis	8082A		1	474852	11/06/17 22:00	JHP	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 03:49	CBW	TAL SAC

Client Sample ID: MW-4D
Date Collected: 11/01/17 12:30
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 15:56	SZD	TAL EDI
Total/NA	Prep	3510C			474606	11/04/17 09:36	JNP	TAL EDI
Total/NA	Analysis	8082A		1	474852	11/06/17 22:24	JHP	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 04:08	CBW	TAL SAC

Client Sample ID: NPPRS
Date Collected: 10/31/17 12:50
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 16:20	SZD	TAL EDI
Total/NA	Prep	3510C			474606	11/04/17 09:36	JNP	TAL EDI
Total/NA	Analysis	8082A		1	474852	11/06/17 22:48	JHP	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 04:26	CBW	TAL SAC

Client Sample ID: SPPRS
Date Collected: 10/31/17 12:30
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 16:44	SZD	TAL EDI
Total/NA	Prep	3510C			474606	11/04/17 09:36	JNP	TAL EDI
Total/NA	Analysis	8082A		1	475107	11/07/17 14:03	JHP	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 04:44	CBW	TAL SAC

Client Sample ID: EB-PROBE
Date Collected: 10/31/17 11:10
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 12:21	SZD	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 05:03	CBW	TAL SAC

Client Sample ID: EB-TUBING
Date Collected: 10/31/17 11:25
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 12:45	SZD	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 05:21	CBW	TAL SAC

Client Sample ID: FB-X
Date Collected: 11/01/17 13:15
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 11:57	SZD	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: NY Standby - Columbia Mills 2017

TestAmerica Job ID: 460-144244-1

Client Sample ID: FB-X
Date Collected: 11/01/17 13:15
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 05:39	CBW	TAL SAC

Client Sample ID: Leachate
Date Collected: 10/31/17 12:05
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474523	11/04/17 08:02	KLB	TAL EDI
Total/NA	Prep	3510C			474606	11/04/17 09:36	JNP	TAL EDI
Total/NA	Analysis	8082A		1	474852	11/07/17 03:11	JHP	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 05:58	CBW	TAL SAC

Client Sample ID: MW-X-DUP
Date Collected: 10/31/17 00:00
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 17:32	SZD	TAL EDI
Total/NA	Prep	3510C			474606	11/04/17 09:36	JNP	TAL EDI
Total/NA	Analysis	8082A		1	474852	11/07/17 03:35	JHP	TAL EDI
Total/NA	Prep	PFAS Prep			195744	11/20/17 09:48	TON	TAL SAC
Total/NA	Analysis	WS-LC-0025 At1		1	195898	11/21/17 06:16	CBW	TAL SAC

Client Sample ID: Trip Blank
Date Collected: 11/01/17 00:00
Date Received: 11/02/17 09:10

Lab Sample ID: 460-144244-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	474314	11/03/17 11:33	SZD	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: ARCADIS U.S. Inc
TestAmerica Job ID: 460-144244-1
Project/Site: NY Standby - Columbia Mills 2017

Laboratory: TestAmerica Edison

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11452	04-01-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8082A	3510C	Water	Polychlorinated biphenyls, Total

Laboratory: TestAmerica Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-18

Laboratory: TestAmerica Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11666	04-01-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
WS-LC-0025 At1	PFAS Prep	Water	Perfluorobutanesulfonic acid (PFBS)
WS-LC-0025 At1	PFAS Prep	Water	Perfluoroheptanoic acid (PFHpA)
WS-LC-0025 At1	PFAS Prep	Water	Perfluorohexanesulfonic acid (PFHxS)
WS-LC-0025 At1	PFAS Prep	Water	Perfluorononanoic acid (PFNA)
WS-LC-0025 At1	PFAS Prep	Water	Perfluorooctanesulfonic acid (PFOS)
WS-LC-0025 At1	PFAS Prep	Water	Perfluorooctanoic acid (PFOA)

APPENDIX D

Groundwater Level Data Form

GROUNDWATER LEVEL DATA FORM

ARCADIS Design & Consultancy for natural and built assets

PROJECT NAME: Columbia Mills
PROJECT NUMBER: 00266405.00000

DATE: 10/31/2017 - 11/1/2017
PERSONNEL: J. Mullins
J. Wyckoff

WELL ID	Date	Time	Headspace VOC ppm	Depth to Water (feet)	Total Depth (feet)	Reference Point
MW-1S	10/31/2017	2:15 - 4:45	0.0	2.89	16.77	TOC
MW-1D	10/31/2017	2:15 - 4:45	0.0	0.10	28.06	TOC
MW-2S	11/1/2017	9:45 - 11:45	0.0	10.55	17.48	TOC
MW-2D	11/1/2017	9:45 - 11:45	0.0	11.28	27.44	TOC
MW-3S	10/31/2017	2:15 - 4:45	0.0	6.34	17.68	TOC
MW-3D	10/31/2017	2:15 - 4:45	0.0	10.34	26.55	TOC
MW-4S	11/1/2017	9:45 - 11:45	0.0	9.19	14.17	TOC
MW-4D	11/1/2017	9:45 - 11:45	0.0	10.34	27.12	TOC
LFP-1	11/1/2017	9:45 - 11:45	0.0	NM	20.14	TOC
LFP-2	11/1/2017	9:45 - 11:45	0.0	NM	18.15	TOC
LFP-3	11/1/2017	9:45 - 11:45	0.0	NM	17.10	TOC
LFP-4	11/1/2017	9:45 - 11:45	0.0	NM	14.65	TOC
LFP-5	11/1/2017	9:45 - 11:45	0.0	NM	22.54	TOC
LFP-6	11/1/2017	9:45 - 11:45	0.0	NM	19.72	TOC
LFP-7	11/1/2017	9:45 - 11:45	0.0	NM	9.87	TOC
LFP-8	11/1/2017	9:45 - 11:45	0.0	NM	14.98	TOC
LFP-9	11/1/2017	9:45 - 11:45	0.0	NM	18.68	TOC
LFP-10	11/1/2017	9:45 - 11:45	0.0	NM	15.69	TOC
LFP-11	11/1/2017	9:45 - 11:45	0.0	NM	24.97	TOC
LFP-12	11/1/2017	9:45 - 11:45	0.0	NM	21.69	TOC
LFP-13	11/1/2017	9:45 - 11:45	0.0	NM	7.90	TOC
LFP-14	11/1/2017	9:45 - 11:45	0.0	NM	30.98	TOC

Notes: LFP-9 had no cap
LFP-11 had crack in the top of the PVC, but is still functionable
NM - Not Measured

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