DES Waste Management Division 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095

NOVEMBER 2020
SPRING 2020 SAMPLING EVENT
ANALYTICAL RESULTS
Coakley Landfill Superfund Site
North Hampton and Greenland
New Hampshire

NHDES Site #: 198712001 Project Type: Superfund Site

Prepared For:
New Hampshire Department of Environmental
Services
29 Hazen Drive
Concord, New Hampshire 03302-0095



Prepared By: CES, Inc.

415 Lisbon Street Lewiston, Maine 04240

Phone Number: (207) 795-6009 Contact Name: Suzanne Yerina Contact Email: syerina@cesincusa.com

Date of Report: (November 2020)

Groundwater Monitoring Report Cover Sheet

Site Name: Coakley Landfill
Town: North Hampton, New Hampshire
Permit #: GWP-198712001-N-002
Type of Submittal (Check all that apply)
□ Periodic Summary Report (year): Spring 2020
☐ Data Submittal (<i>month and year per Condition #7 of Permit</i>):
Data Submittal (Month and year per Sonation #1 or 1 emit).
Check each box where the answer to any of the following questions is "YES"
Sampling Results
During the most recent monitoring event, were any <u>new</u> compounds detected at any sampling point? Well/Compound:
 ☐ Are there any detections of contamination in drinking water that is untreated prior to use? None ☐ Well/Compound: ☐ Do compounds detected exceed
 ☐ Was free product detected for the <u>first time</u> in any monitoring point? ☐ Surface Water (<i>visible sheen</i>) ☐ Groundwater (1/8" or greater thickness) Location/Thickness:
Contaminant Trends
 Do sampling results show an increasing concentration trend in any source area monitoring well? Well/Compound:
and PFOA); FPC-9A (arsenic, 1,4-dioxane, PFOA, and PFOS); FPC-9B (1,4-dioxane and PFOA);
FPC-11A (1,4-dioxane and PFOA); FPC-11B (manganese); FPC-3C (arsenic); AE-1A (1,4-dioxane
and arsenic); AE-1B (1,4-dioxane); MW-20D2 (1,4-dioxane); MW-21S (1,4-dioxane, PFOA, PFHxS,
PFNA, and PFOS); MW-21D1 (arsenic)
Recommendations
 Does the report include any recommendations requiring DES action? (Do not check this box if the only recommendation is to continue with existing permit conditions.)



November 10, 2020

Peter Britz
Coakley Project Coordinator
1 Junkins Avenue
Portsmouth, New Hampshire 03801

RE: Results of Spring 2020 Groundwater Sampling at the Coakley Landfill North Hampton, New Hampshire

Dear Mr. Britz:

CES, Inc (CES) has completed the first semiannual sampling event for 2020 between May 11 and June 11, 2020. This letter is intended to provide the Coakley Landfill Group (CLG) with a brief preliminary assessment of the data to comply with United States Environmental Protection Agency (USEPA) and New Hampshire Department of Environmental Services (NHDES) request to receive a copy of validated data tables following receipt of analytical data.

Sampling was performed for groundwater, private water supply wells, surface water, landfill leachate seep, and sediment in accordance with the project Sampling and Analysis Plan (SAP) submitted on July 31, 2018. Laboratory analysis was completed by Eastern Analytical, Inc. (EAI) of Concord, New Hampshire, and Vista Analytical Laboratory (Vista) of El Dorado Hills, California. Quality Assurance Associates (QAA) of College Station, Texas, completed the Tier 1 Plus Data Validation.

A Site plan showing the sampling locations is included as **Figure 1**. Groundwater sampling was completed within Operable Unit-1 (OU-1) and Operable Unit-2 (OU-2). OU-1 includes the area in the immediate vicinity of the landfill where source control actions were completed to reduce impacts to surface water and groundwater quality and to eliminate threats possibly posed by direct contact with or ingestion of contaminated media at the Site. OU-2 includes the area beyond the landfill where the objective is to monitor the natural attenuation of water quality impacts and minimize exposure to potential receptors caused by groundwater and surface water migrating away from the Site. **Table 1** through **Table 7** include the validated analytical results of the Spring 2020 sampling event.

The 2020 Annual Summary Report will be completed following the Fall 2020 sampling event and include:

Tables summarizing the results of the two monitoring events completed in 2020;

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- Time series plots for each monitoring point for contaminants of concern (COC) that exceeded a Cleanup Level (CL), Ambient Groundwater Quality Standard (AGQS), or Lifetime Health Advisory (HA);
- Statistical trend analysis for contaminants of concern at monitoring points where CLs/AGQS/HAs were exceeded;
- Isoconcentration contour figures, prepared from Fall event results only, unless the parameter is only sampled during the Spring 2020 sampling event (i.e. arsenic and manganese). Figures will illustrate the contaminant concentrations for which CLs/AGQS/HAs were exceeded;
- Discussion of well depths to determine if silt, sand, or other obstructions may be impeding
 or compromising the use of the well as a sampling point;
- Discussion of temporal trends in contaminants of concern in the context of the progress of the natural attenuation remedy for the restoration of groundwater, surface water, and sediment quality; and,
- Recommendations for any remedial actions, for future modifications to the current monitoring program and/or for implementation of corrective actions to address issues noted during the sampling events during the calendar year.

SAMPLING RESULTS

Groundwater Level Monitoring

Prior to the onset of the sampling event, CES measured and recorded a synoptic round of static groundwater levels using an electronic water level meter capable of measuring in 0.01-foot increments. A summary of these elevations has been provided in **Table 1.1** and include historical groundwater elevations since April 2001. In general, groundwater elevations at each well are consistent with historical averages. Following the collection of groundwater measurements during the Fall 2020 sampling event, groundwater potentiometric surface maps will be generated for overburden and bedrock groundwater monitoring wells.

Vertical Groundwater Gradients

Vertical groundwater gradients were calculated at 18 well pairs (e.g., AE-1A/-1B) or triplets (e.g., FPC-3A/-3B/-3C) based on synoptic water level gauging measurements completed during the Spring 2020 sampling event. A summary of water level measurements and corresponding calculation of vertical gradients is included on **Table 1.2**. For the purpose of categorizing locations as showing an upward, downward or neutral gradient, paired wells exhibiting 0.1 feet or less of difference are considered neutral, while wells with greater than 0.1 feet of difference in water levels are designated as upward or downward.

In general, vertical groundwater gradients were similar to those observed during the Spring 2019 sampling event (where calculated) with the exception of four well pairs. Three well pairs (FPC-3A/-3B, FPC-9A/-9B, and FPC-11A/-11B) exhibited a change in the spring gradient from neutral to downward with one well pair (FPC-3A/-3C) changing from upward to neutral. These data will be compared to those calculated during the Fall 2020 sampling event and discussed further in the 2020 Annual Groundwater Quality Report.





Well Depth Comparison

The SAP requires measurement of well depths during the sampling event prior to USEPA 5-Year Reviews to determine the presence of silt, sand, or other obstructions that may impede or compromise use of the well as a sampling location. The next USEPA 5-Year Review will be completed in 2021.

Following the measurement of static water level at each location, CES measured the total well depth using a weighted electronic water level meter capable of measuring in 0.01-foot increments. Current and historical well depth measurements are summarized in **Table 2**.

Of the forty-nine wells that had well depths measured, three monitoring wells (FPC-3A, FPC-5A, and FPC-9A) had a greater than one foot well depth variance from the 2012 reported well depths. No evidence was observed in 2020 water quality monitoring results that indicate water quality analyses are being affected by sediment in the wells other than at well FPC-9A. However, based on the calculated variances in those wells listed above, we recommend that wells FPC-3A, FPC-5A, and FPC-9A be further evaluated and redeveloped.

Groundwater Sampling

Groundwater was sampled at a total of 11 OU-1 groundwater monitoring wells and 38 OU-2 groundwater monitoring wells during the Spring 2020 event.

Arsenic concentrations were reported above the USEPA CL and NHDES AGQS of 0.01 milligrams per liter (mg/L) in 6 OU-1 wells and 10 OU-2 wells. Manganese was detected at concentrations above the CL (0.3 mg/L) and/or AGQS (0.84 mg/L) in 11 OU-1 wells and 13 OU-2 wells (Table 3). With few exceptions, arsenic and manganese results are similar to 2019 results and are considered largely stable. Detections of arsenic and manganese were within historical concentration ranges with the exception of arsenic at FPC-9B (0.0019 mg/L) and manganese at MW-6 (4 mg/L), AE-1A (0.6 mg/L), AE-3A (2 mg/L), FPC-2A (1.2 mg/L), and FPC-9B (0.18 mg/L). Arsenic and manganese concentrations at these wells were reported above their historical ranges. It should be noted that MW-6 was redeveloped in preparation for ongoing deep bedrock investigation activities prior to sampling and this is the first time FPC-2A has been sampled since 2012. Both arsenic and manganese are sensitive to reducing conditions which may result in the mobilization of naturally occurring arsenic and manganese present in overburden and bedrock groundwater. This mobilization can have an effect on concentrations in groundwater.AE-1A, AE-3A, and FPC-2A are overburden wells screened in glacial till located to the southeast (AE-1A), south (FPC-2A), and north (AE-3A) of the landfill. MW-6, AE-1B, and FPC-9B are located to the south (MW-6), southeast (AE-1B), and northeast (FPC-9B) of the landfill. Concentrations of arsenic and manganese decrease as one moves to the north and east away from the landfill. Bedrock wells reported slightly higher concentrations than adjacent glacial till wells.

Chromium was reported above the USEPA CL (0.05 mg/L) but below the NHDES AGQS (0.1 mg/L) in one OU-2 well (MW-20D2) during the Spring 2020 sampling event at a concentration of 0.085 mg/L. This was the first event that MW-20D2 was analyzed for chromium with metals sampled annually from OU-1/OU-2 monitoring wells. The next event scheduled for metals analysis is Spring 2021.





All OU-1 and OU-2 monitoring wells were analyzed for 1,4-dioxane during the Spring 2020 sampling event. A total of eight OU-1 wells and 18 OU-2 wells had detections of 1,4-dioxane at a concentration above the AGQS of 0.32 micrograms per liter (ug/L) while six OU-1 wells and 12 OU-2 wells had detections above the CL of 3 ug/L. Results were similar for exceedances of the AGQS and CL reported for Fall 2019. Wells with reported concentrations of 1,4-dioxane above the CL/AGQS are all located within the Groundwater Management Zone (GMZ).

Volatile Organic Compounds (VOCs) were not detected at concentrations above the CL or AGQS in wells sampled, with the exception of tert-butyl alcohol (AGQS of 40 ug/L) at OU-1 wells MW-5D (55 ug/L) and MW-8 (46 ug/L). These results are consistent with historical data.

On October 1, 2019, the AGQS for PFAS compounds perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were lowered from their previous level of 70 nanograms per liter (ng/L) each to 12 ng/L and 15 ng/L, respectively. New AGQSs were established for perfluorononanoic acid (PFNA) at 11 ng/L and perfluorohexanesulfonic acid (PFHxS) at 18 ng/L. These lower standards were stayed by a court ruling on December 31, 2019, but were reinstated in September 2020 after the preliminary injunction was vacated.

Concentrations of PFOA within OU-1 ranged from 2.76 J nanograms per liter (ng/L) at OP-5 to 914 ng/L at MW-10. PFOA concentrations above the HA (70 ng/L) were detected in 8 of the 11 OU-1 wells sampled. Concentrations of PFOA within OU-2 ranged from non-detect (ND) to 766 ng/L at AE-2B and were reported above the HA in 8 of 38 wells sampled. The 16 wells reporting exceedances of the HA for PFOA are all located within the GMZ. One additional OU-1 well and 5 additional OU-2 wells exceeded the lowered AGQS for PFOA (12 ng/L).

Concentrations of PFOS within OU-1 ranged from ND at OP-5 to 819 ng/L at MW-10. PFOS was reported above the HA (70 ng/L) in 9 of the 11 OU-1 wells sampled. Concentrations of PFOS in OU-2 wells ranged from ND to 445 ng/L at AE-2B and were reported above the HA in 5 of 38 wells sampled. Wells with reported exceedances of the HA for PFOS are all located within the GMZ. Two additional OU-1 wells and 4 additional OU-2 wells exceeded the AGQS for PFOS (15 ng/L).

The combined concentrations of PFOA and PFOS exceeded the HA (70 ng/L) in 8 of 11 OU-1 wells sampled and 9 of 38 OU-2 wells sampled. Wells with reported exceedances of the HA for PFOA/PFOS combined are all located within the GMZ. There is no AGQS for combined concentrations of PFOA and PFOS.

Concentrations of PFNA within OU-1 ranged from ND at four wells to 392 ng/L at MW-10. PFNA was reported above the AGQS (11 ng/L) in 6 of 11 wells sampled. Concentrations of PFNA in OU-2 ranged from ND at 27 wells to 142 ng/L at AE-2A. Exceedances of the AGQS were detected in 7 of 38 OU-2 wells.

Concentrations of PFHxS within OU-1 ranged from ND at two wells to 98.5 ng/L at MW-8. PFHxS was reported above the AGQS (18 ng/L) in 5 of 11 OU-1 wells. Concentrations of PFHxS in OU-





2 ranged from ND at 16 wells to 89.4 ng/L at AE-2B and exceeded the AGQS in 7 of 38 OU-2 wells.

Although concentrations in some wells were slightly above previously reported concentrations, results are relatively consistent with those reported in the Fall of 2019. Trend analysis will be completed following receipt of Fall 2020 data and included with the 2020 Annual Water Quality Report. It should be noted that the Spring 2020 sampling event was only the second event where the analysis for an expanded list of PFAS compounds was completed. The first event was completed in Fall 2019.

Private Water Supply Wells

A total of 22 private water supply wells were sampled during the Spring event. **Table 4** provides a summary of analytical results. 1,4-dioxane was not detected above the NHDES AGQS of 0.32 ug/L in any residential well sampled. Historically, 339 Breakfast Hill Road (339 BHR) and R-3 (368 Breakfast Hill Road) had low levels (< 0.6 ug/L) of 1,4-dioxane, above the NHDES AGQS. However, 1,4-dioxane was detected at a concentration of 0.26 and 0.21 ug/L (original and duplicate samples) at R-3 and 0.28 ug/L at 339 BHR during this sampling event, all below the NHDES AGQS.

Concentrations of PFOA ranged from ND to 16.3 ng/L (339 BHR). Only one residential well (339 BHR) was above the AGQS of 12 ng/L; however, this result was within the historical range for PFOA at this location. PFOS concentrations ranged from ND to 6.17 ng/L (463 BHR), all below the AGQS of 15 ng/L. PFOA/PFOS combined concentrations ranged from ND to 17.31 J ng/L (339 BHR) and were consistent with past events. PFOA, PFOS, and PFOA/PFOS combined concentrations were not reported above the Lifetime HA (70 ng/L) in any of the residential wells sampled. Concentrations of PFOS, PFNA, and PFHxS did not exceed their respective AGQS in any residential wells sampled during this sampling event.

Surface Water Sampling

A total of eight surface water locations were sampled during the Spring 2020 event (**Figure 1**). **Table 5** provides a summary of analytical results.

Copper was reported above the chronic and acute standards (0.0023 and 0.0029 mg/L, respectively) at SW-4 with a concentration of 0.013 mg/L. This was a first-time exceedance for copper at SW-4 since sampling began in April 2017: however, copper has previously been reported at concentrations above the standard at other surface water locations monitored at the Site (e.g., SW-5). Iron concentrations were reported above the chronic standard (1 mg/L) at two locations (SW-5 and SW-BB1) and are consistent with historical results. Aluminum was reported above the chronic standard (0.087 mg/L) but below the acute standard (0.75 mg/L) in one sample (SW-LR) at a concentration of 0.15 mg/L. This is consistent with historical concentrations at SW-LR.

1,4-dioxane was reported at concentrations ranging from ND to 1.8 ug/L (SW-5 Dup), consistent with past results. 1,4-dioxane does not have a chronic or acute standard.





PFOA concentrations ranged from 13.6 (SW-LR) to 719 ng/L (SW-5 Dup). PFOS concentrations ranged from 3.45 J (SW-LR) to 1,080 ng/L (SW-103). The combination of PFOA and PFOS was reported in surface water samples at concentrations ranging from 17.05 J ng/L (SW-LR) to 1,779 ng/L (SW-5 Dup) during the Spring 2020 sampling event. These results are consistent with past events.

None of the detected concentrations of PFOS, PFOA, or PFBS in any surface water sample exceeded the mid-range child or adult recreator screening level or the adult maximum exposure screening level. No surface water location results were above the lowest screening level for PFOA – the child recreator maximum exposure scenario (120 effective days). Results for two surface water sampling locations, SW-5 and SW-103, located near the landfill, exceeded the lowest screening level – the child recreator maximum exposure scenario (120 effective days) for PFOS. Concentrations at the other six surface water sampling locations were below the child recreator maximum exposure screening level.

Sediment Sampling

Sediment samples were collected from a total of seven locations as shown on **Figure 1. Table 6** provides a summary of analytical results.

Six parameters (total arsenic, total chromium, total copper, total lead, total mercury, and total nickel) in one or more sediment samples were reported at concentrations above their respective National Oceanic and Atmospheric Administration (NOAA) Screening Quick Reference Tables (SQuiRT) Threshold Effect Concentration (TEC). SQuiRT TECs are screening concentrations and were designed to help evaluate potential risks from contaminated water, sediment, or soil. It should be noted that they do not represent official NOAA policy and are not intended to be used in place of regulatory standards or CLs. Concentrations of total arsenic were reported above their associated SQuiRT TECs at locations SED-5, SED-LR, SED-BB1, and SED-BB2. Total chromium was reported above its respective TEC at location SED-LR. Total copper and total mercury were reported above their respective TEC at location SED-5 with total mercury also reported above the associated TEC at SED-4. Concentrations of total lead was reported above its associated TEC at locations SED-5 and SED-LR. Total nickel was reported above the associated TEC at locations (SED-5, SED-110, SED-LR, and SED-BB1).

1,4-dioxane was not reported in any of the sediment samples collected.

The combination of PFOA and PFOS was reported in sediment samples at concentrations ranging from ND to 0.10646 milligrams per kilogram (mg/kg) (SED-5). Neither 1,4-dioxane nor PFOA/PFOS have an applicable TEC. None of the PFOA, PFOS, or PFBS concentrations in sediment exceeded the maximum or mid-range regional screening levels (RSLs) during this sampling event, consistent with past events.

Seep Sampling (L-1)

A summary of analytical results from the regular and duplicate samples collected for the seep sampling location L-1 is provided as **Table 7**. As shown, one parameter (iron) was reported above the NHDES Chronic/Acute Surface Water Standard.

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1,4-dioxane was reported at concentrations of 8.8 J and 9.6 ug/L (original and duplicate sample, respectively), below the historical average for this location since analysis for 1,4-dioxane began in August 2009. 1,4-dioxane does not have a chronic or acute standard. Concentrations of other parameters analyzed at this location were consistently below historic concentrations.

PFOA and PFOS were analyzed at this location. Results include both the original and a duplicate sample. PFOA was reported at 501 J and 456 ng/L, and PFOS was reported at concentrations of 239 J and 204 ng/L. The combined concentrations for PFOA/PFOS were 740 J and 660 ng/L. Combined PFOA and PFOS concentrations at L-1 were slightly above the concentrations reported in 2019.

SUMMARY

Based on the results of the Spring 2020 sampling, the following findings were made:

- 1,4-dioxane was not detected above the NHDES AGQS in any residential well sampled during this sampling event. Historically it has been detected above the AGQS in two wells (339 BHR and R-3).
- PFOA was detected above the NHDES AGQS in one residential well (339BHR).
- Combined PFOA and PFOS detections did not exceed the USEPA HA of 70 ng/L in the residential water supply wells sampled. The maximum combined concentration in water supply wells was 17.31 J ng/L at 339 BHR, consistent with past results.
- Groundwater exceedances for arsenic, manganese, 1,4-dioxane, PFOA, PFOS, and PFOA/PFOS combined were confined to wells within the GMZ.
- One parameter (iron) at two surface water locations (SW-5 and SW-BB1) was reported above the NHDES Chronic surface water standard. Aluminum was reported above the chronic standard in one sample (SW-LR). Copper was reported above the NHDES chronic and acute surface water standard in one sample (SW-4).
- PFOA was detected below the applicable USEPA surface water RSLs at all eight surface water sampling locations. PFOS was detected at concentrations below USEPA surface water RSLs at six of eight surface water sampling locations. PFOS was detected above the child recreator maximum exposure scenario (120 effective days) at two surface water locations (SW-5 and SW-103), consistent with past results.
- Six parameters (total arsenic, total chromium, total copper, total lead, total mercury, and total nickel) in one or more sediment samples were reported above their associated NOAA SQuiRT TEC Standard, which is consistent with historical results.
- None of the PFOA, PFOS or PFBS concentrations in sediment exceeded the maximum or mid-range screening levels established by USEPA/NHDES.
- Iron was reported above the chronic NHDES surface water standard for the L-1 seep sampling location; however, it was reported below the historical high (1,100,000 ug/L, August 2004).
- PFOA/PFOS for seep location (L-1) were detected at combined concentrations of 740 and 660 ng/L (original and duplicate sample), below the historical high reported in April 2017.

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If you have any questions concerning this letter, please contact either of the undersigned at (207) 795-6009.

Sincerely, CES, Inc.

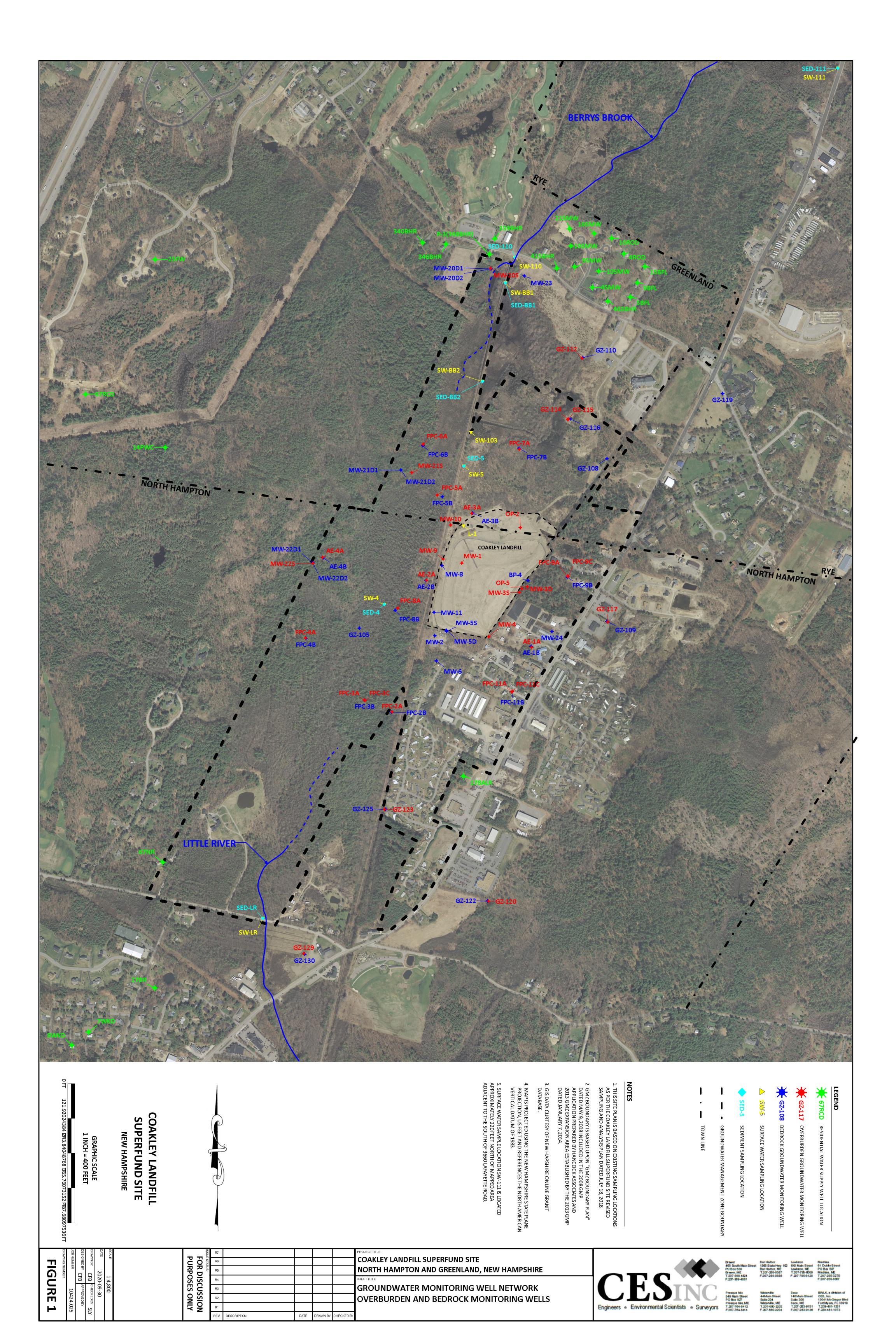
Suzanne Yerina, P.G. Project Geologist

SLY/CFB

Christopher Buckman, P.G. Senior Project Geologist



FIGURE





TABLES

Draft Table 1.1 Summary of Groundwater Elevation Data: April 2001 through May 2020

2020 Semi-Annual Summary Report Coakley Landfull Superfund Site Greenland and North Hampton, New Hampshire

MONITORING	Ref. Pt Elev.	New Ref Pt.	Screened Interval	Apr-01	Aug-01	Jun-02	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Aug-08	Aug-09	Aug-10	Aug-11	Aug-12	Aug-13	Sep-14	Sep-15	May-16	Apr-17	Sep-17	Apr-18	May-19	Sep-19	May-20
WELL	:	2018-2019 survey		GW. EL.																							
IDENTIFICATION	(FT. NGVD)	(FT. NGVD)	(FT. from measuring point)	FT.																							
Operable Unit 1																											
BP-4	111.70	107.40	36.4 - 101.8	99.37	96.29	97.27	96.26	96.51	96.89	96.34	97.71	95.72	97.52	99.00	96.55	96.75	96.48	97.39	96.15	96.35	97.35	99.14	97.07	98.85	98.28	96.05	94.27
MW-2 MW-4	94.54 129.12	94.54 129.12	11.7 - 21.7 30.1 - 40.1	NM 100.33	86.75 96.88	89.00 98.01	NM 96.99	NM	NM 97.35	NM 96.71	NM 00.42	88.61	88.95 97.98	88.40 98.43	87.88	88.79 97.20	86.85 96.90	87.69 97.75	85.69 96.49	87.14	88.19 97.71	89.27 99.65	88.20 97.34	89.07 99.46	89.13 98.76	82.37	88.75 99.01
MW-5S (Note 2)	101.96	101.96	50.7-80.7	92.24	89.33	91.46	88.78	97.07 88.71	90.89	88.54	98.12 91.42	96.17 89.54	91.47	90.99	96.93 89.70	89.89	89.02	90.06	88.33	96.72 88.76	90.20	99.05	89.79	99.46	91.08	96.16 87.90	91.09
MW-5D (Note 2)	99.72	99.72	135.6-165.6	91.72	88.60	90.60	88.12	89.22	89.96	88.02	89.82	88.61	90.42	90.99	88.96	89.11	88.25	89.52	87.70	87.93	89.62	90.91	89.12	90.81	90.60	87.25	90.70
MW-6	101.15	101.15	27.2 - 186.2	93.23	89.79	92.50	89.16	90.09	92.13	89.01	92.46	90.52	92.42	91.93	90.58	90.73	89.66	90.40	88.78	89.71	90.70	91.86	90.57	91.81	92.62	88.37	91.49
MW-8 (Note 2)	85.02	85.02	47.6-67.6	78.33	76.02	77.93	75.64	76.32	77.58	75.66	77.90	76.61	78.20	77.61	76.35	77.26	75.70	77.42	75.25	75.21	77.11	78.27	77.16	78.22	78.21	75.03	78.19
MW-9	82.62	81.70	8.0 - 13.0	76.88	74.10	75.74	73.81	73.28	76.13	73.94	75.71	75.80	76.88	75.35	74.64	77.15	74.15	75.22	73.84	74.15	75.15	77.28	75.87	77.23	77.25	72.60	75.84
MW-10	80.60	79.10	7.7 - 12.7	75.22	73.93	74.91	73.45	74.20	74.93	73.99	74.71	74.95	74.86	74.50	74.21	75.46	74.22	74.50	74.05	74.80	74.62	75.10	74.77	75.15	75.12	72.27	73.60
MW-11	92.70	92.70	33.8 - 53.8	83.09	80.59	82.67	80.11	81.24	82.26	79.85	82.89	81.07	82.99	82.58	81.08	81.54	80.36	82.10	79.46	79.89	82.15	83.14	81.82	83.01	83.04	79.21	82.82
OP-2 (Note 2)	100.00	100.00	9-14	87.25	92.00	93.49	91.85	92.26	93.05	91.94	93.80	92.28	94.04	93.98	92.50	93.17	92.52	77.42	92.28	92.53	93.84	95.34	93.67	95.03	94.89	92.30	95.00
OP-5	112.68	108.40	15.8 - 25.8	107.29	97.54	97.72	96.82	96.98	97.31	96.78	98.03	96.04	97.81	98.28	96.91	97.22	96.86	97.72	96.48	96.67	97.61	99.45	97.33	99.21	98.57	96.42	94.53
Operable Unit 2																											
AE-1A	127.00	127.00	57-67	99.67	96.54	97.54	96.53	96.67	97.05	97.35	98.10	95.89	97.74	98.19	96.74	97.00	96.63	97.53	96.32	96.55	97.48	99.39	97.31	99.04	98.48	96.28	98.73
AE-1B	126.80	126.80	77.3-87.3	99.65	96.43	97.51	96.51	96.65	97.09	96.49	98.09	95.87	97.73	97.98	96.55	96.93	96.61	97.51	96.30	96.53	96.45	99.38	97.30	99.33	98.47	96.27	98.72
AE-2A (Note 5)	79.60	79.60	12.6 - 22.6	75.69	73.58	75.66	72.98	73.75	75.19	73.18	75.70	74.69	75.81	75.29	73.76	75.00	73.52	74.70	72.92	73.32	75.29	75.89	74.75	75.77	75.83	72.70	75.82
AE-2B (Note 5) AE-3A (Note 6)	79.50 86.10	79.50 85.00	42.5 - 52.5 ?? - 20	75.78 77.80	73.49 77.05	75.65 77.70	73.16 76.86	74.42 76.30	75.33 77.90	73.60 77.14	75.61 78.02	74.22 77.90	75.94 77.98	76.02 78.68	74.35 77.30	74.26 78.30	74.01 77.04	75.30 77.50	73.49 76.75	73.56 77.03	75.65 77.54	76.46 77.85	75.31 77.42	76.30 77.83	76.40 77.93	73.13 75.45	76.36 76.67
AE-3A (Note 6)	87.30	86.20	31.4 - 43.4	78.64	78.30	78.49	77.47	77.90	78.58	76.86	78.66	78.47	78.50	78.32	77.76	78.84	77.50	77.84	77.22	77.45	81.09	78.68	77.89	78.57	78.66	75.45	77.35
AE-4A	77.20	76.45	7.3 - 17.3	NA	NA	NA	NA	NA	73.47	70.75	73.75	72.91	73.10	73.20	71.49	73.10	70.80	72.29	70.42	71.20	72.99	73.74	72.64	73.68	73.68	69.43	72.80
AE-4B	77.50	76.71	36.7 - 46.7	NA	NA	NA	NA	NA	73.42	70.51	73.30	72.28	73.61	73.01	71.10	72.18	70.58	72.12	70.26	70.55	72.92	73.83	72.01	73.89	73.89	69.33	72.92
FPC-2A	78.40	78.40	8.8 - 18.8	NM	NM	76.66	78.40	76.24	76.31	75.66	76.32	75.90	76.30	76.12	75.62	75.98	75.41	75.89	75.02	75.36	75.39	75.86	75.50	75.85	75.68	74.67	75.64
FPC-2B	77.98	77.98	25.4-40.4	77.78	NM	77.38	76.37	76.81	77.28	76.45	77.30	76.90	77.46	77.26	76.45	74.94	76.51	75.22	76.24	75.18	77.00	77.45	76.97	77.25	77.42	76.11	77.28
FPC-3A	73.17	73.17	65.6-75.6	NM	71.02	70.58	71.06	70.51	68.95	71.02																	
FPC-3B	72.22	72.22	82.2 - 97.2	NM	70.42	70.23	70.42	70.47	68.93	70.55																	
FPC-3C	72.36	72.36	20.9 - 30.9	NM	71.03	70.61	71.10	71.13	68.95	71.04																	
FPC-4B	75.83	75.83	20.8-35.8	NM	NM	NM	NM	69.96	71.58	68.21	71.63	70.95	71.81	71.24	69.80	71.01	69.51	70.43	68.98	69.76	71.15	71.95	70.76	71.91	71.90	68.81	71.71
FPC-5A	74.30	73.80	62.8-72.8	74.14	73.02	73.10	73.03	73.10	74.30	72.18	73.50	73.50	73.73	73.37	72.73	72.91	72.05	72.11	NM	NM	NM	NM	NM	NM	72.48	70.88	71.70
FPC-5B FPC-6A (Note 3)	74.90 79.20	74.00 79.20	98.1-113.1 7.3-8.3	74.70 73.01	73.43 NM	70.96 72.65	73.15 NM	74.23 NM	74.40 75.03	73.19 72.91	74.66 75.03	74.50 74.58	74.85 75.22	74.46 74.42	73.74	74.33	72.95 70.77	73.64 71.22	72.90 70.12	73.39 70.52	74.05 72.18	74.35 72.71	73.85	74.11 72.67	74.39 72.75	71.70 70.14	73.35 72.57
FPC-6B	77.10	79.20	16-31	73.01	70.88	72.33	70.30	71.94	70.32	68.37	70.47	70.19	72.93	72.35	71.26	72.35	71.06	71.60	70.12	71.24	72.16	73.18	72.17	73.19	73.21	69.58	72.14
FPC-7A	82.08	87.60	19.1-24.1	NM	NM	NM	NM	80.12	80.99	80.03	81.46	81.30	81.49	81.16	80.39	81.10	80.20	80.73	79.78	80.46	81.17	81.44	80.85	81.56	81.66	79.46	86.95
FPC-7B	82.33	85.3	32.4-47.4	NM	NM	NM	NM	79.82	80.72	79.69	81.02	79.43	81.20	80.87	80.14	80.82	79.95	80.42	79.54	80.20	80.94	81.42	80.61	81.40	81.42	79.26	84.28
FPC-8A	73.80	73.80	25.1 - 35.1	73.20	71.06	72.99	70.36	71.26	72.86	70.63	73.01	72.20	73.09	72.73	71.62	72.46	71.31	72.60	70.75	71.32	72.75	73.17	72.30	72.90	73.19	70.44	73.13
FPC-8B	73.60	73.60	42.9-57.9	72.99	70.93	72.79	70.07	71.22	72.69	70.58	72.83	72.03	72.00	72.68	71.10	72.28	71.16	72.40	70.61	71.19	72.59	72.96	72.15	72.78	73.03	70.32	72.95
FPC-9A	117.57	114.10	60.4 - 70.4	99.22	96.25	97.05	96.02	96.27	96.40	95.83	97.59	95.48	97.44	97.90	96.37	96.58	96.18	97.23	95.98	96.18	97.20	99.10	97.00	98.70	98.26	95.92	95.01
FPC-9B	117.87	116.00	74.5 - 89.5	99.28	96.15	97.08	96.11	96.37	NM	NM	NM	95.14	97.41	97.93	96.42	96.96	96.21	97.22	96.03	96.18	97.18	99.13	97.02	98.71	98.31	95.92	96.55
FPC-9C	117.75	114.60	17.4 - 27.4	99.62	NM	97.52	NM	96.75	NM	NM	NM	96.08	97.62	98.10	96.75	96.65	96.78	97.69	96.53	96.84	97.58	99.25	97.37	99.07	98.57	96.51	95.55
FPC-11A	117.95	117.95	46.6 - 51.6	NM	NM	NM	NM	96.65	97.01	96.51	97.71	95.81	97.58	97.95	96.50	96.68	96.38	97.45	96.09	96.36	97.24	99.14	97.08	98.79	98.31	NM	98.47
FPC-11B FPC-11C (Note 4)	117.90	117.90 117.86	57.5 - 72.5 17.7 - 32.7	NM NM	NM NM	NM NM	NM NM	96.70 NM	96.90 NM	96.34 NM	97.69 NM	95.54 NM	97.57	97.89	96.56 NM	97.10 NM	96.37 96.58	97.30 97.44	96.07 96.23	96.29 96.82	97.19	99.13 99.38	97.04	98.78 99.08	98.29	NM NM	98.40 NM
GZ-105 (Note 4)	73.60	73.60	37.8 - 52.8	71.02	69.31	70.83	68.45	69.71	71.09	69.28	70.91	70.68	NM 71.05	NM 70.78	69.83	70.71	69.47	70.70	68.98	70.03	97.39 70.69	71.08	97.35 70.58	71.06	98.45 71.08	68.90	71.00
GZ-105 GZ-109	119.36	119.36	105-254	71.02 NM	NM	70.63 NM	NM	NM	NM	NM	NM	70.06 NM	71.05 NM	NM	09.63 NM	NM	NM	NM	00.90 NM	70.03 NM	NM	71.06 NM	97.05	98.61	98.35	95.86	98.41
GZ-109 GZ-117	118.10	118.10	31.8-41.8	NM	96.13	97.20	96.85	95.06	96.90																		
GZ-117	87.49	86.6	12.9 - 17.9	NM	76.91	77.90	78.28	77.05	77.42	77.01	77.24	76.76	77.36	77.61	79.53	77.54	79.23	78.77	75.89	78.08							
GZ-125	88.77	87.99	60.3-202.3	NM	80.35	81.73	81.87	80.36	80.32	80.07	80.79	79.76	80.03	80.89	82.93	80.97	82.57	80.62	78.87	81.35							
MW-20S	75.1	75.09	7.5-12.5	NA	71.49	68.46	71.17																				
MW-21S	73.6	73.57	8.4-16.4	NA	72.25	69.67	72.10																				
MW-22S	76.5	76.51	8.25-16.25	NA	73.66	69.80	73.58																				
MW-20D1	75.51	75.51	67.7-77.7	NA	67.95	71.02																					
MW-20D2	75.49	75.49	224.7-236-7	NA	67.80	70.56																					
MW-21D1	78.66	78.66	24.6-34.6	NA	69.70	72.48																					
MW-21D2	78.71	78.71	301.7-311.7	NA	NA	NA NA	NA	NA	NA NA	NA	NA NA	NA NA	NA NA	NA	NA	NA NA	NA	NA NA	NA NA	NA	NA	NA	NA NA	NA	NA	69.85	73.28
MW-22D1	76.75	76.75	76.8-86.8	NA	NA	NA NA	NA NA	NA	NA NA	NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA	NA NA	NA NA	NA	NA NA	NA	NA NA	NA NA	NA NA	69.36	72.96
MW-22D2	76.78	76.78	211.8-221.8	NA	69.20	72.58																					

NOTES:

- $1. \; \text{GW.EL. indicates groundwater elevation and FT. indicates measurements were in feet.} \\$
- 2. Summit determined that Reference Point Elevations for MW-5D, MW-5D, MW-8 and OP-2 were incorrect for data collected since 1999. Correct measuring point elevations were identified on an as built survey plan prepared by Richard D. Bartlett and Associates, Inc. dated September 1998. Surveyed "top of cap" elevations for MW-5S, MW-5D and MW-8 were adjusted to top of PVC using field measurements (significant settling is not likely at these wells as they are 2-inch diameter wells install in 6 inch diameter boreholes through 6-inch diameter metal casings. A PVC casing elevation was listed for OP-2. Groundwater elevation data since April 1999 adjustments are as follows: MW-5S (+3.54 ft), MW-5D (+1.33 ft), MW-8 (-0.28 ft) and OP-2 (+1.51 ft).
- 3. A replacement well (point) for FPC-6A was installed in August 2003, due to insufficient water for sampling for extended periods of time. However, the reference point elevation was not updated at that time. Therefore, groundwater elevations presented in previous monitoring reports for FPC-6A since August 2003 were incorrect. Summit surveyed the FPC-6A reference point elevation in December 2013 relative to the FPC-6B reference point elevation and determined that the measure point elevation for FPC-6A is 79.20 feet (not 77.00 feet, as identified in previous reports). Groundwater elevations at FPC-6A since August 2004 were corrected by +2.20 feet. In addition, the FPC-6A screened interval was updated based on well depth (9.97 feet), stickup (5.54 feet), and an assumed 1 foot screen interval.
- 4. FPC-11C: Well casing was modified during road box repairs at FPC-11A/B/C on 1/10/2014 (Summit Environmental Consultants). Top of PVC casing was resurveyed relative to FPC-11A/B measuring points on 2/27/2014. Original measuring point elevation was 118.04 feet. New measuring point elevation is 118.10. Well was paved over and could not be gauged suring the Spring 2020 sampling event
- 5. AE-2A/2B stickups are based on field measurements in August 2014. Source (RDBA) measuring point (PVC) elevations appear accurate; however, existing grade elevation were not accurate. Field measurements of stickup added to total depth from boring log are consistent with total depth from top of PVC casing measured in August 2012.
- 6. AE-3A well screen interval not specifically listed on boring log (well construction log for AE-3A is the same as AE-3B). Assume 10 foot screen was installed to bottom of borehole (0.3 feet below top of bedrock).

Draft Table 1.2 Vertical Hydraulic Gradients - Select Well Couplets: Spring 2020

2020 Semi-Annual Summary Report Coakley Landfull Superfund Site Greenland and North Hampton, New Hampshire

Monitoring Well	Geologic Unit	Ground Elevation	Screened Depth (ft bgs)	Bottom of Screen Elevation	GW Elevation January 2019	GW Elevation May 2019	GW Elevation July 2019	GW Elevation September 2019	GW Elevation May 2020	Vertical Gradient January 2019	Vertical Gradient May 2019	Vertical Gradient July 2019	Vertical Gradient September 2019	Vertical Gradient May 2020
MW-5S	SBR	99.30	48-78	21.30	91.15	91.08	90.21	87.90	91.09					
MW-5D	DBR	97.58	139-159	-61.42	91.72	90.60	89.64	87.25	90.70	0.007	0.006	0.007	0.008	0.005
AE-1A	Till	125.00	55-65	60.00	98.60	98.48	97.73	96.28	98.73					
AE-1A AE-1B	SBR	125.00	75-85	40.00	98.59	98.47	97.72	96.27	98.72	0.000	0.001	0.001	0.001	0.001
AE-2A	Till	76.97	10-20	56.97	75.88	75.83	75.18	72.70	75.82					
AE-2B	SBR	77.04	40-50	27.04	76.44	76.40	75.60	73.13	76.36	0.019	0.019	0.014	0.014	0.018
AE-3A	Till	82.80	7.8-17.8	65.00	76.87	76.83	76.37	75.45	76.67					
AE-3B	SBR	82.80	28-40	42.80	77.57	77.56	76.95	75.87	77.35	0.032	0.033	0.026	0.019	0.031
AE-4A	Outwash	74.20	5-15	59.20	72.94	72.93	72.34	69.43	72.80					
AE-4B	SBR	74.01	34-44	30.01	73.11	73.10	72.29	69.33	72.92	0.006	0.006	0.002	0.003	0.004
FPC-2A	Outwash	75.60	6-16	59.60	Frozen	75.68	75.39	74.67	75.64					
FPC-2B	SBR	75.40	22.8-37.8	37.60	Frozen	77.42	77.06	76.11	77.28	NC	0.079	0.076	0.065	0.075
FPC-3A	Till	70.57	63-73	-2.43	Frozen	70.51	70.72	68.95	71.02		0.000	0.004	0.004	2.224
FPC-3B	SBR	70.57	80.5-95.5	-24.93	70.50	70.47	70.25	68.93	70.55	NC	0.002	0.021	0.001	0.021
FPC-3A	Till	70.57	63-73	-2.43	Frozen	70.51	70.72	68.95	71.02	NO	0.044	0.004	0.000	0.000
FPC-3C	Outwash	69.68	18.5-28.5	41.18	Frozen	71.13	70.77	68.95	71.04	NC	0.014	0.001	0.000	0.000
FPC-5A	Till	73.80	60-70	2.06				70.88	71.7	NO	NO	NO	0.004	0.040
FPC-5B	SBR	74.00	95.3-110.3	-37.68				71.70	73.35	NC	NC	NC	0.021	0.042
FPC-6A	Till	73.66	1.8-2.8	70.86	72.79	72.75	72.03	72.14	72.57	0.020	0.021	0.016	0.099	0.017
FPC-6B	SBR	73.62	13.5-28.5	45.12	72.28	72.22	71.63	69.58	72.14	0.020	0.021	0.010	0.099	0.017
FPC-7A	Till	85.52	17-22	63.52	Frozen	81.66	81.05	79.46	86.95	NC	0.009	0.009	0.008	0.104
FPC-7B	SBR	82.87	30-45	37.87	Frozen	81.42	80.81	79.26	84.28	110	0.000	0.000	0.000	0.104
FPC-8A	Till	71.70	23-33	38.70	Frozen	73.19	72.64	70.44	73.13	NC	0.007	0.005	0.005	0.008
FPC-8B	SBR	71.36	40.7-55.7	15.66	Frozen	73.03	72.52	70.32	72.95		0.00.	0.000	0.000	0.000
FPC-9A	Till	111.73	58-68	43.73	98.32	98.26	97.41	95.92	95.01	0.001	0.003	0.000	0.000	0.090
FPC-9B	SBR	113.53	72-87	26.53	98.34	98.31	97.41	95.92	96.55					
FPC-9C	Outwash	112.22	15-25	87.22	98.66	98.57	97.87	96.51	95.55	0.008	0.007	0.011	0.014	0.012
FPC-9A	Till	111.73	58-68	43.73	98.32	98.26	97.41	95.92	95.01	5.000				***
FPC-11A	Till	118.36	47-52	66.36	Frozen	98.31	97.50	95.88	98.47	NC	0.001	0.002	0.002	0.003
FPC-11B	SBR	118.45	58-73	45.45	Frozen	98.29	97.46	95.93	98.40					
FPC-11A	Till	118.36	47-52	66.36	Frozen	98.31	97.50	95.88	98.47	NC	0.005	0.003	NC	NC
FPC-11C	Outwash	118.18	18-33	85.18	Frozen	98.21	97.55	Paved Over	Paved Over					
GZ-109	Open BR	117.74	103-252	-134.26	98.46	98.35	97.40	95.86	98.41	0.007	0.007	0.005	0.004	0.007
GZ-117	Till	118.10	30.5-40.5	77.60	96.89	96.85	96.35	95.06	96.90					
GZ-123	Outwash	85.21	11.5-16.5	68.71	78.52	77.88	76.90	75.89	78.08	0.007	0.011	0.014	0.016	0.018
GZ-125	Open BR	85.72	57-200	-114.28 62.59	79.88	79.84	79.39	78.87	81.35					
MW-20S MW-20D1	Outwash DBR	72.59	5-10 65-75	-2.21				68.46	71.17 71.02	NC	NC	NC	0.008	0.002
		72.79 72.79		-2.21 -2.21				67.95 67.95	71.02					
MW-20D1 MW-20D2	DBR DBR	72.79	65-75 224-234	-2.21 -161.21				67.80	71.02	NC	NC	NC	0.001	0.003
				57.18				69.67	72.10					
MW-21S MW-21D1	MSC DBR	71.18 74.06	6-14 20-30	44.06				69.70	72.10	NC	NC	NC	0.002	0.029
MW-21D1	DBR	74.06	20-30	44.06				69.70	72.48					
MW-21D1	DBR	74.06	297-307	-232.94				69.85	73.28	NC	NC	NC	0.001	0.003
MW-22S	Outwash	74.06	6-14	60.26				69.80	73.58					
MW-22D1	DBR	74.20	75-85	-0.06				69.36	72.96	NC	NC	NC	0.007	0.010
MW-22D1	DBR	74.94	75-85	-0.06				69.36	72.96					
MW-22D1	DBR	74.94	210-220	-145.06				69.20	72.58	NC	NC	NC	0.001	0.003
Notes	2310	17.07	210 220	1 10.00				00.20	12.00	I				

Notes
1 Positive vertical gradient indicates a downward flow direction

FT BGS = Feet Below Ground Surface

Frozen = Unable to measure due to frozen well

NC = Not Calculated

Open BR = Open Borehole

SBR = Shallow Bedrock

DBR = Deep Bedrock

- MSC = Marine silt and clay.

 = Neutral vertical gbradient (0.1 ft difference or less in groundwater elevations)
 - = Upward Vertical Gradient = Downward vertical gradient

 - = Data not collected

Draft Table 2 - Well Depth Comparison: Spring 2020

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Well ID	Measuring Point Elevation (ft	Adjusted Well Depths Based on Well Depth and Stickup (ft from	Screen Length (in feet)	(ft from N	d Interval leasuring int)	August 2012 Measured Well Depth from 2012 (in ft from	August 2015 Measured Well Depth (in ft from	May 2020 Measured Well Depth (in ft from	Well Depth Variance 2012 to 2020
	NGVD)	Measuring Point)		Upper	Lower	Measuring Point)	Measuring Point)	Measuring Point)	
Operating Unit	: 1 (OU-1) Wells								
BP-4	107.40	101.78	65.4	36.4	101.8	101.56	101.8	101.2	0.4
MW-2	94.54	21.74	10	11.7	21.7	NM	21.8	NM	NM
MW-4	129.12	40.12	10	30.1	40.1	39.22	39.2	39.0	0.2
MW-5D	99.72	165.64	20	145.6	165.6	161.32	161.7	161.2	0.1
MW-5S	101.96	80.66	30	50.7	80.7	83.02	83.5	83.1	-0.1
MW-6	101.15	186.15	159	27.2	186.2	171	170.9	170.9	0.1
MW-8 MW-9	85.02 81.70	67.59 13.00	20 5	47.6 8.0	67.6 13.0	67.51 12.46	67.6 12.5	67.3 12.7	0.2 -0.2
MW-10	79.10	12.67	5	7.7	12.7	12.46	12.1	11.9	0.3
MW-11	92.70	53.80	20	33.8	53.8	54.85	54.7	54.6	0.3
OP-2	100.00	14.00	5	9.0	14.0	16.84	16.9	16.6	0.3
OP-5	112.68	25.84	10	15.8	25.8	25.78	25.7	25.5	0.3
	2 (OU-2) Wells			,					3.3
AE-1A	127.00	67.00	10	57.0	67.0	66.15	66.1	65.9	0.3
AE-1B	126.80	87.30	10	77.3	87.3	87.69	87.7	87.4	0.3
AE-2A***	79.60	22.63	10	12.6	22.6	22.55	22.6	22.3	0.3
AE-2B***	79.50	52.46	10	42.5	52.5	52.8	52.8	52.5	0.3
AE-3A*	85.00	20.00	10*	10.0	20*	20.06	20.1	19.8	0.2
AE-3B	86.20	43.40	12	31.4	43.4	43.02	43.1	42.8	0.2
AE-4A	76.45	17.25	10	7.3	17.3	16.05	16.6	16.0	0.1
AE-4B	76.71	46.70	10	36.7	46.7	46.1	46.1	45.7	0.4
FPC-2A	78.40	18.80	10	8.8	18.8	18.81	18.8	18.5	0.3
FPC-2B	77.98	40.38	15	25.4	40.4	40.01	40.3	40.0	0.1
FPC-3A	73.17	73.00	10	63.0	73.0	NM	NM	69.4	3.7
FPC-3B FPC-3C	72.22	95.50	15	80.5	95.5	NM	NM	95.8	-0.3
FPC-3C FPC-4B	72.36	28.50	10 15	18.5	28.5 35.8	NM 35.45	NM 35.4	28.7 35.1	-0.2 0.4
FPC-5A**	75.83 73.80	35.83 70.00	10	20.8 60.0	70.0	25.76**	Obstructed	60.0	10.0
FPC-5B	74.00	113.11	15	98.1	113.1	113.56	113.4	114.2	-0.6
FPC-6A	79.20	8.34	1	7.3	8.3	9.97	10.4	10.0	0.0
FPC-6B	76.11	30.99	15	16.0	31.0	30.2	30.2	29.9	0.3
FPC-7A	87.60	24.08	5	19.1	24.1	23.95	24.0	23.7	0.2
FPC-7B	85.30	47.43	15	32.4	47.4	46.9	47.0	46.6	0.3
FPC-8A	73.80	35.10	10	25.1	35.1	33.87	33.9	33.5	0.4
FPC-8B	73.60	57.94	15	42.9	57.9	57.45	57.7	57.7	-0.2
FPC-9A	114.10	68.00	10	58.0	68.0	68.35	68.4	65.1	3.3
FPC-9B**	116.00	87.00	15	72.0	87.0	NM	89.5	89.0	-2.0
FPC-9C**	114.60	25.00	10	15.0	25.0	NM FO 44	27.7	NM 50.2	NM
FPC-11A FPC-11B	117.95 117.90	51.59 72.45	5 15	46.6 57.5	51.6	50.41 70.7	50.4 71.3	50.2 71.0	0.3 -0.3
FPC-11B	117.90	72.45 32.68	15	17.7	72.5 32.7	32.12	31.8	71.0 NM	-0.3 NM
GZ-105	73.60	52.76	15	37.8	52.8	51.99	52.1	51.7	0.3
GZ-109**	119.36	252.00	149	103.0	252.0	NM	NM	252.0	0.0
GZ-117**	118.10	40.50	10	30.5	40.5	NM	NM	40.0	0.5
GZ-123	86.6	17.89	5	12.9	17.9	17.58	17.4	NM	NM
GZ-125	87.99	202.27	142	60.3	202.3	192.36	201.3	NM	NM
MW-20S**	75.09	12.50	5	7.5	12.5	NM	NM	11.8	0.7
MW-20D1**	75.51	77.72	10	67.7	77.7	NM	NM	78.3	-0.5
MW-20D2**	75.49	236.70	10	226.7	236.7	NM	NM	236.7	0.0
MW-21S**	73.57	16.39	8	8.4	16.4	NM	NM	16.1	0.3
MW-21D1**	78.66	34.60	10	24.6	34.6	NM	NM	34.6	0.0
MW-21D2**	78.66	311.65	10	301.7	311.7	NM	NM	311.6	0.0
MW-22S**	76.51	16.25	8	8.3	16.3	NM	NM	16.1	0.1
MW-22D1**	76.75	86.81	10	76.8	86.8	NM	NM	86.8	0.0
MW-22D2**	76.78	221.84	10	211.8	221.8	NM	NM	221.8	0.0
MW-23	80.69	283.85	234	49.9	283.9	NM	NM	NM	NM
MW-24	118.7	144.25	62	82.3	144.3	NM	NM	NM	NM

TABLE NOTES

- ft bgs = feet below ground surface
- 2. ft NGVD = feet National Geodetic Vertical Datum
- 3. NM = Not Measured
- 4. Well depths relative to measuring point measured in August 2012 and listed in 2012 Annual Report (Provan and Lorber)
- * AE-3A well screen interval not specifically listed on boring log (well construction log for AE-3A is the same as AE-3B). Assume 10 foot screen was installed to bottom of borehole (0.3 feet below top of bedrock).
- ** Well depth compared to orginal well depth

2020 Semi-Annual Summary Report

Coakley Landfill Superfund Site - Greenland and North Hampton, New Hampshire

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Sampling Point ID Monitored Zone / Unit	USEPA	NHDES	MW-4 ¹	MW-4-DUP ¹	MW-5D DBR	MW-5S SBR	MW-6 OBH-BR	MW-8 ¹ SBR	MW-9 Outwash	MW-10 Outwash	MW-11 SBR	OP-2 Outwash	OP-5 Outwash	BP-4 OBH-BR	# of Exc	eedances NHDES
Date of Sample Collection	CL	AGQS	5/19/20	5/19/20	5/15/20	5/15/20	5/22/20	5/20/20	5/22/20	5/22/20	5/18/20	5/14/20	5/18/20	5/18/20	CL	AGQS
VOLATILE ORGANIC COMPOUNDS BY 8260C - (ug/L)																
1,2,4-Trimethylbenzene		330	N/A	N/A	1 U	1 U	1 U	1 U	N/A	N/A	1 U	N/A	N/A	N/A	-	0
1,2-Dichloropropane	5	5	N/A	N/A	1 U	1 U	1 U	1 U	N/A	N/A	1 U	N/A	N/A	N/A	0	0
1,4-Dichlorobenzene		75	N/A	N/A	1.1	1	1 U	1.6	N/A	N/A	1 U	N/A	N/A	N/A		0
2-Butanone(MEK)	200	4,000	N/A	N/A	10 U	10 U	10 U	10 U	N/A	N/A	10 U	N/A	N/A	N/A	0	0
Acetone		6,000	N/A	N/A	10 U	10 U	10 U	12	N/A	N/A	10 U	N/A	N/A	N/A		
Benzene Corbon digulfide	5	5	N/A	N/A	2	1.9	10	3	N/A	N/A	1.3	N/A	N/A	N/A	0	0
Carbon disulfide Chlorobenzene	100	70 100	N/A N/A	N/A N/A	2 U 1.8	2 U	2 U 1 U	2 U 5.6	N/A N/A	N/A N/A	2 U 1 U	N/A N/A	N/A N/A	N/A N/A	0	0
Chloroethane			N/A N/A	N/A	35	3.7	2 U	11	N/A	N/A N/A	15	N/A	N/A	N/A		
Chloroform	80		N/A	N/A	1 U	1 U	1 U	1 U	N/A	N/A	1 U	N/A	N/A	N/A	0	
Diethyl Ether		1,400	N/A	N/A	100	23	2 U	59	N/A	N/A	11	N/A	N/A	N/A		0
IsoPropylbenzene		800	N/A	N/A	1 U	1 U	1 U	1.5	N/A	N/A	1 U	N/A	N/A	N/A		0
Methyl-t-butyl ether(MTBE)		13	N/A	N/A	1 U	1 U	1 U	1.U	N/A	N/A	1 U	N/A	N/A	N/A		0
m&p-Xylene		10,000^	N/A	N/A	1 U	1 U	1 U	1 U	N/A	N/A	1 U	N/A	N/A	N/A		0
p-Xylene		10,000^	N/A	N/A	1 U	1 U	1 U	1 U	N/A	N/A	1 U	N/A	N/A	N/A		0
tert-Butyl Alcohol (TBA)		40	N/A	N/A	55	30 U	30 U	46	N/A	N/A	30 U	N/A	N/A	N/A		2
Tetrachloroethene	3.5	5	N/A	N/A	1 U	1 U	1 U	1 U	N/A	N/A	1 U	N/A	N/A	N/A	0	0
Tetrahydrofuran(THF)	154	600	N/A	N/A	89	11	10 U	88	N/A	N/A	10 U	N/A	N/A	N/A	0	0
trans-1,2-Dichloroethene	100	100	N/A	N/A	1 U	1 U	1 U	1 U	N/A	N/A	1 U	N/A	N/A	N/A	0	0
1,4-DIOXANE BY 8260B SIM - (ug/L)																
1,4-Dioxane	3	0.32	4.3	4.2	140	36	0.2 U	100 J+	0.2 U	1.3	26	0.43	0.2 U	5.7	6	8
DISSOLVED METALS BY 200.8 - (mg/L)																
Dissolved Antimony	0.006	0.006	0.001 U	0.001 U	N/A	N/A	N/A	N/A	0.001 U	0.001 U	N/A	0.001 U	0.001 U	N/A	0	0
Dissolved Arsenic	0.01	0.01	0.048	0.05	N/A	N/A	N/A	N/A	0.0047	0.0063	N/A	0.15	0.032	N/A	3	3
Dissolved Barium		2	0.065	0.066	N/A	N/A	N/A	N/A	0.02	0.019	N/A	0.0098	0.012	N/A		0
Dissolved Beryllium	0.004	0.004	0.001 U	0.001 U	N/A	N/A	N/A	N/A	0.001 U	0.001 U	N/A	0.001 U	0.001 U	N/A	0	0
Dissolved Calcium			73 J+	73 J+	N/A	N/A	N/A	N/A	35 J+	25 J+	N/A	37 J+	10 J+	N/A		
Dissolved Chromium	0.05	0.1	0.001 U	0.001 U	N/A	N/A	N/A	N/A	0.001U	0.001 U	N/A	0.001 U	0.001 U	N/A	0	0
Dissolved Iron			29 J+	30 J+	N/A	N/A	N/A	N/A	2.9 J+	13 J+	N/A	52 J+	14 J+	N/A		
Dissolved Lead	0.015	0.015	0.001 U	0.001 U	N/A	N/A	N/A	N/A	0.001 U	0.001 U	N/A	0.001 U	0.001 U	N/A	0	0
Dissolved Magnesium			20	21	N/A	N/A	N/A	N/A	6.8	6	N/A	7.2	2.4	N/A		
Dissolved Manganese	0.3	0.84	1.2	1.3	N/A	N/A	N/A	N/A	0.65	1.2	N/A	2.1	2.5	N/A	5	4
Dissolved Nickel	0.1	0.1	0.0092	0.012	N/A	N/A	N/A	N/A	0.0048	0.0018	N/A	0.0098	0.015	N/A	0	0
Dissolved Potassium		160	35	35	N/A	N/A	N/A	N/A	2.1	4.7	N/A	9.1	2	N/A		
Dissolved Sodium			32	33	N/A	N/A	N/A	N/A	6.5	17	N/A	1.3	6.2	N/A		
Dissolved Vanadium	0.26		0.005 U	0.005 U	N/A	N/A	N/A	N/A	0.005 U	0.005 U	N/A	0.005 U	0.005 U	N/A	0	
TOTAL METALS BY 200.8 - (mg/L)																
Total Antimony	0.006	0.006	N/A	N/A	0.001 U	0.001 U	0.001 U	0.001 U	N/A	N/A	0.001 U	N/A	N/A	0.001 U	0	0
Total Arsenic	0.01	0.01	N/A	N/A	0.0052	0.018	0.001 U	0.0018	N/A	N/A	0.014	N/A	N/A	0.04	3	3
Total Barium		2	N/A	N/A	0.11	0.12	0.012	0.15	N/A	N/A	0.059	N/A	N/A	0.038		0
Total Beryllium	0.004	0.004	N/A	N/A	0.001 U	0.001 U	0.001 U	0.001 U	N/A	N/A	0.001 U	N/A	N/A	0.001 U	0	0
Total Calcium			N/A	N/A	38 J+	38 J+	29 J+	29 J+	N/A	N/A	19 J+	N/A	N/A	54 J+		
Total Chromium	0.05	0.1	N/A	N/A	0.001 U	0.001 U	0.0011	0.001 U	N/A	N/A	0.001 U	N/A	N/A	0.001 U	0	0
Total Iron			N/A N/A	N/A N/A	0.001 U 17 J+	0.001 U 13 J+	0.0011 15 J+	0.001 U 2.6 J+	N/A N/A	N/A N/A	0.001 U 14 J+	N/A N/A	N/A N/A	0.001 U 16 J+	0	
Total Iron Total Lead	0.015	0.015	N/A N/A N/A	N/A N/A N/A	0.001 U 17 J+ 0.001 U	0.001 U 13 J+ 0.001 U	0.0011 15 J+ 0.001 U	0.001 U 2.6 J+ 0.001 U	N/A N/A N/A	N/A N/A N/A	0.001 U 14 J+ 0.001 U	N/A N/A N/A	N/A N/A N/A	0.001 U 16 J+ 0.001 U	0 0	0
Total Iron Total Lead Total Magnesium	0.015	0.015	N/A N/A N/A N/A	N/A N/A N/A N/A	0.001 U 17 J+ 0.001 U 34	0.001 U 13 J+ 0.001 U 18	0.0011 15 J+ 0.001 U 13	0.001 U 2.6 J+ 0.001 U 36	N/A N/A N/A N/A	N/A N/A N/A N/A	0.001 U 14 J+ 0.001 U 16	N/A N/A N/A N/A	N/A N/A N/A N/A	0.001 U 16 J+ 0.001 U 21	0 0 	0
Total Iron Total Lead Total Magnesium Total Manganese	0.015 0.3	0.015 0.84	N/A N/A N/A N/A	N/A N/A N/A N/A	0.001 U 17 J+ 0.001 U 34 1	0.001 U 13 J+ 0.001 U 18 3.3	0.0011 15 J+ 0.001 U 13	0.001 U 2.6 J+ 0.001 U 36 1.5	N/A N/A N/A N/A N/A	N/A N/A N/A N/A	0.001 U 14 J+ 0.001 U 16 0.49	N/A N/A N/A N/A N/A	N/A N/A N/A N/A	0.001 U 16 J+ 0.001 U 21 1.6	0 0 6	0 5
Total Iron Total Lead Total Magnesium Total Manganese Total Nickel	0.015 0.3 0.1	0.015 0.84 0.1	N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095	0.001 U 13 J+ 0.001 U 18 3.3 0.0076	0.0011 15 J+ 0.001 U 13 4 0.0082	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026	N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064	N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086	0 0 6 0	0 5 0
Total Iron Total Lead Total Magnesium Total Manganese Total Nickel Total Potassium	0.015 0.3 0.1	0.015 0.84 0.1 160	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23	0.001 U 13 J+ 0.001 U 18 3.3 0.0076	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16	0 0 6 0	0 5 0
Total Iron Total Lead Total Magnesium Total Manganese Total Mischel Total Potassium Total Potassium Total Potassium	0.015 0.3 0.1 	0.015 0.84 0.1 160	N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11	N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65	N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50	0 0 6 0	5 0 5
Total Iron Total Lead Total Magnesium Total Manganese Total Nickel Total Potassium Total Sodium Total Sodium Total Sodium	0.015 0.3 0.1 0.26	0.015 0.84 0.1 160	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23	0.001 U 13 J+ 0.001 U 18 3.3 0.0076	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16	0 0 6 0	0 5 0
Total Iron Total Lead Total Magnesium Total Magnesee Total Nickel Total Potassium Total Sodium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED	0.015 0.3 0.1 0.26 537 - (ng/L	0.015 0.84 0.1 160 	N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U	N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U	N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U	0 0 6 0 0	5 0 5 0
Total Iron Total Lead Total Magnesium Total Manganese Total Nickel Total Potassium Total Potassium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA)	0.015 0.3 0.1 0.26 537 - (ng/L	0.015 0.84 0.1 160 	N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U	0 0 6 0 0	5 0 5 0
Total Iron Total Lead Total Magnesium Total Manganese Total Manganese Total Potassium Total Potassium Total Potassium Total Sodium Total Sodium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFEA)	0.015 0.3 0.1 0.26 537 - (ng/L	0.015 0.84 0.1 160 	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A 4.41 U	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9	0 0 6 0 0	5 0 5 0
Total Iron Total Lead Total Magnesium Total Manganese Total Manganese Total Potassium Total Sodium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS)	0.015 0.3 0.1 0.26 537 - (ng/L	0.015 0.84 0.1 160)	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A 4.41 U 4.41 U	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J	0 0 0 0	5 0 5 0
Total Iron Total Lead Total Magnesium Total Manganese Total Manganese Total Potassium Total Sodium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluoroputanoic acid (PFBA) Perfluorobutanesuffonic acid (PFBS) Perfluorobutanesuffonic acid (PFBS) Perfluorobutanesuffonic acid (PFBS)	0.015 0.3 0.1 0.26 537 - (ng/L 	0.015 0.84 0.1 160)	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7 89.8	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.81 J	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2	N/A N/A N/A N/A N/A N/A N/A N/A N/A 09.7 2.59 J 92.4	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A 4.41 U 4.41 U 4.41 U	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1	0 0 6 0 0	5 0 5 0
Total Iron Total Lead Total Magnesium Total Manganese Total Manganese Total Potassium Total Potassium Total Potassium Total Potassium Total Sodium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA)	0.015 0.3 0.1 0.26 537 - (ng/L	0.015 0.84 0.1 160)	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.81 J 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A 146 3.40 J 210 422	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1	0 0 6 0 0	 0 5 0
Total Iron Total Lead Total Magnesium Total Magnesium Total Manganese Total Nickel Total Potassium Total Sodium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexpanoic Acid (PFHyA) Perfluorohexpanoic acid (PFHyA) Perfluorohexpanoic acid (PFHyA)	0.015 0.3 0.1 0.26 537 - (ng/L	0.015 0.84 0.1 160)	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.81 J 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412 58.9	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28	0 0 0 0 0 0 0	 0 5 0 5
Total Iron Total Lead Total Magnesium Total Magnesium Total Manganese Total Nickel Total Potassium Total Sodium Total Sodium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorocotanesulfonic acid (PFHxS) IH, 1H, 2H, 2H-Perfluorocotanesulfonic Acid (6:2FTS)	0.015 0.3 0.3 0.1 0.26 537 - (ng/L	0.015 0.84 0.1 160)	N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.81 J 4.40 U 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 4.52 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U	0 6 0 0	 0 5 0 5 5
Total Iron Total Lead Total Magnesium Total Magnesium Total Magnese Total Mickel Total Potassium Total Potassium Total Potassium Total Potassium Total Sodium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobenanoix Acid (PFBA) Perfluorohexanoix Acid (PFHAA) Perfluorohexanesulfonic acid (PFHXS) H1, H1, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluoroctanoic acid (PFOA)	0.015 0.3 0.1 0.26 537 - (ng/L 70	0.015 0.84 0.1 160 18 ² 12 ²	N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U 86.2	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.81 J 4.40 U 4.40 U 8.99	0.001 U 2.6 J+ 0.001 U 3.6 3.6 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U 425	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412 58.9 4.52 U 812	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4	0 0 6 0 0	 0 5 0 5
Total Iron Total Lead Total Magnesium Total Magnesium Total Manganese Total Mickel Total Potassium Total Potassium Total Potassium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBA) Perfluorobutanesuffonic acid (PFBS) Perfluorobutanesuffonic acid (PFBS) Perfluorobexanoix Acid (PFHAA) Perfluorohexanoic Acid (PFHAA) Perfluorohexanoic acid (PFHAA) Perfluorohexanoic acid (PFHAS) HI, 1H, 2H, 2H-Perfluoroctanesuffonic Acid (6:2FTS) Perfluorobetanoic acid (PFOA) Perfluorobetanesuffonic Acid (PFHPS)	0.015 0.3 0.3 0.1 0.26 537 - (ng/L	0.015 0.84 0.1 160 18 ² 12 ²	N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U 86.2 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 7.49	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.81 J 4.40 U 4.40 U 4.9 U 4.9 U	0.001 U 2.6 J+ 0.001 U 3.6 3.6 1.5 0.026 11 150 0.005 U 43.8 226 J 24.7 214 98.5 4.71 U 425 5.75	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 105 204 412 58.9 4.52 U 812	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4 4.37 U	0 0 6 0 0	 0 0 5 0 0 5 9 9
Total Iron Total Lead Total Magnesium Total Magnesium Total Manganese Total Nickel Total Potassium Total Sodium Total Sodium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorocatoric acid (PFHxS) IH, 1H, 2H, 2H-Perfluorocatoric acid (PFOA) Perfluorohexanoix Acid (PFNA)	0.015 0.3 0.1 0.26 537 - (ng/L		N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.009 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 76	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 0.005 U 28 0.005 U 3.21 J 3.26 J 3.81 J 4.40 U 4.40 U 4.40 U 4.40 U 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U 425 5.75 32.9	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412 58.9 4.52 U 812 10.5 109	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4 4.37 U 1.83 J	0 0	 0 5 0 5 0 5 5
Total Iron Total Lead Total Magnesium Total Manganesium Total Manganese Total Mickel Total Potassium Total Potassium Total Potassium Total Potassium Total Potassium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobenanoix Acid (PFHAA) Perfluorohexanesulfonic acid (PFHAS) H1, H1, ZH, ZH-Perfluoroctanesulfonic Acid (6:2FTS) Perfluorohexanesulfonic Acid (PFHAS) Perfluoroctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorononanoic acid (PFNA) Perfluorononanoic acid (PFNA) Perfluoroctanesulfonamide (PFOSA)			N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U 86.2 4.45 U 4.59	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 76 16	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.21 J 4.40 U 4.40 U 4.40 U 8.99 4.40 U 4.40 U 8.19	0.001 U 2.6 J+ 0.001 U 3.6 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U 425 5.75 32.9 18.6	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412 58.9 4.52 U 812 10.5 109	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4 4.37 U 1.83 J 7.97	0 0	0 0 5 0 0
Total Iron Total Lead Total Magnesium Total Manganese Total Manganese Total Mortal Manganese Total Potassium Total Potassium Total Potassium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanesic Acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobetanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanesulfonic acid (PFHxB) Perfluorohexanesulfonic acid (PFHxB) Perfluoroctaneix acid (PFOA) Perfluoronoctanoix acid (PFNA) Perfluorononanoic acid (PFNA) Perfluoronoctanesulfonic Acid (PFNA) Perfluorocotanesulfonic Acid (PFNA) Perfluorocotanesulfonic Acid (PFNA) Perfluorocotanesulfonic Acid (PFNA) Perfluorocotanesulfonic (PFOSA) Perfluorocotanesulfonic (PFOSA)	0.015 0.3 0.1 0.26 537 - (ng/L		N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.005 U 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U 4.45 U 4.45 U 4.45 U 16.7	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 76 16 108	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.81 J 4.40 U 4.40 U 4.9 U 4.0 U	0.001 U 2.6 J+ 0.001 U 3.6 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 17.3 214 98.5 4.71 U 425 5.75 32.9 18.6 223 J	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412 58.9 4.52 U 812 10.5 109 15	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 1.83 J 7.97 6.98	0 0	 0 5 0 5 0 5 5
Total Iron Total Lead Total Magnesium Total Magnesium Total Manganese Total Manganese Total Nickel Total Potassium Total Sodium Total Sodium Total Vanadium			N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.005 U 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 16 108 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.26 J 4.40 U 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 173 214 98.5 4.71 U 425 5.75 32.9 18.6 223 J 4.71 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 204 412 58.9 4.52 U 812 10.5 109 15 395 5.77	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 6.4.4 4.37 U 1.83 J 7.97 6.98 4.37 U	0	
Total Iron Total Lead Total Magnesium Total Magnesium Total Manganese Total Nickel Total Potassium Total Potassium Total Potassium Total Potassium Total Vanadium Total Vanadium Total Vanadium Total Potassium Total Potassium Total Potassium Total Potassium Total Vanadium Perfluorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBA) Perfluorobutanoic acid (PFBA) Perfluorobutanoic Acid (PFBS) Perfluorobutanoic Acid (PFHAS) Perfluorobexanoix Acid (PFHAS) Perfluorobexanosulfonic acid (PFHAS) Perfluorobexanosulfonic Acid (PFHAS) Perfluoroctanoic acid (PFOA) Perfluoroctanoic acid (PFNA) Perfluoroctanosulfonic Acid (PFNA) Perfluoroctanosulfonic PFOS) Perfluoroctanosulfonic (PFOS) Perfluoroctanosulfonic (PFOS) Perfluoroctanosulfonic (PFOS) Perfluoroctanosulfonic (PFOA) IH, 1H, 2H, 2H-Perfluorodecanosulfonic Acid (8:2FTS)	0.015 0.3 0.1 0.26 537 - (ng/L	0.015 0.84 0.1 160 18 ² 11 ² 15 ²	N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U 4.59 16.7 4.45 U 4.45 U 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 76 16 108	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 4.40 U 4.40 U 8.99 4.40 U 8.19 2.26 J 4.40 U 8.19	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 5.75 32.9 18.6 223 J 4.71 U 4.71 U 4.71 U	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412 58.9 4.52 U 812 10.5 109 15 395 15395	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4 4.37 U 1.83 J 7.97 6.98 4.37 U 4.37 U 4.37 U	0 0 6 0 0	
Total Iron Total Lead Total Magnesium Total Magnesium Total Magnese Total Mischel Total Potassium Total Potassium Total Potassium Total Potassium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFBS) Perfluorobexanesulfonic acid (PFHyA) Perfluorohexanesulfonic acid (PFHyA) Perfluoroctanoic acid (PFHyA) Perfluoroctanic acid (PFOA) Perfluoroctanic acid (PFNA) Perfluoroctanic acid (PFNA) Perfluoroctanic acid (PFNA) Perfluoroctanic acid (PFNA) Perfluoroctanesulfonic Acid (PFNA) Perfluoroctanesulfonic Acid (PFNA) Perfluoroctanesulfonic Acid (PFNA) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOS) Perfluorodecanoic Acid (PFDA) HI, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS) V-Methyl Perfluoroccanesulfonic Acid (MeFOSAA)		0.015 0.84 0.1 160 18 ² 15 ² 15 ²	N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.005 U 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 76 108 4.56 U 4.56 U 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.26 J 3.81 J 4.40 U 4.40 U 4.4	0.001 U 2.6 J+ 0.001 U 3.6 3.6 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U 425 5.75 32.9 18.6 223 J 4.71 U 4.71 U 4.71 U	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412 58.9 4.52 U 812 10.5 109 15 395 5.77 4.52 U 4.52 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 6.4.4 4.37 U 1.83 T 7.97 6.98 4.37 U 4.37 U 4.37 U 4.37 U	0 6 0 0 0 0 0	
Total Iron Total Lead Total Magnesium Total Magnesium Total Manganese Total Manganese Total Potassium Total Potassium Total Potassium Total Potassium Total Vanadium Total		0.015 0.84 0.1 160 18 ² 11 ² 15 ²	N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U 4.59 16.7 4.45 U 4.45 U 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 91.9 4.56 U 577 7.49 76 16 108 4.56 U 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 4.40 U 4.40 U 8.99 4.40 U 8.19 2.26 J 4.40 U 8.19	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 5.75 32.9 18.6 223 J 4.71 U 4.71 U	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412 58.9 4.52 U 812 10.5 109 15 395	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4 4.37 U 1.83 J 7.97 6.98 4.37 U 4.37 U 4.37 U	0 0 6 0 8 8 5	
Total Iron Total Lead Total Manganesium Total Manganesium Total Manganese Total Misckel Total Potassium Total Sodium Total Sodium Total Sodium Total Sodium Total Vanadium Perriuorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBS) Perfluorobexanoix Acid (PFHAA) Perfluorohexanoix Acid (PFHAA) Perfluorohexanoix Acid (PFHAA) Perfluorohexanoix Acid (PFHAS) Perfluorohexanoix Acid (PFHAS) Perfluoronoctanoic Acid (PFHAS) Perfluoroctanoic Acid (PFHAS) Perfluoroctanoic Acid (PFNA) Perfluoroctanoic Acid (PFNA) Perfluoroctanoic Acid (PFNA) Perfluoroctanoic Acid (PFNA) Perfluoroctanosid Tonic (PFOS) Perfluoroctanesulfonic PFOS) Perfluoroctanesulfonic (PFOA) IH, IH, 2H, 2H-Perfluorodecanoic Acid (MeFOSAA) N-Methyl Perfluoroctanesulfonamidoacetic Acid (MeFOSAA) Perfluoroundecanoic Acid (PFUNA) Perfluoroundecanoic Acid (PFUNA)			N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.005 U 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 10 10 4.56 U 4.56 U 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.21 J 4.40 U 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 173 214 98.5 4.71 U 425 5.75 32.9 18.6 223 J 4.71 U 4.71 U 4.71 U 4.71 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 204 412 58.9 4.52 U 812 10.5 109 15 395 5.77 4.52 U 4.52 U 4.52 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 1.83 J 7.97 6.98 4.37 U 4.37 U 4.37 U 4.37 U 4.37 U 4.37 U	0	
Total Iron Total Lead Total Magnesium Total Magnesium Total Manganese Total Mischel Total Potassium Total Sodium Total Sodium Total Vanadium Per- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFBS) Perfluorobexanoix Acid (PFHAA) Perfluorohexanosulfonic acid (PFHAS) Perfluorohexanosulfonic acid (PFHAS) Perfluorohexanosulfonic acid (PFHAS) Perfluoroctanoic acid (PFOA) Perfluoroctanoic acid (PFOA) Perfluoroctanoic acid (PFOA) Perfluoroctanoic acid (PFOA) Perfluoroctanoic acid (PFOS) Perfluoroctanoic Acid (PFOS) Perfluoroctanosulfonic Acid (PFOS) Perfluoroctanosulfonic Mischelloric Acid (8:2FTS) N-Methyl Perfluoroctanosulfonamidoacetic Acid (MeFOSAA) Perfluoroctanosulfonamidoacetic Acid (MeFOSAA) Perfluoroctanosulfonamidoacetic (EtFOSAA) Perfluorocdecanosulfonamidoacetic (EtFOSAA) Perfluorodecanoic Acid (PFUAS)			N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 4.56 U 4.56 U 4.56 U 4.56 U 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 4.40 U 4.40 U 4.40 U 8.19 2.26 J 4.40 U 4.40	0.001 U 2.6 J+ 0.001 U 3.6 3.6 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412 58.9 4.52 U 812 10.5 109 4.52 U 4.52 U 4.52 U 4.52 U 4.52 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 28 11 4.37 U 64.4 4.37 U 1.83 J 7.97 6.98 4.37 U	0	
Total Iron Total Lead Total Magnesium Total Magnesium Total Manganese Total Nickel Total Potassium Total Potassium Total Sodium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobetanoic Acid (PFHxA) Perfluorobetanoic Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluoronepatanoic acid (PFHxA) Perfluoronepatanoic acid (PFOA) Perfluorocotanesulfonic Acid (PFDA) Perfluorocotanesulfonic Acid (PFNA) Perfluorocotanesulfonic Acid (PFNA) Perfluorocotanesulfonic (PFOS) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA)			N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 91 91 95 406 60.9 4.56 U 577 7.49 16 108 4.56 U 4.56 U 4.56 U 4.56 U 4.56 U 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.21 J 3.21 J 4.40 U 4.40 U 8.99 4.40 U 8.19 2.26 J 4.40 U 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U 425 5.75 18.6 223 J 4.71 U	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412 52 204 412 10.5 9.3 4.52 U 4.52 U 4.52 U 4.52 U 4.52 U 4.52 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 26. J 18.1 28 11.4.37 U 64.4 4.37 U	0 0 0 0 0 0 1	0 0 5 0 0 5 5 5
Total Iron Total Lead Total Manganesium Total Manganesium Total Manganese Total Misckel Total Manganese Total Nickel Total Sodium Total			N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.005 U 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 16 10 10 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.26 J 3.81 J 4.40 U 4.40 U 4.4	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 173 214 98.5 4.71 U 425 5.75 32.9 18.6 223 J 4.71 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.006 U 9.3 65 0.005 U 49.5 105 204 412 58.9 4.52 U 812 10.9 15 395 5.77 4.52 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.008 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 1.83 J 7.97 6.98 4.37 U	0	
Total Iron Total Lead Total Magnesium Total Magnesium Total Magnese Total Mischel Total Potassium Total Sodium Total Sodium Total Sodium Total Vanadium Perriuorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFHA) Perfluorobetanoic Acid (PFHA) Perfluorobetanoic Acid (PFHA) Perfluorobetanoic Acid (PFHAS) Perfluorobetanoic Acid (PFHAS) Perfluorobetanoic Acid (PFHAS) Perfluoroctanoic Acid (PFHAS) Perfluoroctanoic Acid (PFDA) Perfluoroctanoic Acid (PFDA) Perfluoroctanosulfonic (PFOS) Perfluorodecanoic Acid (PFDA)		0.015 0.84 0.1 160 18 ² 11 ² 15 ²	N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.005 U 34 1 0.005 U 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 16 108 4.56 U 4.56 U 4.56 U 4.56 U 4.56 U 22.8 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.21 J 3.21 J 4.40 U 4.40 U 8.99 4.40 U 8.19 2.26 J 4.40 U 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 224 J 173 214 98.5 4.71 U 425 5.75 4.71 U 4.71 U 4.71 U 4.71 U 4.71 U 22.4 UJ	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 204 412 58.9 4.52 U 812 10.5 5.77 4.52 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4 4.37 U	0 6 0 0 0	
Total Iron Total Lead Total Magnesium Total Magnesium Total Manganese Total Mickel Total Potassium Total Potassium Total Potassium Total Potassium Total Potassium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobetanoix Acid (PFHyA) Perfluorobetanoix Acid (PFHyA) Perfluorohexanesulfonic acid (PFHyA) Perfluoroctanoic acid (PFDA) Perfluoroctanoic acid (PFDA) Perfluoroctanoic acid (PFDA) Perfluoroctanoix Acid (PFDA) Perfluoroctanoix Acid (PFDS) Perfluoroctanesulfonic Acid (PFDS) Perfluoroctanesulfonic PFOS) Perfluorodecanoix Acid (PFDA) Perfluorodecanoix Acid (PFUA) Perfluorodecanoix Acid (PFUA) Perfluorodecanoix Acid (PFDS) Perfluorodecanoix Acid (PFDS) Perfluorodecanoix Acid (PFDA) Perfluorodecanoix Acid (PFDA) Perfluorodecanoix Acid (PFDA) Perfluorotetradecanoix Acid (PFTDA)			N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.005 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 76 16 108 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 4.40 U 4.40 U 8.19 2.26 J 4.40 U 4.40	0.001 U 2.6 J+ 0.001 U 3.6 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U 425 5.75 32.9 18.6 223 J 4.71 U	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412 58.9 11.5 10.5 10.5 10.5 10.5 10.5 10.5 10.5	N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4 4.37 U 1.83 J 7.97 6.98 4.37 U	0	
Total Iron Total Lead Total Magnesium Total Magnesium Total Manganese Total Nickel Total Potassium Total Sodium Total Sodium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorocatoric acid (PFHxS) IH, 1H, 2H, 2H-Perfluorocatoric acid (PFOA) Perfluorohexanoix Acid (PFNA)			N/A	N/A	0.001 U 17 J+ 0.001 U 17 J+ 0.001 U 34 1 1 0.005 U 23 120 0.005 U 28.4 37.9 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 185 406 60.9 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.26 J 3.26 J 3.26 J 3.27 J 4.40 U 4.40 U 4.4	0.001 U 2.6 J+ 0.001 U 3.6 1.5 0.026 11 150 0.005 U 43.8 226 J 173 214 98.5 4.71 U 425 5.75 32.9 18.6 223 J 4.71 U	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.006 U 16 0.9.3 65 0.005 U 49.5 10.5 10.5 10.5 58.9 4.52 U 812 10.5 10.9 15 395 5.77 4.52 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.008 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4 4.37 U 1.83 J 7.97 6.98 4.37 U	0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Total Iron Total Lead Total Magnesium Total Manganese Total Manganese Total Mickel Total Person Marcia Marc			N/A	N/A	0.001 U 17 J+ 0.001 U 17 J+ 0.001 U 34 1 0.005 U 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.21 J 3.21 J 3.21 J 4.40 U 4.40 U 8.99 4.40 U 8.19 2.26 J 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U 4.71 U 4.71 U 4.71 U 4.71 U 4.71 U 22.4 UJ 4.71 U 22.4 UJ	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 204 412 58.9 4.52 U 812 10.5 5.77 4.52 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 6.44 4.37 U	0 6 0 0 0	
Total Iron Total Lead Total Magnesium Total Magnesium Total Manganese Total Mickel Total Potassium Total Potassium Total Potassium Total Potassium Total Potassium Total Potassium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFBS) Perfluorobexanesulfonic acid (PFHyA) Perfluorohexanesulfonic acid (PFHyA) Perfluoroctanoic acid (PFHyA) Perfluoroctanoic acid (PFNA) Perfluoroctanoic acid (PFNA) Perfluoroctanoic acid (PFNA) Perfluoroctanoic acid (PFNA) Perfluoroctanesulfonic Acid (PFNA) Perfluoroctanesulfonic Acid (PFNA) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic Acid (PFDA) Perfluoroctanesulfonic Acid (PFDA) Perfluoroctanesulfonic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFUA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorotetradecanoic Acid (PFDA) Perfluorotetradecanoic Acid (PFTDA)		0.015 0.84 0.1 160 18 ² 11 ² 15 ²	N/A	N/A	0.001 U 17 J+ 0.001 U 17 J+ 0.001 U 34 1 0.0095 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 91.9 185 406 60.9 4.56 U 577 7.49 76 16 108 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 4.40 U 4.40 U 8.19 2.26 J 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U 425 5.75 32.9 18.6 223 J 4.71 U	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 204 412 58.9 15 395 15 395 15 395 4.52 U	N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4 4.37 U	0	
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Total Iron Total Lead Total Magnesium Total Magnesium Total Magnesium Total Magnese Total Nickel Total Potassium Total Potassium Total Potassium Total Potassium Total Potassium Total Potassium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFBS) Perfluorobexanesulfonic acid (PFHAS) H1, H1, H2, H2-Perfluorocotanesulfonic Acid (6:2FTS) Perfluorobexanesulfonic Acid (PFHAS) H1, H1, H2, H2-Perfluorocotanesulfonic Acid (6:2FTS) Perfluoroctanoic acid (PFNA) Perfluorocatanesulfonic Acid (PFNA) Perfluorocatanesulfonic (PFOS) Perfluorocatanesulfonic (PFOS) Perfluorocatanesulfonic (PFOS) Perfluorocatanesulfonic (PFOS) Perfluorocatanesulfonic (PFOS) Perfluorocatanesulfonic Acid (PFDA) H1, H1, H2, H2-Perfluorocatanesulfonic Acid (8:2FTS) N-Methyl Perfluorocatanesulfonamidoacetic Acid (MeFOSAA) Perfluorocatanesulfonic Acid (PFDA) Perfluorodecanic Acid (PFDA) Perfluorodecanic Acid (PFDA) Perfluorocatanesulfonic Acid (PFDS) Perfluorotateradecanic Acid (PFDA) Perfluorotateradecanic Acid (PFTDA)			N/A	N/A	0.001 U 17 J+ 0.001 U 17 J+ 0.001 U 34 1 1 0.005 U 23 120 0.005 U 28.4 37.9 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 4.56 U 4.56 U 4.56 U 4.56 U 22.8 U 4.56 U 22.8 U 4.56 U 22.8 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.26 J 3.81 J 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U 425 5,75 32.9 18.6 223 J 4.71 U 4.71 U 4.71 U 4.71 U 4.71 U 4.71 U 22.4 UJ 4.71 U 22.4 UJ 4.71 U 22.4 UJ 4.71 U 22.5 U 23.5 U	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.006 U 49.3 65 0.005 U 49.5 105 58.9 4.52 U 812 10.5 109 15 395 5.77 4.52 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.008 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4 4.37 U 1.83 J 7.97 6.98 4.37 U	0	
Total Iron Total Lead Total Magnesium Total Magnesium Total Magnese Total Mickel Total Potassium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFBS) Perfluorobetanoic Acid (PFHA) Perfluorobetanoic acid (PFHA) Perfluorohexanesulfonic acid (PFHAS) HI, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorobetanoic acid (PFDA) Perfluorooctanoic acid (PFNA) Perfluorooctanoic Acid (PFDA) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic Acid (PFDA) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA) N-Ethyl Perfluorooctanesulfonic Acid (PFDA) Perfluorooctanesulfonic Acid (PFDA) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFDA) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFTDA) Perfluorooctanesulfonamide (EtFOSA) Perfluorooctanesulfonamide (EtFOSA) Perfluorooctanesulfonamide Ethanol (MeFOSE) N-Ethyl Perfluorooctanesulfonamido Ethanol (MeFOSE) N-Ethyl Perfluorooctanesulfonamido Ethanol (EtFOSE) Combination of PFOA and PFOS FIELD PARAMETERS			N/A	N/A	0.001 U 17 J+ 0.001 U 17 J+ 0.001 U 34 1 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 76 16 108 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 9.95 105 812 10.5 10.5 10.5 10.5 10.5 10.5 10.5 10.5	N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 4.37 U 4.37 U 4.37 U 4.37 U 21.8 U 4.37 U 21.8 U 4.37 U 21.8 U	0	
Total Iron Total Lead Total Manganesium Total Manganesium Total Manganese Total Nickel Total Potal Sodium Total Sodium Total Sodium Total Sodium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBS) Perfluorobutanoic Acid (PFBS) Perfluorobexanoix Acid (PFHAA) Perfluorobexanoix Acid (PFHAA) Perfluorohexanoix Acid (PFHAA) Perfluorohexanoix Acid (PFHAS) IH, 1H, 2H, 2H-Perfluorocatanesulfonic Acid (6:2FTS) Perfluorocanoic acid (PFOA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanesulfonia Mericanoic Acid (8:2FTS) Perfluorocanesulfonic (PFOS) Perfluorocanesulfonamide (PFOSA) Perfluorocanesulfonamide (PFOSA) Perfluorocanoic Acid (PFDA) IH, 1H, 2H, 2H-Perfluorocanesulfonamidoacetic Acid (MeFOSA) Perfluorodecanoic Acid (PFDA) Perfluorocanesulfonic Acid (PFTDA) Perfluorocanesulfonic			N/A	N/A	0.001 U 17 J+ 0.001 U 17 J+ 0.001 U 34 1 0.005 U 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 4.56 U 4.56 U 4.56 U 4.56 U 22.8 U 4.56 U 22.8 U 4.56 U 22.8 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.81 J 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U 425 5,75 32.9 18.6 223 J 4.71 U 4.71 U 4.71 U 4.71 U 4.71 U 4.71 U 22.4 UJ 4.71 U 22.4 UJ 4.71 U 22.4 UJ 4.71 U 22.4 UJ 4.71 U 22.5 U 23.5 U	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 204 412 58.9 4.52 U 812 15 395 5.77 4.52 U 4.52 U 4.52 U 4.52 U 4.52 U 22.6 U 4.52 U 22.6 U 22.6 U 22.6 U	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 1.83 J 7.97 6.98 4.37 U	0 0	
Total Iron Total Lead Total Manganesium Total Manganesium Total Manganese Total Nickel Total Manganese Total Nickel Total Polassium Total Sodium Total Sodium Total Vanadium Perr. & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBA) Perfluorobexanoix Acid (PFHAA) Perfluorobexanoix Acid (PFHAA) Perfluorobexanoix Acid (PFHAA) Perfluorobexanoix Acid (PFHAS) Perfluorobexanoix Acid (PFHAS) Perfluorobexanoix Acid (PFHAS) Perfluorobetanesulfonic Acid (PFHAS) Perfluorocanoic acid (PFOA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFNA) Perfluorocanoic Acid (PFNA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFIDA) Perfluorocanoic Acid (PF			N/A	N/A	0.001 U 17 J+ 0.001 U 34 1 0.005 U 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U 22.2 U 4.45 U 22.2 U 4.45 U 22.2 U 102.9	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 22.8 U 4.56 U 22.8 U 4.56 U 22.8 U 22.8 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.26 J 3.81 J 4.40 U	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 173 214 98.5 4.71 U 425 5.75 32.9 18.6 223 J 4.71 U 4.71 U 4.71 U 4.71 U 4.71 U 4.71 U 22.4 UJ 4.71 U 22.4 UJ 4.71 U 22.4 UJ 4.71 U 22.4 UJ 4.71 U 22.5 U 23.5 U 648 J	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 105 58.9 4.52 U 812 10.5 109 15 5.77 4.52 U 4.52 U 4.52 U 4.52 U 4.52 U 22.6 U 4.52 U 22.6 U 22.6 U 22.6 U 22.6 U	N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 4.37 U 4.37 U 4.37 U 4.37 U 21.8 U 4.37 U 21.8 U 4.37 U 21.8 U	0 0	
Total Iron Total Lead Total Manganesium Total Manganesium Total Manganese Total Nickel Total Potassium Total Potassium Total Potassium Total Potassium Total Potassium Total Potassium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanesulfonic acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobanoic Acid (PFHAA) Perfluorobexanesulfonic acid (PFHAS) H1, H1, 2H, 2H-Perfluoroctanesulfonic Acid (6:2FTS) Perfluorobexanesulfonic Acid (PFHAS) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic Acid (PFDA) H1, H1, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS) N-Methyl Perfluoroctanesulfonamidoacetic Acid (MeFOSAA) Perfluorodecanoic Acid (PFUNA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorodecanesulfonic Acid (PFDS) Perfluorotetradecanoic Acid (PFDA) Perfluorotetradecanoic Acid (PFTDA) Perfluoroctanesulfonamide (BeFOSA) Perfluorotetradecanoic Acid (PFTDA) Perfluoroctanesulfonamide (BeFOSA) Perfluoroctanesulfonamide (BeFOSE) Perfluoroctanesulfonamide Ethanol (MeFOSE) Perfluoroctanesulfonamide Ethanol (BeFOSE)			N/A	N/A	0.001 U 17 J+ 0.001 U 17 J+ 0.001 U 34 1 0.005 U 23 120 0.005 U 28.4 37.9 28.7 89.8 51.6 50.7 4.45 U	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 4.56 U	0.0011 15 J+ 0.001 U 13 4 0.0082 2.9 28 0.005 U 1.63 J 3.21 J 3.21 J 3.26 J 4.40 U 4.20 U 4.40 U 4.20 U 4.40 U 4.20 U 4.30 U 4.40 U 4.50 U 4.50 U 4.50 U 6.50 U 6.5	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U 425 5.75 32.9 18.6 223 J 4.71 U 22.4 UJ 4.71 U 22.4 UJ 4.71 U 23.5 U 23.5 U 23.5 U 648 J	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.0064 9.3 65 0.005 U 49.5 105 204 412 58.9 4.52 U 812 10.5 5.77 4.52 U	N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4 4.37 U 4.3	0 6 0	
Total Iron Total Lead Total Magnesium Total Magnesium Total Magneses Total Nickel Total Potassium Total Potassium Total Potassium Total Potassium Total Potassium Total Potassium Total Vanadium PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED Perfluorobutanoic Acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFHA) Perfluorobetanoic acid (PFHA) Perfluorohexanesulfonic acid (PFHAS) HI, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorobetanoic acid (PFDA) Perfluorobetanoic acid (PFDA) Perfluorooctanoic Acid (PFDA) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic Acid (PFDA) HI, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA) Perfluorooctanesulfonic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFTDA) Perfluorooctanesulfonic Acid (PFTDA) Perfluorooctanesulfonic Acid (PFTDA) Perfluorooctanesulfonic Acid (PFTDA) Perfluorooctanesulfonamide (EtFOSA) Perfluorooctanesulfonamide (EtFOSA) Perfluorooctanesulfonamide (EtFOSA) Perfluorooctanesulfonamide Ethanol (MeFOSE) N-Methyl Perfluorooctanesulfonamide Ethanol (MeFOSE) N-Methyl Perfluorooctanesulfonamide Ethanol (MeFOSE) N-Methyl Perfluorooctanesulfonamide Ethanol (MeFOSE) N-Methyl Perfluorooctanesulfonamide Ethanol (EtFOSE) Combination of PFOA and PFOS FIELD PARAMETERS Dissolved Oxygen (mg/l) Oxidation Reduction Potential (mV) pH (standard units)			N/A	N/A	0.001 U 17 J+ 0.001 U 17 J+ 0.001 U 34 1 0.005 U 28.4 37.9 28.7 89.8 51.6 51.6 51.6 4.45 U 4.	0.001 U 13 J+ 0.001 U 18 3.3 0.0076 18 70 0.005 U 43.1 91 9.09 185 406 60.9 4.56 U 577 7.49 76 16 108 4.56 U 6.57	0.0011 15 J+ 0.001 U 13 4 0.008 2.9 28 0.005 U 1.63 J 3.26 J 3.81 J 4.40 U 4.50 U 4.70 U 4.80	0.001 U 2.6 J+ 0.001 U 36 1.5 0.026 0.026 11 150 0.005 U 43.8 226 J 24.2 173 214 98.5 4.71 U 425 4.71 U 4.7	N/A	N/A	0.001 U 14 J+ 0.001 U 16 0.49 0.006 U 49.5 0.005 U 49.5 105 9.95 204 412 412 412 412 412 412 412 412 412 41	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A	0.001 U 16 J+ 0.001 U 21 1.6 0.0086 16 50 0.005 U 7.43 10.9 2.6 J 18.1 28 11 4.37 U 64.4 4.37 U 1.8 J 7.97 6.98 4.37 U	0 0	

2020 Semi-Annual Summary Report

Coakley Landfill Superfund Site - Greenland and North Hampton, New Hampshire

			_	ABLE (1				
Sampling Point ID	USEPA	NUIDEO	AE-1A Till	AE-1B SBR	AE-2A ¹	AE-2B ¹	AE-3A ¹	AE-3A-DUP ¹	AE-3B ¹	AE-4A	AE-4B SBR	# of Exc	
Monitored Unit Date of Sample Collection	CL	NHDES AGQS	5/15/20	5/15/20	Till 5/21/20	SBR 5/21/20	Till 5/20/20	Till 5/20/20	SBR 5/20/20	Outwash 5/12/20	5/12/20	USEPA	NHDES AGQS
VOLATILE ORGANIC COMPOUNDS BY 8260C - (ug/L)													
1,2,4-Trimethylbenzene		330	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U		0
1,2-Dichloropropane	5	5	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0	0
1,4-Dichlorobenzene		75	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U		0
2-Butanone(MEK)	200	4,000	N/A	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0	0
Acetone		6,000	N/A	N/A	10 U	10 U	13	10 U	10 U	10 U	10 U		
Benzene Carbon disulfide	5	5 70	N/A N/A	N/A N/A	1 U 2 U	1 U 2 U	1.3 2 U	1.3 2 U	1 U 2 U	1 U 2 U	1 U 2 U	0	0
Chlorobenzene	100	100	N/A	N/A	1.6	1 U	4.8	4.9	1 U	1 U	1 U	0	0
Chloroethane			N/A	N/A	2 U	2 U	4.5	4.5	2 U	2 U	2 U		
Chloroform	80		N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0	
Diethyl Ether		1,400	N/A	N/A	2.1	11	10	11	2 U	2 U	2 U		0
IsoPropylbenzene		800	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U		0
Methyl-t-butyl ether(MTBE)		13	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U		0
m&p-Xylene		10,000^	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U		0
o-Xylene		10,000^	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U		0
tert-Butyl Alcohol (TBA)		40	N/A	N/A	30 U	30 U	30 U	30 U	30 U	30 U	30 U		0
Tetrachloroethene	3.5	5	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0	0
Tetrahydrofuran(THF)	154	600	N/A	N/A	10 U	12	10 U	10 U	10 U	10 U	10 U	0	0
rans-1,2-Dichloroethene	100	100	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0	0
I,4-DIOXANE BY 8260B SIM - (ug/L)		0.00	0.07	4.0		- 40	_ ^ -	40	- 44		00		_
1,4-Dioxane	3	0.32	0.97	1.2	7	48	9.7	13	11	0.2 U	0.2 U	4	6
DISSOLVED METALS BY 200.8 - (mg/L)	0.000	0.000	0.004.11	NI/A	0.004 **	NI/A	0.004.11	0.00411	N//A	0.00411	NI/A		^
Dissolved Antimony	0.006	0.006	0.001 U	N/A	0.001 U	N/A	0.001 U	0.001 U	N/A	0.001 U	N/A	0	0
Dissolved Arsenic Dissolved Barium	0.01	0.01	0.018 0.019	N/A N/A	0.14 0.019	N/A N/A	0.1 0.059	0.11 0.058	N/A N/A	0.001 U 0.0038	N/A N/A	3	3 0
Dissolved Barium Dissolved Beryllium	0.004	0.004	0.019 0.001 U	N/A N/A	0.019 0.001 U	N/A N/A	0.059 0.001 U	0.058 0.001 U	N/A N/A	0.0038 0.001 U	N/A N/A	0	0
Dissolved Beryllium Dissolved Calcium	0.004	0.004	40 J+	N/A N/A	27 J+	N/A	44 J+	46 J+	N/A N/A	7.2 J+	N/A N/A		
Dissolved Calcium Dissolved Chromium	0.05	0.1	0.001 U	N/A	0.001 U	N/A	0.001 U	0.001 U	N/A	0.001 U	N/A	0	0
Dissolved Iron			0.42 J+	N/A	21 J+	N/A	30 J+	30 J+	N/A	0.001 U	N/A		
Dissolved Iron Dissolved Lead	0.015	0.015	0.001 U	N/A	0.001 U	N/A	0.001 U	0.001 U	N/A	0.001 U	N/A	0	0
Dissolved Magnesium			14	N/A	7.9	N/A	18	18	N/A	5.8	N/A		
Dissolved Manganese	0.3	0.84	0.6	N/A	1.1	N/A	1.9	2	N/A	0.012	N/A	3	2
Dissolved Nickel	0.1	0.1	0.001 U	N/A	0.0071	N/A	0.0073	0.0074	N/A	0.001U	N/A	0	0
Dissolved Potassium		160	4.1	N/A	13	N/A	16	17	N/A	2.4	N/A		
Dissolved Sodium			21	N/A	25	N/A	56	59	N/A	7.7	N/A		
Dissolved Vanadium	0.26		0.005 U	N/A	0.005 U	N/A	0.005 U	0.005 U	N/A	0.005 U	N/A	0	
FOTAL METALS BY 200.8 - (mg/L)													
Total Antimony	0.006	0.006	N/A	0.001 U	N/A	0.001 U	N/A	N/A	0.001 U	N/A	0.001 U	0	0
Total Arsenic	0.01	0.01	N/A	0.0082	N/A	0.0051	N/A	N/A	0.052	N/A	0.001 U	1	1
Total Barium		2	N/A	0.036	N/A	0.075	N/A	N/A	0.11	N/A	0.0077		0
Total Beryllium	0.004	0.004	N/A	0.001 U	N/A	0.001 U	N/A	N/A	0.001 U	N/A	0.001 U	0	0
Total Calcium	0.05	0.1	N/A	35 J+	N/A	39 J+	N/A	N/A	48 J+	N/A	7.9 J+		
Total Chromium	0.05	0.1	N/A	0.001 U 2.4 J+	N/A N/A	0.001 U 2.2 J+	N/A N/A	N/A N/A	0.001 U	N/A N/A	0.001 U	0	0
Total Iron Total Lead	0.015	0.015	N/A N/A	0.001 U	N/A	0.001 U	N/A	N/A	9.6 J+ 0.001 U	N/A	0.05 U 0.001 U	0	0
Total Magnesium	0.013	0.013	N/A	16	N/A	28	N/A	N/A	22	N/A	6.5		
Fotal Manganese	0.3	0.84	N/A	0.59	N/A	1.2	N/A	N/A	1.2	N/A	0.005 U	3	2
Total Nickel	0.1	0.1	N/A	0.001 U	N/A	0.0085	N/A	N/A	0.0082	N/A	0.000 U	0	0
Total Potassium		160	N/A	5.9	N/A	11	N/A	N/A	18	N/A	3.7		
Total Sodium			N/A	26	N/A	140	N/A	N/A	76	N/A	14		
Total Vanadium	0.26		N/A	0.005 U	N/A	0.005 U	N/A	N/A	0.005 U	N/A	0.005 U	^	
										IN/A		U	
PER- & PULY-FLUURINATED ALKYL SUBSTANCES BY	Y MODIFIE	D 537 - (n	g/L)						0.000 0	N/A	0.005 0	0	
	Y MODIFIE	D 537 - (ng	g/L) 1.5 J	2.01 J	24.8	47.1	20.2	20.2	19.6	4.42 U	4.14 U		
Perfluorobutanoic Acid (PFBA)	MODIFIE 	D 537 - (ng		2.01 J 4.54 U	24.8 50.2	47.1 106	20.2 43.1	20.2 40.5		•			
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS)			1.5 J 2.02 J 4.27 U	4.54 U 4.54 U	50.2 4.77			40.5 5.94	19.6	4.42 U 4.42 U 4.42 U	4.14 U 4.14 U 4.14 U		
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS)			1.5 J 2.02 J	4.54 U	50.2	106	43.1	40.5	19.6 37.4	4.42 U 4.42 U	4.14 U 4.14 U		
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHpA)	 	 	1.5 J 2.02 J 4.27 U 2.64 J 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U	50.2 4.77 109 244	106 14 206 383	43.1 6.55 68.5 103	40.5 5.94 64.1 105	19.6 37.4 4.09 J 67.1 96.8	4.42 U 4.42 U 4.42 U 4.42 U 4.42 U	4.14 U 4.14 U 4.14 U 4.14 U 4.14 U	 	
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoic acid (PFHpA) Perfluorohexanesulfonic acid (PFHxS)	 	 18 ²	1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J	50.2 4.77 109 244 22.8	106 14 206 383 89.4	43.1 6.55 68.5 103 20.1	40.5 5.94 64.1 105 19.4	19.6 37.4 4.09 J 67.1 96.8 13.4	4.42 U 4.42 U 4.42 U 4.42 U 4.42 U 4.42 U	4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U	 	 3
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHpA) Perfluorohexanoix Acid (PFHpA) Perfluorohexanoix Acid (PFHxS) H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS)	 	 18 ²	1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U	50.2 4.77 109 244 22.8 4.62 U	106 14 206 383 89.4 2.11 U	43.1 6.55 68.5 103 20.1 4.59 U	40.5 5.94 64.1 105 19.4 4.59 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U	4.42 U 4.42 U 4.42 U 4.42 U 4.42 U 4.42 U 4.42 U	4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U	 	 3
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorobexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanesulfonic acid (PFHyA) Perfluorohexanesulfonic acid (PFHxS) H, 1H, 2H, 2H-Perfluoroctanesulfonic Acid (6:2FTS)	 70	 18 ²	1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.47	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61	50.2 4.77 109 244 22.8 4.62 U 558	106 14 206 383 89.4 2.11 U 766	43.1 6.55 68.5 103 20.1 4.59 U 302	40.5 5.94 64.1 105 19.4 4.59 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U	4.42 U 4.42 U 4.42 U 4.42 U 4.42 U 4.42 U 4.42 U 4.42 U 4.42 U	4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U	 4	 3 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFpEA) Perfluorobexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanesulfonic acid (PFHxB) IH, 1H, 2H, 2H-Perfluorooctanosulfonic Acid (6:2FTS) Perfluoroctanoic acid (PFOA) Perfluorobexanesulfonic Acid (PFDA)	 70	 18 ² 12 ²	1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.47 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U	50.2 4.77 109 244 22.8 4.62 U 558 6.69	106 14 206 383 89.4 2.11 U 766 13.6	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J	4.42 U 4.42 U 4.42 U 4.42 U 4.42 U 4.42 U 4.42 U 4.42 U 4.42 U 4.42 U	4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U	 4	3 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesuffonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanosuffonic acid (PFHxS) IH, 1H, 2H, 2H-Perfluorocatanesuffonic Acid (6:2FTS) Perfluorocatanoic acid (PFOA) Perfluorohexanoix Acid (PFHpS) Perfluoronanoic acid (PFNA)	 70	 18 ² 12 ²	1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.47 4.27 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U 4.54 U	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142	106 14 206 383 89.4 2.11 U 766 13.6	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4	4.42 U 4.42 U	4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U 4.14 U	 4	3 4 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHyA) Perfluorohexanoix Acid (PFHyA) Perfluorohexanosulfonic acid (PFHxS) IH, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoronanoic acid (PFNA) Perfluorooctanesulfonic Acid (PFNA) Perfluorooctanesulfonic Acid (PFNA)	 70	 18 ² 12 ² 11 ²	1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.47 4.27 U 4.27 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U 4.54 U 4.54 U	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3	4.42 U 4.42 U	4.14 U 4.14 U	 4 	3 4 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHpA) Perfluorohexanesulfonic acid (PFHxS) H, 1H, 2H, 2H-Perfluorocatanesulfonic Acid (6:2FTS) Perfluoroctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorooctanesulfonic Acid (PFNA) Perfluorocatanesulfonic Acid (PFNA) Perfluorocatanesulfonic (PFOSA) Perfluoroctanesulfonic (PFOS)	 70 70		1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.47 4.27 U 4.27 U 4.27 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U 4.54 U 4.54 U 4.54 U	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7	4.42 U 4.42 U	4.14 U 4.14 U	 4 4	3 4 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanosulfonic acid (PFHxB) IH, 1H, 2H, 2H-Perfluorocctanesulfonic Acid (6:2FTS) Perfluoroctanoic acid (PFOA) Perfluoroctanoic acid (PFNA) Perfluorocctanesulfonic Acid (PFNA) Perfluorocctanesulfonic mide (PFOSA) Perfluorocctanesulfonic (PFOS) Perfluorocctanesulfonic (PFOS) Perfluorocctanesulfonic (PFOS)	 70	 18 ² 12 ² 11 ²	1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.47 4.27 U 4.27 U 4.27 U 4.27 U 4.27 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U 4.54 U 4.54 U 4.54 U 4.54 U	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68	4.42 U 4.42 U	4.14 U 4.14 U	 4 	3 4 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix acid (PFHA) Perfluoronexanesulfonic acid (PFHxS) Perfluoroctanoic acid (PFOA) Perfluorootanoic acid (PFOA) Perfluoronexanoic acid (PFNA) Perfluoronexanoic acid (PFNA) Perfluoroctanesulfonic Acid (PFNA) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOS) Perfluorootanesulfonic (PFOA) Perfluorodecanoic Acid (PFDA)	 70 70		1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.47 4.27 U 4.27 U 4.27 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U 4.54 U 4.54 U 4.54 U	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7	4.42 U 4.42 U	4.14 U 4.14 U	 4 4 	3 4 4 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHpA) Perfluorohexanoisulfonic acid (PFHxS) Perfluoroctanoic acid (PFDA) Perfluoroctanoic acid (PFOA) Perfluoroctanoic acid (PFNA) Perfluoroctanoic acid (PFNA) Perfluoroctanesulfonic Acid (PFDSA) Perfluoroctanesulfonic (PFOSA) Perfluorodecanoic Acid (PFDA)	 70 70		1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.47 4.27 U 4.27 U 4.27 U 4.27 U 4.27 U 4.27 U 4.27 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U 4.54 U 4.54 U 4.54 U 4.54 U 4.54 U 4.54 U	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 4.59 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68 4.55 U	4.42 U 4.42 U	4.14 U 4.14 U	 4 4	3 4 4 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorobexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix acid (PFHpA) Perfluorohexanosulfonic acid (PFHxS) IH, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluoroctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFPBS) Perfluorooctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOS) Perfluorooctanesulfonic (PFOS) IH, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS) I-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOS) N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorodecanoic Acid (PFUA)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.47 U 4.27 U 4.27 U 4.27 U 4.27 U 4.27 U 4.27 U 4.27 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U 4.54 U 4.54 U 4.54 U 4.54 U 4.54 U 4.54 U 4.54 U	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 2.11 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 4.59 U 4.59 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 41.3 92.7 7.68 4.55 U	4.42 U 4.42 U	4.14 U 4.14 U		3 4 4 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorobexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluoronexanesulfonic acid (PFHxS) IH, 1H, 2H, 2H-Perfluorocctanesulfonic Acid (6:2FTS) Perfluoroctanoic acid (PFOA) Perfluoronanoic acid (PFNA) Perfluoroctanesulfonic Acid (PFNA) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOS) Perfluorocctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOA) IH, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS) Perfluorocctanesulfonic Acid (PFOA) Perfluorocctanesulfonic Acid (PFOS) Perfluorocctanesulfonic Acid (PFOS) Perfluorocctanesulfonic Acid (PFOS) Perfluorocdecanoic Acid (PFUA)	 70 70 	18 ² 11 ² 15 ²	1.5 J 2.02 J 4.27 U 1.8 J 4.27 U 1.8 J 4.27 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 5.61 4.54 U 5.61 4.54 U 4.54 U	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U 4.62 U 4.62 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 2.11 U 2.11 U 2.11 U	43.1 6.55 68.5 10.3 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 4.59 U 4.59 U 4.59 U 4.59 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 2.81 J 4.59 U 2.81 J 4.59 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 11.3 92.7 7.55 U 4.55 U 4.55 U 4.55 U 4.55 U	4.42 U 4.42 U	4.14 U 4.14 U		3 4 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHpA) Perfluorohexanosulfonic acid (PFHxS) IH, 1H, 2H, 2H-Perfluorocctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoronanoic acid (PFOA) Perfluorooctanesulfonic Acid (PFPSA) Perfluorocctanesulfonic (PFOSA) Perfluorocctanesulfonic (PFOSA) Perfluorocctanesulfonic (PFDA) IH, 1H, 2H, 2H-Perfluorodecanoic Acid (MEFOSA) Perfluorooctanesulfonic Acid (PFUA) Perfluorooctanesulfonamidoacetic (EiFOSAA) Perfluorooctanesulfonamidoacetic (EiFOSAA) Perfluorodecanoic Acid (PFUA) Perfluorodecanoic Acid (PFDS) Perfluorodecanoic Acid (PFDS) Perfluorodecanoic Acid (PFDS)	 70 70 		1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.47 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U 4.54 U	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U 4.62 U 4.62 U 4.62 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 4.59 U 4.59 U 2.74 J 4.59 U 4.59 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 4.59 U 2.81 J 4.59 U 4.59 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68 4.55 U 3.12 J 4.55 U 3.12 J 4.55 U	4.42 U 4.42 U	4.14 U 4.14 U	4	3 4 4 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxB) Perfluorohexanoix acid (PFHxB) Perfluoronexanoic acid (PFHxB) Perfluorocanoic acid (PFOA) Perfluoroneptanoic acid (PFOA) Perfluorocanoic acid (PFNA) Perfluorocanoic acid (PFNA) Perfluorocanoic acid (PFNA) Perfluorocanoic Acid (PFDA)	70 70		1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.47 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 4.54 U 4.5	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U 4.62 U 4.62 U 4.62 U 2.3.1 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 7.86 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 2.81 J 4.59 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68 4.55 U 4.55 U 4.55 U 4.55 U 4.55 U	4.42 U 4.42 U	4.14 U 4.14 U	4	3
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFBS) Perfluorobexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHyA) Perfluorohexanoix Acid (PFHyA) Perfluoronexanesulfonic acid (PFHyA) Perfluorocanoic acid (PFOA) Perfluorocanoic acid (PFOA) Perfluorocanonic acid (PFOA) Perfluorocanonic acid (PFNA) Perfluorocanonic acid (PFNA) Perfluorocanonic acid (PFNA) Perfluorocanonic acid (PFNA) Perfluorocanosic Acid (PFNA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFUA) Perfluorodecanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.47 U 4.27	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 4.54 U 4.5	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 4.62 U 4.62 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 4.59 U 2.81 J 4.59 U 4.59 U 4.59 U 4.59 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68 4.55 U 4.55 U 4.55 U 4.55 U 4.55 U 4.55 U	4.42 U 4.42 U	4.14 U 4.14 U	4	
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfionic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHpA) Perfluorohexanoix Acid (PFHpA) Perfluorocanesulfonic acid (PFNS) IH, 1H, 2H, 2H-Perfluorocanesulfonic Acid (6:2FTS) Perfluorocanoic acid (PFOA) Perfluorocanesulfonamide (PFOSA) Perfluorocanesulfonic Acid (PFDA) IH, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS) Perfluorodecanoic Acid (PFDA) IH, 1H, 2H, 2H-Perfluorodecanoidacitic Acid (MeFOS) Perfluorondecanoic Acid (PFDA) Perfluoroundecanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFDS) Perfluorodecanoic Acid (PFDS) Perfluorodecanoic Acid (PFDS) Perfluorodecanoic Acid (PFDS) Perfluorotodecanoic Acid (PFDA) Perfluorotodecanoic Acid (PFDA) Perfluorotodecanoic Acid (PFDA) Perfluorotodecanoic Acid (PFTDA) Perfluorotodecanoic Acid (PFTDA)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 1.8 J 4.27 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 U 4.54 U 4.5	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U 4.62 U 4.62 U 4.62 U 4.62 U 4.62 U 4.62 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 4.59 U 2.81 J 4.59 U 4.59 U 2.81 J 4.59 U 4.59 U 4.50 U 4.5	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68 4.55 U 3.12 J 4.55 U 3.12 J 4.55 U 4.55 U 4.55 U	4.42 U 4.42 U	4.14 U 4.14 U		4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanesulfonic acid (PFHxS) IH, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluoroctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFPAS) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic Acid (MeFOS) Perfluorodecanoic Acid (PFINA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFOS) Perfluorotodecanoic Acid (PFOS) Perfluorotodecanoic Acid (PFOS) Perfluorotodecanoic Acid (PFOS) Perfluorotodecanoic Acid (PFIDA) Perfluorototecanesulfonic Acid (PFIDA) Perfluorototecanoic Acid (PFIDA) Perfluorototecanoic Acid (PFIDA)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 4.27 U 4.47 U 4.27 U 4.2	4.54 U 4.54 U 2.84 U 1.88 J 4.54 U 1.88 J 4.54 U 4.54 U 4.	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 18.5 4.62 U 4.62 U 4.62 U 4.62 U 23.1 U 4.62 U 23.1 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 7.86 4.59 U 2.74 J 4.59 U 4.59 U 4.59 U 2.74 J 4.59 U 2.9 U 2.9 U 2.9 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 2.81 J 4.59 U 4.59 U 2.81 J 4.59 U 4.59 U 4.50 U 4.5	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68 4.55 U 4.55 U 4.55 U 4.55 U 22.7 U 4.55 U 22.7 U	4.42 U 4.42 U 4.	4.14 U 4.14 U 4.	4	4
Perfluorobutanoic Acid (PFBA) Perfluorobutanoic Acid (PFBA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFHAA) Perfluorobexanoix Acid (PFHAA) Perfluorohexanoix Acid (PFHAA) Perfluorohexanoix acid (PFHAS) Perfluorocanoic acid (PFDA) Perfluorocanoic acid (PFOA) Perfluorocanoic acid (PFOA) Perfluorocanoic acid (PFNA) Perfluorocanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFDA) Perfluorotetradecanoic Acid (PFTDA) Perfluorotetradecanoic Acid (PFTDA) Perfluorotetradecanoic Acid (PFTDA) Perfluorotetradecanoic Acid (PFTDA) Perfluorocanoic Acid (PFTDA)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 4.27 U 4.47 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 4.54 U	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 U 4.59 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 4.59 U 2.81 J 4.59 U 4.59 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 1.91 J 7.68 4.55 U 4.55 U 4.5	4.42 U 4.42 U	4.14 U 4.14 U 4.		
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHpA) Perfluorocanesulfonic acid (PFHxS) IH, 1H, 2H, 2H-Perfluorocanesulfonic Acid (6:2FTS) Perfluorocanoic acid (PFOA) Perfluorocanesulfonic Acid (PFHpS) Perfluorocanesulfonic Acid (PFDA) Perfluorocanesulfonic (PFOSA) Perfluorocanesulfonic (PFOSA) Perfluorocanesulfonic (PFDA) IH, 1H, 2H, 2H-Perfluorocanesulfonic Acid (8:2FTS) N-Methyl Perfluorocanesulfonic Acid (PFDA) Perfluorocanesulfonic Acid (PFDA) Perfluorocanesulfonic Acid (PFDA) Perfluorocanesulfonic Acid (PFDS) Perfluorodecanoic Acid (PFDA) Perfluorocanesulfonic Acid (PFDA) Perfluorocancic Acid (PFDA) Perfluorocancic Acid (PFTDA) Perfluorotrodecanoic Acid (PFTDA) Perfluorotrodecanoic Acid (PFTDA) Perfluorotrodecanoic Acid (PFTDA) Perfluorocancic Acid (PFTDA)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 4.27 U 4.47 U 4.27 U 4.2	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U 4.54 U 4	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 3.15 U 3.16 U 3.17 U 3.18 U 3.19	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 4.59 U 4.59 U 4.50 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 2.81 J 4.59 U 4.59 U 4.50 U 4.5	19.6 37.4 4.09 J 67.1 96.7 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68 4.55 U 3.12 J 4.55 U 4.55 U 4.55 U 4.55 U 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U	4.42 U 4.42 U 4.	4.14 U 4.14 U 6.14 U 6.	4	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanoit acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanosulfonic acid (PFHxS) IH, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluoroctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoroctanesulfonic Acid (PFDA) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic (PFDA) IH, 1H, 2H, 2H-Perfluoroctanesulfonic Acid (8:2FTS) Perfluorodecanoic Acid (PFDA) Perfluorotodecanoic Acid (PFTDA) Perfluorotodecanoic Acid (PFFDA) Perfluorogexadecanoic Acid (PFFDA) Perfluorogexadecanoic Acid (PFTDA) Perfluoroctanesulfonamido (EFOSE) Perfluoroctanesulfonamido Ethanol (MeFOSE) Perfluoroctanesulfonamido Ethanol (MeFOSE)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 4.47 U 4.47 U 4.27 U 4.2	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U 4.54 U 22.2 UJ 4.54 U 22.7 U 22.7 U	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 18.5 4.62 U 4.62 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 10.5 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 4.59 U 2.74 J 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 22.9 U 22.9 U 22.9 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 2.81 J 4.59 U 2.81 J 4.59 U 2.9 U 4.59 U 2.9 U 4.59 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68 4.55 U 4.55 U 4.55 U 2.5 U 2.7 U 4.55 U 2.7 U 2.7 U 2.7 U 2.7 U 2.7 U 2.7 U 2.7 U 2.7 U	4.42 U 4.42 U 4.	4.14 U 4.14 U 4.		4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix acid (PFHxB) Perfluoronexanosulfonic acid (PFHxB) Perfluorocanoic acid (PFOA) Perfluoroneptanoic acid (PFOA) Perfluoroneptanosulfonic Acid (PFPBS) Perfluorocanoic acid (PFNA) Perfluorocanoic acid (PFNA) Perfluorocanoic Acid (PFDA) Perfluorocanoic Acid (PFIDA)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 4.27 U 4.47 U 4.27 U 4.2	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U 4.54 U 4	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 3.15 U 3.16 U 3.17 U 3.18 U 3.19	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 4.59 U 4.59 U 4.50 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 2.81 J 4.59 U 4.59 U 4.50 U 4.5	19.6 37.4 4.09 J 67.1 96.7 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68 4.55 U 3.12 J 4.55 U 4.55 U 4.55 U 4.55 U 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U	4.42 U 4.42 U 4.	4.14 U 4.14 U 6.14 U 6.	4	4 4 4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorobexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluoronexanesulfonic acid (PFHxS) Perfluoronexanesulfonic acid (PFHxS) Perfluoroctanesulfonic Acid (PFHxS) Perfluoroctanoic acid (PFOA) Perfluoronexanoic acid (PFNA) Perfluoroctanesulfonic Acid (PFHS) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOS) Perfluoroctanesulfonic (PFOS) Perfluorodecanoic Acid (PFDA) Perfluoroctanesulfonic Acid (PFDA) Perfluoroctanesulfonic Acid (PFDA) Perfluoroctanesulfonic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluorodecanoic Acid (PFDA) Perfluoroctanesulfonic Acid (PFDS) Perfluorotetradecanoic Acid (PFTDA) Perfluorotetradecanoic Acid (PFTDA) Perfluorotetradecanoic Acid (PFTDA) Perfluoroctanesulfonamide (MeFOSA) Perfluorotetradecanoic Acid (PFTDA) Perfluoroctanesulfonamide (EtFOSA) Perfluoroctanesulfonamide (EtFOSA) Perfluoroctanesulfonamide (EtFOSA) Perfluoroctanesulfonamide Ethanol (MeFOSE) Perfluoroctanesulfonamide Ethanol (MeFOSE) Perfluoroctanesulfonamide Ethanol (MeFOSE) Perfluoroctanesulfonamide Ethanol (MeFOSE) Perfluoroctanesulfonamide Openamical Ethanol (MeFOSE) Perfluorobetranesulfonamide Openamical Ethanol (MeFOSE) Perfluorobetranesulfonamide Openamical Ethanol (MeFOSE) Perfluorobetranesulfonamide Openamical Ethanol (MeFOSE) Perfluorobetranesulfonamide Openamical Ethanol (MeFOSE)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 4.27 U 4.47 U 4.27 U 4.2	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 4.54 U 5.6 Therefore the the the the the the the the the th	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 10.5 U 10.5 U 10.5 U 10.5 U 10.5 U 10.5 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 4.59 U 4.59 U 4.50 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 2.81 J 4.59 U 4.59 U 4.50 U 4.5	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 1.91 J 43.4 1.55 U 3.12 J 4.55 U 3.12 J 4.55 U 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U 22.7 U 22.7 U 22.7 U 22.7 U 23.7 U	4.42 U 4.42 U 4.	4.14 U 4.14 U 4.17 U 4.18 U 4.19 U 4.	4 4	4
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFHXA) Perfluoroheptanoic acid (PFHXA) Perfluoroheptanoic acid (PFHXA) Perfluoroheptanoic acid (PFHXS) IH, 1H, 2H, 2H-Perfluorocctanesulfonic Acid (6:2FTS) Perfluoronetanoic acid (PFOA) Perfluoronetanoic acid (PFOA) Perfluoronetanesulfonic Acid (PFDA) Perfluorocctanesulfonamide (PFOSA) Perfluorocctanesulfonic (PFOS) Perfluorocctanesulfonic (PFOS) Perfluorocctanesulfonic (PFOA) Perfluorocctanesulfonic (PFDA) Perfluorocctanesulfonic Acid (B:2FTS) Perfluorocctanesulfonamidoacetic Acid (MeFOSA) Perfluorocctanesulfonamidoacetic (EtFOSAA) Perfluorocctanesulfonamidoacetic (EtFOSAA) Perfluorodecanoic Acid (PFDA) Perfluorocctanesulfonic Acid (PFDS) Perfluorotrodecanoic Acid (PFDA) Perfluorotrodecanoic Acid (PFTDA) Perfluorotrodecanoic Acid (PFTDA) Perfluorotrodecanoic Acid (PFTDA) Perfluorocctanesulfonamide (EtFOSA) Perfluorocctanesulfonamide (EtFOSA) Perfluorocctanesulfonamide (EtFOSA) Perfluorocctanesulfonamide (EtFOSA) Perfluorocctanesulfonamide (EtFOSA) Perfluorocctanesulfonamide (EtFOSA) Perfluorocctanesulfonamide (EtFOSE)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 4.47 U 4.47 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 5.61 4.54 U 4.54 U 5.6 T U 5.6 T U 5.6 T U 5.6 T U	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U 4	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 10.5 U 2.11 U 10.5 U 2.11 U 10.5 U 10.5 U 1.11 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 4.59 U 4.59 U 4.50 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 2.81 J 4.59 U 2.9 U 4.59 U 2.9 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68 4.55 U 3.12 J 4.55 U 3.12 J 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U 22.7 U 22.7 U 22.7 U	4.42 U 4.42 U 4.	4.14 U 4.14 U 4.17 U 4.		3
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanesulfonic acid (PFHxS) IH, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorocanoic acid (PFOA) Perfluorooctanesulfonic Acid (PFPBS) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic Acid (REFOS) Perfluorooctanesulfonic Acid (PFOS) Perfluorooctanesulfonic Acid (PFOS) Perfluorooctanesulfonic Acid (PFOS) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFOS) Perfluorooctanesulfonic Acid (PFOS) Perfluorooctanesulfonic Acid (PFIDA) Perfluorooctanesulfonic Acid (PFIDA) Perfluorooctanesulfonic Acid (PFIDA) Perfluorooctanesulfonic Acid (PFIDA) Perfluorooctanesulfonamide (EtFOSA) Perfluorooctanesulfonamide (EtFOSA) Perfluorooctanesulfonamide Ethanol (MeFOSE) N-Ethyl Perfluorooctanesulfonamide Ethanol (MeFOSE)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 4.47 U 4.47 U 4.27 U 2.1.3 U 2.1.3 U A.47	4.54 U 4.54 U 2.8 J 4.54 U 5.61 4.54 U 4.54 U 5.61 8.54 U 8.55 U 8.5	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U 4	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.11 U 2.11 U 10.5 U 10.5 U 10.5 U 10.5 U 1.5 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 56.6 19.7 J 104 J 7.86 4.59 U 4.59 U 4.50 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 4.90 4.59 U 4.59 U 4.50 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68 4.55 U 4.55 U 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U 22.7 U	4.42 U 4.42 U 8.43 U 8.44 U 8.45 U 8.5 U	4.14 U 4.14 U 7.14 U 7.14 U 7.14 U 8.14 U 8.		4
Perfluoroctanesulfonic acid (PFHxS) IH, 1H, 2H, 2H-Perfluorocotanesulfonic Acid (6:2FTS) Perfluoroctanoic acid (PFOA) Perfluoroctanoic acid (PFNA) Perfluoronomanoic acid (PFNA) Perfluoroctanesulfonimide (PFOSA) Perfluoroctanesulfonimide (PFOSA) Perfluoroctanesulfonimide (PFOSA) Perfluoroctanesulfonimide (PFOSA) Perfluoroctanesulfonimide (PFOSA) Perfluoroctanesulfonimide (PFDA) N-Methyl Perfluoroctanesulfonimidoacetic Acid (MeFOSA) Perfluoroctanesulfonimidoacetic (EtFOSAA) Perfluoroctanesulfonimidoacetic (EtFOSAA) Perfluorodecanesulfonic Acid (PFDA) N-Methyl Perfluoroctanesulfonimide (MeFOSA) Perfluorotetradecanoic Acid (PFTDA) Perfluorotetradecanoic Acid (PFTPA) Perfluorotetradecanoic Acid (PFTPA) Perfluoroctanesulfonimide (EtFOSA) Perfluoroctanesulfonimide (EtFOSA) Perfluoroctanesulfonimide (EtFOSA) Perfluoroctanesulfonimide Ethanol (MeFOSE) N-Ethyl Perfluoroctanesulfonamide Ethanol (MeFOSE) N-Ethyl Perfluoroctanesulfonamide Ethanol (EtFOSE) Combination of PFOA and PFOS FIELD PARAMETERS Dissolved Oxygen (mg/l) Oxidation Reduction Potential (mV) pH (standard units)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 4.27 U 4.47 U 4.27 U	4.54 U 4.54 U 2.8 J 4.54 U 1.88 J 4.54 U 4.54 U 5.54 U 4.54 U 5.54 U 4.54 U 5.54 U 5.56 U 5.61 N/A N/A	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U 4.62 U 4.62 U 4.62 U 4.62 U 23.1 U 4.62 U 23.1 U 23.1 U 23.1 U 23.1 U 23.1 U	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.01 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 2.11 U 10.5 U 10.5 U 10.5 U 1.211 1.3 -113 7.3	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 55.6 19.7 J 104 J 7.86 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 4.59 U 22.9 U 4.59 U 22.9 U 4.59 U 22.9 U 4.59 U 22.9 U 4.59 U 4.59 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 49.3 31.4 J 100 7.57 4.59 U 2.81 J 4.59 U 4.59 U 4.50 U 4.5	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 1.91 J 43.5 4.55 U 3.12 J 4.55 U 4.55 U 4.55 U 4.55 U 4.55 U 22.7 U 4.55 U 22.7	4.42 U 4.42 U 6.42 U 6.62 U 6.	4.14 U 4.14 U 4.17 U 4.18 U 4.19 U 6.07 U 6.		3
Perfluorobutanoic Acid (PFBA) Perfluoropentanoic acid (PFpEA) Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanoix Acid (PFHxA) Perfluorohexanesulfonic acid (PFHxS) IH, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorocanoic acid (PFOA) Perfluorooctanesulfonic Acid (PFPBS) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic Acid (REFOS) Perfluorooctanesulfonic Acid (PFOS) Perfluorooctanesulfonic Acid (PFOS) Perfluorooctanesulfonic Acid (PFOS) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFOS) Perfluorooctanesulfonic Acid (PFOS) Perfluorooctanesulfonic Acid (PFIDA) Perfluorooctanesulfonic Acid (PFIDA) Perfluorooctanesulfonic Acid (PFIDA) Perfluorooctanesulfonic Acid (PFIDA) Perfluorooctanesulfonamide (EtFOSA) Perfluorooctanesulfonamide (EtFOSA) Perfluorooctanesulfonamide Ethanol (MeFOSE) N-Ethyl Perfluorooctanesulfonamide Ethanol (MeFOSE)			1.5 J 2.02 J 4.27 U 2.64 J 4.27 U 4.47 U 4.47 U 4.27 U 2.1.3 U 2.1.3 U A.47	4.54 U 4.54 U 2.8 J 4.54 U 5.61 4.54 U 4.54 U 5.61 8.54 U 8.55 U 8.5	50.2 4.77 109 244 22.8 4.62 U 558 6.69 142 13.1 413 18.5 4.62 U 4.62 U 4	106 14 206 383 89.4 2.11 U 766 13.6 120 7.83 445 9.11 U 2.11 U 10.5 U 10.5 U 10.5 U 10.5 U 1.5 U	43.1 6.55 68.5 103 20.1 4.59 U 302 1.23 J 56.6 19.7 J 104 J 7.86 4.59 U 4.59 U 4.50 U	40.5 5.94 64.1 105 19.4 4.59 U 288 4.59 U 4.90 4.59 U 4.59 U 4.50 U	19.6 37.4 4.09 J 67.1 96.8 13.4 4.55 U 261 1.91 J 43.4 11.3 92.7 7.68 4.55 U 4.55 U 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U 22.7 U 4.55 U 22.7 U	4.42 U 4.42 U 8.43 U 8.44 U 8.45 U 8.5 U	4.14 U 4.14 U 7.14 U 7.14 U 7.14 U 8.14 U 8.		4

2020 Semi-Annual Summary Report

Coakley Landfill Superfund Site - Greenland and North Hampton, New Hampshire

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0 11 0 14 10	_	_	EDO 041	rno oni	FPC-3A ¹	_	JNIT 2 (C		ED0 54	ED0 ED	EDO 04	EDO 00	EDO 741	rno rni	FPC-8A ¹	FPC-8B ¹	EDO 04		
Sampling Point ID Monitored Unit	USEPA	NHDES	Outwash	FPC-2B ¹ SBR	Till	FPC-3B ¹ SBR	Outwash	SBR	FPC-5A	FPC-5B SBR	FPC-6A	FPC-6B SBR	FPC-7A ¹	FPC-7B ¹ SBR	Till	SBR	FPC-9A	# OT EXC	ceedances NHDES
Date of Sample Collection	CL	AGQS	5/19/20	5/19/20	5/19/20	5/19/20	5/19/20	5/12/20	5/22/20	5/22/20	5/13/20	5/13/20	5/20/20	5/20/20	5/21/20	5/21/20	5/14/20	CL	AGQS
VOLATILE ORGANIC COMPOUNDS BY 8260C - (ug/L)																			
1,2,4-Trimethylbenzene		330	1 U	1 U	1 U	1 U	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	1 U	1 U	1 U		0
1,2-Dichloropropane	5	5	1 U	1 U	1 U	1 U	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	1 U	1 U	1 U	0	0
1,4-Dichlorobenzene		75	1 U	1 U	1 U	1 U	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	1 U	1 U	1 U		0
2-Butanone(MEK)	200	4,000	10 U	10 U	N/A	N/A	10 U	10 U	N/A	N/A	10 U	10 U	10 U	0	0				
Acetone	5	6,000 5	10 U 1 U	10 U 1 U	10 U 1 U	10 U 1 U	10 U	10 U	N/A N/A	N/A N/A	10 U 1 U	10 U 1 U	N/A N/A	N/A N/A	10 U	10 U 1 U	10 U	0	0
Benzene Carbon disulfide		70	2 U	2 U	2 U	2 U	2 U	2 U	N/A N/A	N/A	2 U	2 U	N/A	N/A	2 U	2 U	2 U		0
Chlorobenzene	100	100	1 U	1 U	1 U	1 U	1 U	1 U	N/A	N/A	1	1 U	N/A	N/A	1 U	1 U	1 U	0	0
Chloroethane			2 U	2 U	2 U	2 U	2 U	2 U	N/A	N/A	2 U	2 U	N/A	N/A	2 U	2 U	2 U		
Chloroform	80		1 U	1 U	1 U	1 U	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	1 U	1 U	1 U	0	
Diethyl Ether		1,400	2 U	2 U	2 U	2 U	2 U	2 U	N/A	N/A	4.3	2 U	N/A	N/A	2 U	2 U	2 U		0
IsoPropylbenzene		800	1 U	1 U	1 U	1 U	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	1 U	1 U	1 U		0
Methyl-t-butyl ether(MTBE)		13	1 U	1 U	1 U	1 U	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	1 U	1 U	1 U		0
m&p-Xylene		10,000^	1 U	1 U	1 U	1 U	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	1 U	1 U	1 U		0
o-Xylene		10,000^ 40	1 U 30 U	1 U 30 U	N/A N/A	N/A N/A	1 U 30 U	1 U 30 U	N/A N/A	N/A N/A	1 U 30 U	1 U 30 U	1 U 30 U		0				
tert-Butyl Alcohol (TBA) Tetrachloroethene	3.5	5	1 U	1 U	1 U	1 U	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	1 U	1 U	1 U	0	0
Tetrahydrofuran(THF)	154	600	10 U	10 U	N/A	N/A	10 U	10 U	N/A	N/A	10 U	10 U	10 U	0	0				
trans-1,2-Dichloroethene	100	100	1 U	1 U	1 U	1 U	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	1 U	1 U	1 U	0	0
1,4-DIOXANE BY 8260B SIM - (ug/L)																			
1,4-Dioxane	3	0.32	0.21	0.2 U	0.2 U	0.2 U	0.25	0.2 U	21	37	7.1	3.4	0.2 U	0.2 U	0.41	0.38	13	5	7
DISSOLVED METALS BY 200.8 - (mg/L)																			
Dissolved Antimony	0.006	0.006	0.001 U	N/A	N/A	N/A	N/A	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	0	0
Dissolved Arsenic	0.01	0.01	0.001 U	N/A	N/A	N/A	N/A	N/A	0.038	N/A	0.014	N/A	0.001 U	N/A	0.001 U	N/A	0.049	3	3
Dissolved Barium		2	0.019	N/A	N/A	N/A	N/A	N/A	0.07	N/A	0.015	N/A	0.0085	N/A	0.0078	N/A	0.072		0
Dissolved Beryllium	0.004	0.004	0.001 U	N/A	N/A	N/A	N/A	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	0	0
Dissolved Calcium			28 J+	N/A	N/A	N/A	N/A	N/A	55 J+	N/A	16 J+	N/A	35 J+	N/A	27 J+	N/A	46 J+		
Dissolved Chromium Dissolved Iron	0.05	0.1	0.001 U	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	0.001 U	N/A	0.001 U	N/A N/A	0.001 U	N/A N/A	0.001 U	N/A	0.001 U	0	0
Dissolved Iron Dissolved Lead	0.015	0.015	5.6 J+ 0.001 U	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	6 J+ 0.001 U	N/A N/A	1.1 J+ 0.001 U	N/A N/A	0.05 U 0.001 U	N/A N/A	0.05 U 0.001 U	N/A N/A	6.1 J+ 0.001 U	0	0
Dissolved Lead Dissolved Magnesium	0.013	0.013	15	N/A	N/A	N/A	N/A	N/A	26	N/A	6.8	N/A	11	N/A	5.4	N/A	23		
Dissolved Maganese	0.3	0.84	1.2	N/A	N/A	N/A	N/A	N/A	0.28	N/A	1.4	N/A	0.005 U	N/A	0.005 U	N/A	0.17	2	2
Dissolved Nickel	0.1	0.1	0.0012	N/A	N/A	N/A	N/A	N/A	0.0081	N/A	0.0036	N/A	0.011	N/A	0.0011	N/A	0.0037	0	0
Dissolved Potassium		160	4.9	N/A	N/A	N/A	N/A	N/A	21	N/A	4.4	N/A	3.2	N/A	2.4	N/A	9.1		
Dissolved Sodium			15	N/A	N/A	N/A	N/A	N/A	110	N/A	37	N/A	15	N/A	17	N/A	76		
Dissolved Vanadium	0.26		0.005 U	N/A	N/A	N/A	N/A	N/A	0.005 U	N/A	0.005 U	N/A	0.005 U	N/A	0.005 U	N/A	0.005 U	0	
TOTAL METALS BY 200.8 - (mg/L)																			
Total Antimony	0.006	0.006	N/A	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0	0
Total Arsenic	0.01	0.01	N/A	0.0021	0.0068	0.0028	0.013	0.001 U	N/A	0.001 U	N/A	0.0013	N/A	0.001 U	N/A	0.0069	N/A	1	1
Total Barium	0.004	2	N/A	0.012	0.0025	0.005	0.0066	0.0034	N/A	0.03	N/A	0.015	N/A	0.0059	N/A	0.0068	N/A		0
Total Beryllium Total Calcium	0.004	0.004	N/A N/A	0.001 U 9.9 J+	0.001 U 4.6 J+	0.001 U 2.1 J+	0.001 U 28 J+	0.001 U 3.9 J+	N/A N/A	0.001 U 4.8 J+	N/A N/A	0.001 U 5.2 J+	N/A N/A	0.001 U 36 J+	N/A N/A	0.001 U 24 J+	N/A N/A	0	0
Total Chromium	0.05	0.1	N/A	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0	0
Total Iron	0.03		N/A	0.057 J+	0.089 J+	0.05 U	0.05 U	0.001 U	N/A	0.001 U	N/A	1.2 J+	N/A	0.05 U	N/A	0.11 J+	N/A		
Total Lead	0.015	0.015	N/A	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0	0
Total Magnesium			N/A	1.2	0.58	0.98	7.8	2.6	N/A	3	N/A	2.9	N/A	11	N/A	5.2	N/A		
Total Manganese	0.3	0.84	N/A	0.005 U	0.0094	0.017	0.14	0.005 U	N/A	0.054	N/A	0.55	N/A	0.005 U	N/A	0.024	N/A	1	0
Total Nickel	0.1	0.1	N/A	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	N/A	0.0061	N/A	0.0012	N/A	0.0029	N/A	0.001 U	N/A	0	0
Total Potassium		160	N/A	4.5	4.1	2.4	2.9	1.5	N/A	6.3	N/A	3.5	N/A	2.9	N/A	3	N/A		
Total Sodium			N/A	37	62	70	13	5.2	N/A	230	N/A	42	N/A	16	N/A	18	N/A		
Total Vanadium	0.26		N/A	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	N/A	0.005 U	N/A	0.005 U	N/A	0.005 U	N/A	0.005 U	N/A	0	
PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED	_ ```		4.40.1	0.44	4.00.111	4.44.11	4.40.11	4.00.11	04.0.1	00.4	071	0.004.1	40.1	0.04	2.00.1	4 70 1			
Perfluorobutanoic Acid (PFBA)			1.46 J 4.61 U	3.11 J 5.51	4.63 UJ 4.63 U	4.41 U 4.41 U	4.48 U 4.48 U	4.36 U 4.36 U	21.6 J 46.6	23.4 36.7	3.7 J 7.74	0.964 J 3.47 J	10 J 31	9.31 24.9	3.00 J 1.45 J	1.76 J 4.66 U	9.65		
Perfluoropentanoic acid (PFpEA) Perfluorobutanesulfonic acid (PFBS)			3.59 J	4.57 U	4.63 U	4.41 U	4.48 U	4.36 U	6.7	13.2	2.69 J	4.45 U	6	4.56	3.34 J	4.66 U	4.57		
Perfluorohexanoix Acid (PFHxA)			4.61 U	4.57 U	4.63 U	4.41 U	4.48 U	4.36 U	73.9	57.5	15.3	5.5	28	21.5	4.97	3.24 J	25.6		
Perfluoroheptanoic acid (PFHpA)			2.81 J	1.42 J	4.63 U	4.41 U	4.48 U	4.36 U	105	28.4	16.4	6.04	5.4	5.8	4.11 J	4.66 U	20		
Perfluorohexanesulfonic acid (PFHxS)																			
		18 ²	1.48 J	4.57 U	4.63 U	4.41 U	1.55 J	4.36 U	23.3	39.1	9.04	3.84 J	2.08 J	1.36 J	2.62 J	1.57 J	14.3		2
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS)			4.61 U	4.57 U	4.63 U	4.41 U	4.48 U	4.36 U	4.64 U	39.1 4.49 U	9.04 4.43 U	4.45 U	4.50 U	4.25 U	4.46 U	4.66 U	4.26 U		
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA)			4.61 U 7.18	4.57 U 0.902 J	4.63 U 1.07 J	4.41 U 0.854 J	4.48 U 2.64 J	4.36 U 4.36 U	4.64 U 310	39.1 4.49 U 152	9.04 4.43 U 52.4	4.45 U 20.8	4.50 U 11.8	4.25 U 12.6	4.46 U 11.5	4.66 U 4.42 J	4.26 U 67.8		
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroheptanesulfonic Acid (PFHpS)	70 	12 ²	4.61 U 7.18 4.61 U	4.57 U 0.902 J 4.57 U	4.63 U 1.07 J 4.63 U	4.41 U 0.854 J 4.41 U	4.48 U 2.64 J 4.48 U	4.36 U 4.36 U 4.36 U	4.64 U 310 1.75 J	39.1 4.49 U 152 1.20 J	9.04 4.43 U 52.4 4.43 U	4.45 U 20.8 4.45 U	4.50 U 11.8 4.50 U	4.25 U 12.6 4.25 U	4.46 U 11.5 4.46 U	4.66 U 4.42 J 4.66 U	4.26 U 67.8 4.26 U	2 	6
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroheptanesulfonic Acid (PFHpS) Perfluorononanoic acid (PFNA)	70 	12 ² 11 ²	4.61 U 7.18 4.61 U 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U	4.63 U 1.07 J 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U	4.36 U 4.36 U 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2	39.1 4.49 U 152 1.20 J 4.49 U	9.04 4.43 U 52.4 4.43 U 3.65 J	4.45 U 20.8 4.45 U 4.45 U	4.50 U 11.8 4.50 U 4.50 U	4.25 U 12.6 4.25 U 1.14 J	4.46 U 11.5 4.46 U 1.39 J	4.66 U 4.42 J 4.66 U 4.66 U	4.26 U 67.8 4.26 U 4.26 U	2	6 1
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroheptanesulfonic Acid (PFHpS) Perfluorononanoic acid (PFNA) Perfluorooctanesulfonamide (PFOSA)	70 	12 ² 11 ²	4.61 U 7.18 4.61 U 4.61 U 5.24	4.57 U 0.902 J 4.57 U 4.57 U 4.57 U	4.63 U 1.07 J 4.63 U 4.63 U 7.01	4.41 U 0.854 J 4.41 U 4.41 U 3.88 J	4.48 U 2.64 J 4.48 U 4.48 U 4.48 U	4.36 U 4.36 U 4.36 U 4.36 U 10.3	4.64 U 310 1.75 J 35.2 9.89	39.1 4.49 U 152 1.20 J 4.49 U 4.49 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85	4.45 U 20.8 4.45 U 4.45 U 6.99	4.50 U 11.8 4.50 U 4.50 U 3.89 J	4.25 U 12.6 4.25 U 1.14 J 3.15 J	4.46 U 11.5 4.46 U 1.39 J 4.46 U	4.66 U 4.42 J 4.66 U 4.66 U 7.89	4.26 U 67.8 4.26 U 4.26 U 9.94	2 	6 1
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroheptanesulfonic Acid (PFHpS) Perfluorononanoic acid (PFNA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA)	70 70	12 ² 11 ² 11 ² 15 ²	4.61 U 7.18 4.61 U 4.61 U 5.24 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U 4.57 U 1.47 J	4.63 U 1.07 J 4.63 U 4.63 U 7.01 4.63 U	4.41 U 0.854 J 4.41 U 4.41 U 3.88 J 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U 4.48 U 4.48 U	4.36 U 4.36 U 4.36 U 4.36 U 10.3 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4	39.1 4.49 U 152 1.20 J 4.49 U 4.49 U 17.1	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5	4.45 U 20.8 4.45 U 4.45 U 6.99 2.67 J	4.50 U 11.8 4.50 U 4.50 U 3.89 J 4.50 U	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J	4.66 U 4.42 J 4.66 U 4.66 U 7.89 4.66 U	4.26 U 67.8 4.26 U 4.26 U 9.94 15.4	2 0	6 1 3
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroheptanesulfonic Acid (PFHpS) Perfluorononanoic acid (PFNA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonic (PFOS) Perfluorodeanoic Acid (PFDA)	70 70 	12 ² 11 ²	4.61 U 7.18 4.61 U 4.61 U 5.24 4.61 U 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U 4.57 U 1.47 J 4.57 U	4.63 U 1.07 J 4.63 U 4.63 U 7.01 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 4.41 U 3.88 J 4.41 U 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U	4.36 U 4.36 U 4.36 U 4.36 U 10.3 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J	39.1 4.49 U 152 1.20 J 4.49 U 4.49 U 17.1 4.49 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U	4.45 U 20.8 4.45 U 4.45 U 6.99 2.67 J 4.45 U	4.50 U 11.8 4.50 U 4.50 U 3.89 J 4.50 U 4.50 U	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U	4.66 U 4.42 J 4.66 U 4.66 U 7.89 4.66 U 4.66 U	4.26 U 67.8 4.26 U 4.26 U 9.94 15.4 4.26 U	2 	6 1
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluorononanoic acid (PFNA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic (PFOS) Perfluorooctanoic Acid (PFDA) 1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS)	70 70	12 ² 11 ² 15 ²	4.61 U 7.18 4.61 U 4.61 U 5.24 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U 4.57 U 1.47 J	4.63 U 1.07 J 4.63 U 4.63 U 7.01 4.63 U	4.41 U 0.854 J 4.41 U 4.41 U 3.88 J 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U 4.48 U 4.48 U	4.36 U 4.36 U 4.36 U 4.36 U 10.3 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4	39.1 4.49 U 152 1.20 J 4.49 U 4.49 U 17.1	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5	4.45 U 20.8 4.45 U 4.45 U 6.99 2.67 J	4.50 U 11.8 4.50 U 4.50 U 3.89 J 4.50 U	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J	4.66 U 4.42 J 4.66 U 4.66 U 7.89 4.66 U	4.26 U 67.8 4.26 U 4.26 U 9.94 15.4	2 0	6 1 3
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroheptanesulfonic Acid (PFHpS) Perfluorononanoic acid (PFNA) Perfluoroctanesulfonamide (PFOSA) Perfluorocanesulfonic (PFOS) Perfluorodecanoic Acid (PFDA) 1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS) N-Methyl Perfluoroctanesulfonamidoacetic Acid (MeFOSAA)	70 70 	12 ² 11 ² 15 ²	4.61 U 7.18 4.61 U 4.61 U 5.24 4.61 U 4.61 U 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U 4.57 U 1.47 J 4.57 U 4.57 U	4.63 U 1.07 J 4.63 U 4.63 U 7.01 4.63 U 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 4.41 U 3.88 J 4.41 U 4.41 U 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U	4.36 U 4.36 U 4.36 U 4.36 U 10.3 4.36 U 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U	39.1 4.49 U 152 1.20 J 4.49 U 4.49 U 17.1 4.49 U 4.49 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U 4.43 U	4.45 U 20.8 4.45 U 4.45 U 6.99 2.67 J 4.45 U 4.45 U	4.50 U 11.8 4.50 U 4.50 U 3.89 J 4.50 U 4.50 U 4.50 U	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25 U	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U	4.66 U 4.42 J 4.66 U 4.66 U 7.89 4.66 U 4.66 U 4.66 U	4.26 U 67.8 4.26 U 4.26 U 9.94 15.4 4.26 U 4.26 U	2 0 	6 1 3
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoronenoic acid (PFNA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOS) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic Acid (PFDA) 1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA) Perfluoroundecanoic Acid (PFUnA)	70 70 	12 ² 11 ² 15 ²	4.61 U 7.18 4.61 U 4.61 U 5.24 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U 4.57 U 1.47 J 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U	4.63 U 1.07 J 4.63 U 4.63 U 7.01 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 4.41 U 3.88 J 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U	4.36 U 4.36 U 4.36 U 4.36 U 10.3 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.85 4.64 U	39.1 4.49 U 152 1.20 J 4.49 U 4.49 U 17.1 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U	4.45 U 20.8 4.45 U 4.45 U 6.99 2.67 J 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U	4.50 U 11.8 4.50 U 4.50 U 3.89 J 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U	4.66 U 4.42 J 4.66 U 4.66 U 7.89 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U	4.26 U 67.8 4.26 U 4.26 U 9.94 15.4 4.26 U 4.26 U 4.26 U 4.26 U	2 0 	1 3
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoronenoic acid (PFNA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonic (PFOS) Perfluorodecanoic Acid (PFDA) IH, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA) N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluoroodecanoic Acid (PFUnA) Perfluorodecanesulfonic Acid (PFDS)	70 70 70 	12° 11° 15°	4.61 U 7.18 4.61 U 4.61 U 5.24 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U	4.63 U 1.07 J 4.63 U 4.63 U 7.01 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 4.41 U 3.88 J 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U	4.36 U 4.36 U 4.36 U 4.36 U 10.3 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.64 U 4.85 4.64 U 4.64 U	39.1 4.49 U 152 1.20 J 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U	4.45 U 20.8 4.45 U 4.45 U 6.99 2.67 J 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U	4.50 U 11.8 4.50 U 4.50 U 3.89 J 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U	4.66 U 4.42 J 4.66 U 7.89 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U	4.26 U 67.8 4.26 U 4.26 U 9.94 15.4 4.26 U 4.26 U 4.26 U 4.26 U 4.26 U	2 0 	1 3
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluorohaptanesulfonic Acid (PFHpS) Perfluoronoptanesulfonic Acid (PFHpS) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic Acid (PFDA) 1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA) N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluoroundecanoic Acid (PFUnA) Perfluorodecanesulfonic Acid (PFDS) Perfluorodecanoic Acid (PFDS)	70 70 70 	12 ² 11 ² 11 ⁵	4.61 U 7.18 4.61 U 4.61 U 5.24 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U	4.63 U 1.07 J 4.63 U 4.63 U 7.01 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 4.41 U 3.88 J 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U	4.36 U 4.36 U 4.36 U 4.36 U 10.3 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.85 4.64 U 4.85 4.64 U 4.64 U	39.1 4.49 U 152 1.20 J 4.49 U 17.1 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U	4.45 U 20.8 4.45 U 4.45 U 6.99 2.67 J 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U	4.50 U 11.8 4.50 U 4.50 U 3.89 J 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U	4.66 U 4.42 J 4.66 U 7.89 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U	4.26 U 67.8 4.26 U 9.94 15.4 4.26 U 4.26 U 4.26 U 4.26 U 4.26 U 4.26 U 4.26 U 4.26 U 4.26 U	0 	3 3
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoroneptanesulfonic Acid (PFHpS) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonic (PFOS) Perfluorodecanoic Acid (PFDA) 1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA) N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorodecanoic Acid (PFDA) Perfluorodecanesulfonic Acid (PFDS) Perfluorodecanesulfonic Acid (PFDS)	70 70 70	12 ² 11 ² 15 ²	4.61 U 7.18 4.61 U 4.61 U 5.24 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U	4.63 U 1.07 J 4.63 U 4.63 U 7.01 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 4.41 U 3.88 J 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U	4.36 U 4.36 U 4.36 U 10.3 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.85 4.64 U 4.64 U 4.64 U 4.64 U 23.2 U	39.1 4.49 U 152 1.20 J 4.49 U 17.1 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U	20.8 4.45 U 4.45 U 6.99 2.67 J 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U	4.50 U 11.8 4.50 U 4.50 U 3.89 J 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U	4.66 U 4.42 J 4.66 U 4.66 U 7.89 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U	4.26 U 67.8 4.26 U 4.26 U	 2 0 	3
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoronenoic acid (PFNA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic (PFOS) Perfluorooctaneic Acid (PFDA) 1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (8:2FTS) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA) N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluoroodeanoic Acid (PFUnA) Perfluoroodeanoic Acid (PFDS) Perfluoroodeanoic Acid (PFDOA) N-Methyl Perfluorooctane Sulfonamide (MeFOSA) Perfluorodecanoic Acid (PFTDA)		112 ² 111 ² 115 ² 155 ²	4.61 U 7.18 4.61 U 4.61 U 5.24 4.61 U 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U	4.63 U 1.07 J 4.63 U 4.63 U 7.01 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 4.41 U 3.88 J 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U	4.36 U 4.36 U 4.36 U 4.36 U 10.3 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.85 4.64 U 4.64 U 4.64 U 23.2 U 4.64 U	39.1 4.49 U 152 1.20 J 4.49 U 4.49 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U	20.8 4.45 U 4.45 U 6.99 2.67 J 4.45 U 4.45 U	4.50 U 11.8 4.50 U 4.50 U 3.89 J 4.50 U 4.50 U	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25 U	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 22.3 U 4.46 U	4.66 U 4.42 J 4.66 U 4.66 U 7.89 4.66 U 4.66 U	4.26 U 67.8 4.26 U 4.26 U 9.94 15.4 4.26 U 4.26 U	 2 0 	3
IH, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoroneptanesulfonic Acid (PFNA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonic (PFOS) Perfluorodecanesulfonic (PFOS) Perfluorodecanoic Acid (PFDA) IH, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (8:2FTS) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA) N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluoroundecanoic Acid (PFUnA) Perfluorodecanoic Acid (PFDS) Perfluorodecanoic Acid (PFDOSA) Perfluorotodecanoic Acid (PFTDA) Perfluorotodecanoic Acid (PFTDA) Perfluorotodecanoic Acid (PFTDA)	70 70 70 	12 ² 11 ² 15 ²	4.61 U 7.18 4.61 U 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U 4.57 U 1.47 J 4.57 U 4.57 U	4.63 U 1.07 J 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 4.41 U 4	4.48 U 2.64 J 4.48 U 4.48 U	4.36 U 4.36 U 4.36 U 10.3 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.85 4.64 U 4.64 U 4.64 U 4.64 U 4.64 U 4.64 U 4.64 U 4.64 U	39.1 4.49 U 152 1.20 J 4.49 U 4.49 U	9.04 4.43 U 52.4 4.43 U 5.85 11.5 4.43 U 4.43 U	20.8 4.45 U 4.45 U 6.99 2.67 J 4.45 U 4.45 U	4.50 U 11.8 4.50 U 4.50 U	4.25 U 12.6 4.25 U 1.14 J 4.25 U 4.25	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U	4.66 U 4.42 J 4.66 U 4.66 U 7.89 4.66 U 4.66 U	4.26 U 67.8 4.26 U 4.26 U 9.94 15.4 4.26 U 4.26 U	 2 0 	3
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoroneanoic acid (PFNA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonic Acid (PFDA) 1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA) N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorodecanesulfonic Acid (PFDS) Perfluorodecanesulfonic Acid (PFDS) Perfluorodecanic Acid (PFDA) N-Methyl Perfluorooctane Sulfonamide (MeFOSA) Perfluorotodecanoic Acid (PFTDA) Perfluorototecanoic Acid (PFTDA) Perfluorototeradecanoic Acid (PFTDa) Perfluorototeradecanoic Acid (PFTDa) N-Ethyl Perfluorooctane Sulfonamide (EtFOSA)	70 70 70	12 ² 12 ² 15 ² 15 ²	4.61 U 7.18 4.61 U 4.61	4.57 U 0.902 J 4.57 U 4.57 U 4	4.63 U 1.07 J 4.63 U 7.01 4.63 U 7.01 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U 4.	4.36 U 4.36 U 4.36 U 10.3 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.64 U	39.1 4.49 U 152 1.20 J 4.49 U 17.1 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 22.4 U 22.4 U	9.04 4.43 U 52.4 U 3.65 J 5.85 11.5 4.43 U 4.43 U 4.44 U 4.43 U 4.44 U 4	4.45 U 20.8 4.45 U 4.45 U 6.99 2.67 J 4.45 U 4.45 U	4.50 U 11.8 4.50 U 4.50 U	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U	4.66 U 4.42 J 4.66 U 4.66 U 7.89 4.66 U 4.66 U	4.26 U 67.8 4.26 U 4.26 U 9.94 15.4 4.26 U 4.26 U 4	 2 0 	3
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoroneptanesulfonic Acid (PFHpS) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOS) Perfluorooctanesulfonamidoacetic Acid (MeFOSA) N-Methyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorooctanesulfonamidoacetic (PFOS) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFTDA) Perfluorotetradecanoic Acid (PFTDA) Perfluorotetradecanoic Acid (PFTDA) Perfluorooctane Sulfonamide (EtFOSA) Perfluorogexadecanoic Acid (PFHxDA)	70 70 70 	12 ² 11 ² 11 ² 15 ²	4.61 U 7.18 4.61 U 5.24 4.61 U 5.24 4.61 U 23.1 U 4.61 U 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U 4	4.63 U 1.07 J 4.63 U 7.01 4.63 U 7.01 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 3.88 J 4.41 U 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U 4.	4.36 U 4.36 U 4.36 U 10.3 4.36 U 10.3 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 21.8 R 4.36 U 21.8 R 4.36 U 21.8 R	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.85 4.64 U 4.64 U 23.2 U 4.64 U 23.2 U 4.64 U 23.2 U	39.1 4.49 U 152 1.20 J 4.49 U 17.1 4.49 U 4.49 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 22.1 U 4.43 U 22.1 U 4.43 U	4.45 U 20.8 4.45 U 6.99 2.67 J 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 22.3 U 4.45 U 22.3 U 4.45 U 22.3 U 4.45 U	4.50 U 11.8 4.50 U 3.89 J 4.50 U 4.50	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 22.3 U 4.46 U 22.3 U 4.46 U 22.3 U	4.66 U 4.42 J 4.66 U 7.89 4.66 U 4.66 U	4.26 U 67.8 4.26 U 9.94 15.4 4.26 U 4.26 U		
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluorohaptanesulfonic Acid (PFHpS) Perfluorohaptanesulfonic Acid (PFHpS) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorodecanesulfonamide (PFOSA) Perfluorodecanesulfonamide (PFOS) Perfluorodecanesulfonic Acid (8:2FTS) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA) N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluoroundecanoic Acid (PFUnA) Perfluorodecanesulfonamidoacetic (MeFOSA) N-Methyl Perfluorooctane Sulfonamide (MeFOSA) Perfluorotodecanoic Acid (PFTDA) Perfluorotodecanoic Acid (PFTDA) Perfluorototanesulfonamide (MeFOSA) Perfluorototanesulfonamide (MeFOSA) Perfluorototanesulfonamide (EtFOSA) Perfluorooctane Sulfonamide (EtFOSA) Perfluorooctane Sulfonamide (EtFOSA) Perfluorooctanesulfonamide (EtFOSA) Perfluorooctanesulfonamide (EtFOSA)	70 70 70	12 ² 12 ² 15 ² 15 ²	4.61 U 7.18 4.61 U 5.24 4.61 U 5.24 4.61 U 23.1 U	4.57 U 0.902 J 4.57 U 4.57 U 4	4.63 U 1.07 J 4.63 U 4.63 U 7.01 4.63 U 4.63	4.41 U 0.854 J 4.41 U 3.88 J 4.41 U 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U 4.	4.36 U 4.36 U 4.36 U 10.3 4.36 U 10.3 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.85 4.64 U 4.64 U	39.1 4.49 U 152 1.20 J 4.49 U 17.1 4.49 U 4.49 U 4.40 U 4.	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 11.5 4.43 U 4.43 U 4.44 U 4.43 U 4.44	4.45 U 20.8 4.45 U 6.99 2.67 J 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 22.3 U 4.45 U 22.3 U 4.45 U 22.3 U 4.45 U	4.50 U 11.8 4.50 U 3.89 J 4.50 U 4.50	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25 U	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 22.3 U 4.46 U	4.66 U 4.42 J 4.66 U 7.89 4.66 U 4.66 U	4.26 U 67.8 4.26 U 9.94 15.4 4.26 U 4.26 U 4	 2 0 	3
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoronenancic acid (PFNA) Perfluoronenancic acid (PFNA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamidoacetic Acid (8:2FTS) N-Methyl Perfluorooctanesulfonamidoacetic (EtFOSAA) N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorodecanoic Acid (PFUNA) Perfluorodecanesulfonic Acid (PFDS) Perfluorodecanoic Acid (PFDA) N-Methyl Perfluorooctane Sulfonamide (MeFOSA) N-Methyl Perfluorooctane Sulfonamide (MeFOSA) Perfluorotrodecanoic Acid (PFTDA) Perfluorotrodecanoic Acid (PFTDA) Perfluorotrodecanoic Acid (PFTDA) Perfluorogexadecanoic Acid (PFTDA) Perfluorogexadecanoic Acid (PFTDA) Perfluorogexadecanoic Acid (PFTDA) Perfluorooctane Sulfonamide (EtFOSA) Perfluoropexadecanoic Acid (PFTDA) Perfluoroctanesulfonamido Ethanol (MeFOSE) N-Ethyl Perfluorooctanesulfonamido Ethanol (MeFOSE)	70	12 ² 11 ² 15 ² 15 ²	4.61 U 7.18 4.61 U 5.24 4.61 U 5.24 4.61 U 23.1 U 4.61 U 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U 4	4.63 U 1.07 J 4.63 U 7.01 4.63 U 7.01 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 3.88 J 4.41 U 4.41 U	4.48 U 2.64 J 4.48 U 4.48 U 4.	4.36 U 4.36 U 4.36 U 10.3 4.36 U 10.3 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 21.8 R 4.36 U 21.8 R 4.36 U 21.8 R	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.85 4.64 U 4.64 U 23.2 U 4.64 U 23.2 U 4.64 U 23.2 U	39.1 4.49 U 152 1.20 J 4.49 U 17.1 4.49 U 4.49 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 22.1 U 4.43 U 22.1 U 4.43 U	4.45 U 20.8 4.45 U 6.99 2.67 J 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 22.3 U 4.45 U 22.3 U 4.45 U 22.3 U 4.45 U	4.50 U 11.8 4.50 U 3.89 J 4.50 U 4.50	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 22.3 U 4.46 U 22.3 U 4.46 U 22.3 U	4.66 U 4.42 J 4.66 U 7.89 4.66 U 4.66 U	4.26 U 67.8 4.26 U 9.94 15.4 4.26 U 4.26 U		
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoroneptanesulfonic Acid (PFHpS) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOS) Perfluorooctanesulfonamidoacetic Acid (MeFOSA) N-Methyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorooctanesulfonamidoacetic (PFOS) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFTDA) Perfluorotetradecanoic Acid (PFTDA) Perfluorotetradecanoic Acid (PFTDA) Perfluorooctane Sulfonamide (EtFOSA) Perfluorogexadecanoic Acid (PFHxDA)		12 ² 11 ² 15 ² 15 ²	4.61 U 7.18 4.61 U 5.24 4.61 U 5.24 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 21.0 UJ 4.57 U 21.0 UJ 4.57 U 21.0 UJ 21.0 UJ 21.	4.63 U 1.07 J 4.63 U 7.01 4.63 U 7.01 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 3.88 J 4.41 U 4.41	4.48 U 2.64 J 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 22.4 U 22.4 U 4.48 U 22.4 U 22.4 U 22.4 U 22.4 U	4.36 U 4.36 U 4.36 U 10.3 4.36 U 10.3 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.64 U 4.64 U 4.64 U 23.2 U 4.64 U 23.2 U 4.64 U 23.2 U 23.2 U 23.2 U	39.1 4.49 U 152 1.20 J 4.49 U 17.1 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 22.4 U 22.4 U 22.4 U 22.4 U 22.4 U 22.4 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 11.5 11.5 4.43 U 4.43 U 4.44 U	4.45 U 20.8 4.45 U 6.99 2.67 J 4.45 U 4.45 U	4.50 U 11.8 4.50 U 3.89 J 4.50 U 4.50	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 21.4 UJ 4.25 U 21.4 UJ 4.25 U 21.4 UJ 21.4 UJ	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 22.3 U 4.46 U 22.3 R 4.46 U 22.3 R	4.66 U 4.42 J 4.66 U 7.89 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 23.3 U 4.66 U 23.3 U 4.66 U 23.3 U	4.26 U 67.8 4.26 U 9.94 15.4 4.26 U 4.26 U 4		
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoronenic acid (PFNA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonamidoacetic Acid (8:2FTS) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSA) N-Methyl Perfluorooctanesulfonamidoacetic (EIFOSAA) Perfluoroodeanoic Acid (PFUNA) Perfluoroodeanoic Acid (PFDS) Perfluoroodeanoic Acid (PFDS) Perfluorooctanesulfonic Acid (MeFOSA) N-Methyl Perfluorooctane Sulfonamide (MeFOSA) Perfluorotordecanoic Acid (PFTDA) Perfluorototrodecanoic Acid (PFTDA) Perfluorototrodecanoic Acid (PFTDA) Perfluorooctanes Sulfonamide (EIFOSA) Perfluorooctanesulfonamide (EIFOSA) Perfluorooctanesulfonamido Ethanol (MeFOSE) N-Methyl Perfluorooctanesulfonamido Ethanol (EIFOSE) Combination of PFOA and PFOS		12 ² 11 ² 15 ² 15 ²	4.61 U 7.18 4.61 U 5.24 4.61 U 5.24 4.61 U	4.57 U 0.902 J 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 4.57 U 21.0 UJ 4.57 U 21.0 UJ 4.57 U 21.0 UJ 21.0 UJ 21.	4.63 U 1.07 J 4.63 U 7.01 4.63 U 7.01 4.63 U 4.63 U	4.41 U 0.854 J 4.41 U 3.88 J 4.41 U 4.41	4.48 U 2.64 J 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 22.4 U 22.4 U 4.48 U 22.4 U 22.4 U 22.4 U 22.4 U	4.36 U 4.36 U 4.36 U 10.3 4.36 U 10.3 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.64 U 4.64 U 4.64 U 23.2 U 4.64 U 23.2 U 4.64 U 23.2 U 23.2 U 23.2 U	39.1 4.49 U 152 1.20 J 4.49 U 17.1 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 22.4 U 22.4 U 22.4 U 22.4 U 22.4 U 22.4 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 11.5 11.5 4.43 U 4.43 U 4.44 U	4.45 U 20.8 4.45 U 6.99 2.67 J 4.45 U 4.45 U	4.50 U 11.8 4.50 U 3.89 J 4.50 U 4.50	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 4.25 U 21.4 UJ 4.25 U 21.4 UJ 4.25 U 21.4 UJ 21.4 UJ	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 22.3 U 4.46 U 22.3 R 4.46 U 22.3 R	4.66 U 4.42 J 4.66 U 7.89 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 23.3 U 4.66 U 23.3 U 4.66 U 23.3 U	4.26 U 67.8 4.26 U 9.94 15.4 4.26 U 4.26 U 4		
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoroneptanesulfonic Acid (PFHpS) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOS) Perfluorooctanesulfonic (PFOS) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA) N-Methyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluorodecanoic Acid (PFUnA) Perfluorooctanesulfonic Acid (PFDS) Perfluorooctanesulfonic Acid (PFTDA) Perfluorooctanesulfonic Acid (PFTDA) Perfluorooctanesulfonic Acid (PFTDA) Perfluorooctanesulfonic Acid (PFHDA) N-Methyl Perfluorooctanesulfonamide (EtFOSA) Perfluorooctanesulfonamide Ethanol (MeFOSE) N-Methyl Perfluorooctanesulfonamido Ethanol (EtFOSE) Combination of PFOA and PFOS FIELD PARAMETERS	70		4.61 U 7.18 4.61 U 4.61 U 5.24 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U 4.61 U 23.1 U 23.1 U 4.61 U 23.1 U 7.18	4.57 U 0.902 J 4.57 U 4.57 U 4	4.63 U 4.63 U 4.64 U 4.65 U	4.41 U 0.854 J 4.41 U 4.41	4.48 U 2.64 J 4.48 U 4.48 U 4.	4.36 U 4.36 U 4.36 U 10.3 4.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.64 U 4.64 U 23.2 U 4.64 U 23.2 U 4.64 U 23.2 U 33.2 U 368.4	39.1 4.49 U 152 1.20 J 4.49 U 17.1 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 22.4 U 4.49 U 22.4 U 4.49 U 22.4 U 1.49 U 22.4 U 1.49 U 22.4 U 1.49 U 22.4 U 1.49 U 22.4 U 1.49 U 22.4 U	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 22.1 U 4.43 U 22.1 U 4.43 U 22.1 U 4.43 U 22.1 U 22.1 U 22.1 U 22.1 U	4.45 U 20.8 4.45 U 6.99 2.67 J 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 22.3 U 22.3 U 22.3 U 22.3 U 23.47 J	4.50 U 11.8 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 22.3 UJ 4.50 U 22.3 UJ 4.50 U 22.3 UJ 4.50 U 22.3 UJ 4.50 U 4.50 U	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 21.4 UJ 4.25 U 21.4 UJ 4.25 U 21.5 U	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 22.3 U 4.46 U 22.3 U 22.3 U 22.3 U 22.3 U	4.66 U 4.42 J 4.66 U 4.66 U 7.89 4.66 U 4.66 U	4.26 U 67.8 4.26 U 9.94 15.4 4.26 U 4.26 U 4.21.3 U 4.21.3 U 4.22 U 4.23 U 4.25		
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoroneptanesulfonic Acid (PFHpS) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOS) Perfluorooctanesulfonamidoacetic Acid (MeFOSA) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSA) N-Methyl Perfluorooctanesulfonamidoacetic (EIFOSAA) Perfluoroundecanoic Acid (PFUnA) Perfluoroodecanesulfonic Acid (PFDS) Perfluorododecanoic Acid (PFDS) Perfluorododecanoic Acid (PFDS) Perfluorototane Sulfonamide (MeFOSA) N-Methyl Perfluorooctane Sulfonamide (MeFOSA) Perfluorototane Sulfonamide (EIFOSA) Perfluorototradecanoic Acid (PFTDA) Perfluorootanesulfonamide (EIFOSA) Perfluorooctanesulfonamide (EIFOSA) Perfluorooctanesulfonamide Ethanol (MeFOSE) N-Methyl Perfluorooctanesulfonamido Ethanol (MeFOSE) N-Methyl Perfluorooctanesulfonamido Ethanol (EIFOSE) Combination of PFOA and PFOS FIELD PARAMETERS Dissolved Oxygen (mg/l) Doxidation Reduction Potential (mV) pH (standard units)	70 70 70		4.61 U 7.18 4.61 U 4.61 U 5.24 4.61 U 23.1 U 4.61 U 23.1 U 23.1 U 7.18	4.57 U 0.902 J 4.57 U 4.57 U 4	4.63 U 1.07 J 4.63 U 4.63 U 4.64 U 4.65 U	4.41 U 0.854 J 4.41 U 4.41 U 22.0 U 23.0 U 24.0 U 25.0 U 26.0	4.48 U 2.64 J 4.48 U 4.48 U 22.4 U 22.4 U 22.4 U 22.4 U 22.4 U 22.4 U 3.6 U 3	4.36 U 4.36 U 4.36 U 4.36 U 10.3 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 21.8 R 4.36 U 21.8 R 4.36 U 21.8 U 21.8 U 21.8 U 3.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 4.64 U 4.64 U 4.64 U 4.64 U 4.64 U 23.2 U 4.64 U 23.2 U 23.2 U 3.07 J 4.64 U 4.64 U 4.64 U 3.2 U 4.64 U 4.64 U 4.64 U 4.64 U	39.1 4.49 U 152 1.20 J 4.49 U 17.1 4.49 U 17.1 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 22.4 U 4.49 U 22.4 U 4.49 U 22.4 U 169.1 169.1 169.1	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 22.1 U 4.43 U 22.1 U 4.43 U 22.1 U 63.9	4.45 U 20.8 4.45 U 6.99 2.67 J 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 23.47 J	4.50 U 11.8 4.50 U 4.50	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.5 U 22.5 U 22.5 U 22.5 U 22.5 U	4.66 U 4.42 J 4.66 U 4.66 U 7.89 4.66 U 4.66 U	4.26 U 67.8 4.26 U 9.94 15.4 4.26 U 4.26 U 8.21.3 U 4.26 U 8.21.3 U 8.21.3 U 8.3.2 U 9.3.2 U 9.3.3 U 9.3		
IH, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoronotanoic acid (PFOA) Perfluoronotanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonic (PFOS) Perfluorooctanesulfonamidoacetic Acid (8:2FTS) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA) N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA) Perfluoroundecanoic Acid (PFUnA) Perfluoroodecanesulfonic Acid (PFDS) Perfluorodecanoic Acid (PFDS) Perfluorotodecanoic Acid (PFDS) Perfluorotodecanoic Acid (PFTDA) N-Methyl Perfluorooctane Sulfonamide (MeFOSA) Perfluorotodecanoic Acid (PFTDA) Perfluorotodecanoic Acid (PFTDA) Perfluorotodecanoic Acid (PFTDA) Perfluorotodecanoic Acid (PFTDA) Perfluorooctane Sulfonamide (EtFOSA) Perfluorodecanoic Acid (PFTDA) N-Ethyl Perfluorooctanesulfonamido Ethanol (MeFOSE) N-Ethyl Perfluorooctanesulfonamido Ethanol (MeFOSE) N-Ethyl Perfluorooctanesulfonamido Ethanol (EtFOSE) Combination of PFOA and PFOS FIELD PARAMETERS Dissolved Oxygen (mg/l) Oxidation Reduction Potential (mV) Obl (standard units) Specific Conductance (us/cm)			4.61 U 7.18 4.61 U 23.1 U	4.57 U 0.902 J 4.57 U 4.57 U 21.0 UJ 4.57 U 21.0 UJ 21.0 UJ 22.8 U 22.8 U 22.8 U 23.72 J	4.63 U 1.07 J 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 4.63 U 23.2 U 4.63 U 23.2 U 24.6 U 25.2 U 26.2 U 26	4.41 U 0.854 J 4.41 U 22.0 U 4.41 U 22.0 U 23.0 U 25.0 U 26.0 U 27.0 U 28.7 S 8.7 S 8.7 S 8.7 S 8.7 S 8.7 S 8.7 S	4.48 U 2.64 J 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 4.48 U 2.4 U 2.4 U 2.4 U 2.4 U 2.4 U 2.4 U 2.4 U 2.4 U 2.4 U 3.4 U 3	4.36 U 4.36 U 21.8 R 4.36 U 21.8 R 4.36 U 21.8 R 4.36 U 21.8 R 4.36 U 21.8 R 4.36 U 21.8 R 4.36 U 21.8 R	4.64 U 310 1.75 J 35.2 9.89 58.4 3.07 J 4.64 U 4.64 U 4.64 U 23.2 U 4.64 U 23.2 U	39.1 4.49 U 152 1.20 J 4.49 U 4.49 U 17.1 4.49 U 4.49 U 4.40 U 4.	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 22.1 U 4.43 U 22.1 U 4.43 U 22.1 U 63.9	4.45 U 20.8 4.45 U 4.45 U 6.99 2.67 J 4.45 U 4.45 U 4.45 U 4.45 U 22.3 U 4.45 U 22.3 U 4.45 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U	4.50 U 11.8 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 4.50 U 22.3 UJ 4.50 U 22.3 UJ 4.50 U 22.3 UJ 4.50 U 22.5 U 22.5 U 22.5 U	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 21.4 UJ 4.25 U 21.4 UJ 4.25 U 21.4 UJ 4.25 U 21.4 UJ 4.25 U 21.5 U 21.5 U 21.9 U	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 22.3 U 4.46 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U	4.66 U 4.42 J 4.66 U 7.89 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 4.66 U 23.3 U 4.66 U 23.3 U 22.3 U 22.3 U 22.3 U 3.6 U 23.3 U 22.3 U 22.3 U 22.3 U 22.3 U	4.26 U 67.8 4.26 U 9.94 15.4 4.26 U 4.26 U 4.26 U 4.26 U 4.26 U 21.3 U		
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS) Perfluorooctanoic acid (PFOA) Perfluoroneptanesulfonic Acid (PFHpS) Perfluoroneptanesulfonic Acid (PFHpS) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOSA) Perfluorooctanesulfonamide (PFOS) Perfluorooctanesulfonamidoacetic Acid (MeFOSA) N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSA) N-Methyl Perfluorooctanesulfonamidoacetic (EIFOSAA) Perfluoroundecanoic Acid (PFUnA) Perfluoroodecanesulfonic Acid (PFDS) Perfluorododecanoic Acid (PFDS) Perfluorododecanoic Acid (PFDS) Perfluorototane Sulfonamide (MeFOSA) N-Methyl Perfluorooctane Sulfonamide (MeFOSA) Perfluorototane Sulfonamide (EIFOSA) Perfluorototradecanoic Acid (PFTDA) Perfluorootanesulfonamide (EIFOSA) Perfluorooctanesulfonamide (EIFOSA) Perfluorooctanesulfonamide Ethanol (MeFOSE) N-Methyl Perfluorooctanesulfonamido Ethanol (MeFOSE) N-Methyl Perfluorooctanesulfonamido Ethanol (EIFOSE) Combination of PFOA and PFOS FIELD PARAMETERS Dissolved Oxygen (mg/l) Doxidation Reduction Potential (mV) pH (standard units)	70 70 70		4.61 U 7.18 4.61 U 4.61 U 5.24 4.61 U 23.1 U 4.61 U 23.1 U 23.1 U 7.18	4.57 U 0.902 J 4.57 U 4.57 U 4	4.63 U 1.07 J 4.63 U 4.63 U 4.64 U 4.65 U	4.41 U 0.854 J 4.41 U 4.41 U 22.0 U 23.0 U 24.0 U 25.0 U 26.0	4.48 U 2.64 J 4.48 U 4.48 U 22.4 U 22.4 U 22.4 U 22.4 U 22.4 U 22.4 U 3.6 U 3	4.36 U 4.36 U 4.36 U 4.36 U 10.3 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 4.36 U 21.8 R 4.36 U 21.8 R 4.36 U 21.8 U 21.8 U 21.8 U 3.36 U 4.36 U	4.64 U 310 1.75 J 35.2 9.89 58.4 4.64 U 4.64 U 4.64 U 4.64 U 4.64 U 23.2 U 4.64 U 23.2 U 23.2 U 3.07 J 4.64 U 4.64 U 4.64 U 3.2 U 4.64 U 4.64 U 4.64 U 4.64 U	39.1 4.49 U 152 1.20 J 4.49 U 17.1 4.49 U 17.1 4.49 U 4.49 U 4.49 U 4.49 U 4.49 U 22.4 U 4.49 U 22.4 U 4.49 U 22.4 U 169.1 169.1 169.1	9.04 4.43 U 52.4 4.43 U 3.65 J 5.85 11.5 4.43 U 4.43 U 4.43 U 4.43 U 4.43 U 22.1 U 4.43 U 22.1 U 4.43 U 22.1 U 63.9	4.45 U 20.8 4.45 U 6.99 2.67 J 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 4.45 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 23.47 J	4.50 U 11.8 4.50 U 4.50	4.25 U 12.6 4.25 U 1.14 J 3.15 J 2.41 J 4.25 U 4.25	4.46 U 11.5 4.46 U 1.39 J 4.46 U 1.17 J 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 4.46 U 22.3 U 22.3 U 22.3 U 22.3 U 22.3 U 22.5 U 22.5 U 22.5 U 22.5 U 22.5 U	4.66 U 4.42 J 4.66 U 4.66 U 7.89 4.66 U 4.66 U	4.26 U 67.8 4.26 U 9.94 15.4 4.26 U 4.26 U 8.21.3 U 4.26 U 8.21.3 U 8.21.3 U 8.3.2 U 9.3.2 U 9.3.3 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.3 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.3 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.2 U 9.3.3 U 9.3.2 U 9.3.3 U 9.3		

2020 Semi-Annual Summary Report

Coakley Landfill Superfund Site - Greenland and North Hampton, New Hampshire

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		_						OPERABL	_												
Sampling Point ID Monitored Unit	USEPA	NHDES	FPC-9B ¹	FPC-11A	FPC-11B	GZ-1051	GZ-105-DUP ¹ SBR	GZ-109	GZ-117	MW-20S Outwash	MW-20D1 DBR	DBR	MW-20D2 DBR	MW-21S MSC	MW-21D1 DBR	MW-21D2 DBR	MW-22S Outwash	MW-22D1 DBR	MW-22D2 DBR	# of Exce	edances NHDES
Date of Sample Collection	CL	AGQS	5/21/20	5/14/20	5/14/20	5/21/20	5/21/20	5/14/20	5/14/20	5/18/20	5/18/20	5/18/20	5/18/20	5/13/20	5/13/20	5/13/20	5/12/20	5/12/20	5/12/20	CL	AGQS
VOLATILE ORGANIC COMPOUNDS BY 8260C - (ug/L)																					
1,2,4-Trimethylbenzene		330	1 U	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U		0
1,2-Dichloropropane	5	5	1 U	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0	0
1,4-Dichlorobenzene 2-Butanone(MEK)	200	75 4,000	1 U 10 U	N/A N/A	N/A N/A	1.7 10 U	1.8 10 U	1 U 10 U	1 U 10 U	1 U 10 U	1 U 10 U	1 U 10 U	1 U 10 U	1 U 10 U	1 U 10 U	1 U 10 U	1 U 10 U	1 U 10 U	1 U 10 U	0	0
Acetone		6,000	10 U	N/A	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	26	10 U	24	10 U	10 U	10 U	10 U		
Benzene	5	5	1 U	N/A	N/A	2.5	2.7	1 U	1 U	1 U	1 U	1 U	1 U	1.6	1 U	1 U	1 U	1 U	1 U	0	0
Carbon disulfide		70	2U	N/A	N/A	2 U	2 U	2 U	2 U	2 U	2 U	2 U	7.3	2 U	2 U	2 U	2 U	2 U	2 U		0
Chlorobenzene	100	100	1 U	N/A	N/A	4.2	4.4	1 U	1 U	1 U	1 U	1 U	1 U	3.6	1 U	1 U	1 U	1 U	1 U	0	0
Chloroform	80		2 U 1 U	N/A N/A	N/A N/A	3.1 1 U	3.1 1 U	2 U 1 U	2 U	2 U 1 U	2 U 1 U	2 U	2 U 1 U	4.7 1 U	2 U 1 U	2 U 1 U	2 U 1.9	2 U 1 U	2 U 1 U	0	
Chloroform Diethyl Ether		1400	6.6	N/A	N/A	25	26	2 U	2 U	2 U	2 U	2 U	2 U	24	2 U	2 U	2 U	2 U	2 U		0
IsoPropylbenzene		800	1 U	N/A	N/A	1 U	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U		0
Methyl-t-butyl ether(MTBE)		13	1 U	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U		0
m&p-Xylene		10,000^	1 U	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U		0
o-Xylene		10,000^	1 U 30 U	N/A N/A	N/A N/A	1 U 30 U	1 U 30 U	1 U 30 U	1 U	1 U	1 U 30 U	1 U 30 U	1 U 30 U	1 U 30 U	1 U 30 U	1 U 30 U	1 U	1 U 30 U	1 U 30 U		0
tert-Butyl Alcohol (TBA) Tetrachloroethene	3.5	40 5	1 U	N/A	N/A	1 U	1 U	1 U	30 U	30 U 1 U	1 U	1 U	1 U	1 U	1 U	1 U	30 U 1 U	1 U	1 U	0	0
Tetrahydrofuran(THF)	154	600	10 U	N/A	N/A	17	18	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0	0
trans-1,2-Dichloroethene	100	100	2 U	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0	0
1,4-DIOXANE BY 8260B SIM - (ug/L)																					
1,4-Dioxane	3	0.32	3.7	0.84	0.27	31	35	0.2 U	0.2 U	0.2 U	0.26	0.2 U	0.64	28	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	3	5
DISSOLVED METALS BY 200.8 - (mg/L)	1 0 000	0.000	61/A	0.00411	N1/4	AUA	A1/A	h1/4	B1/4	0.004 **	AUZ	h1/A	h1/A	0.004	N1/A	617A	0.004	A172	617A		0
Dissolved Antimony Dissolved Arsenic	0.006	0.006	N/A N/A	0.001 U 0.0061	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	0.001 U 0.001 U	N/A N/A	N/A N/A	N/A N/A	0.001 U 0.0087	N/A N/A	N/A N/A	0.001 U 0.001 U	N/A N/A	N/A N/A	0	0
Dissolved Barium		2	N/A	0.0061	N/A	N/A	N/A	N/A	N/A	0.0010	N/A	N/A	N/A	0.0067	N/A	N/A	0.0010	N/A	N/A		0
Dissolved Beryllium	0.004	0.004	N/A	0.001 U	N/A	N/A	N/A	N/A	N/A	0.001 U	N/A	N/A	N/A	0.001 U	N/A	N/A	0.001 U	N/A	N/A	0	0
Dissolved Calcium			N/A	36 J+	N/A	N/A	N/A	N/A	N/A	8.1 J+	N/A	N/A	N/A	59 J+	N/A	N/A	5.8 J+	N/A	N/A		
Dissolved Chromium	0.05	0.1	N/A	0.001 U	N/A	N/A	N/A	N/A	N/A	0.001 U	N/A	N/A	N/A	0.001 U	N/A	N/A	0.001 U	N/A	N/A	0	0
Dissolved Iron Dissolved Lead	0.015	0.015	N/A N/A	0.36 J+ 0.001 U	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	0.05 U 0.001 U	N/A N/A	N/A N/A	N/A N/A	3.1 J+ 0.001 U	N/A N/A	N/A N/A	0.05 U 0.001 U	N/A N/A	N/A N/A	0	0
Dissolved Lead Dissolved Magnesium	0.015	0.015	N/A	12	N/A	N/A	N/A	N/A	N/A	2.5	N/A	N/A	N/A	19	N/A N/A	N/A	3	N/A	N/A		
Dissolved Maganese	0.3	0.84	N/A	0.35	N/A	N/A	N/A	N/A	N/A	0.0079	N/A	N/A	N/A	0.34	N/A	N/A	0.0082	N/A	N/A	2	0
Dissolved Nickel	0.1	0.1	N/A	0.025	N/A	N/A	N/A	N/A	N/A	0.0013	N/A	N/A	N/A	0.0064	N/A	N/A	0.001 U	N/A	N/A	0	0
Dissolved Potassium		160	N/A	4.3	N/A	N/A	N/A	N/A	N/A	1.2	N/A	N/A	N/A	8.5	N/A	N/A	2.1	N/A	N/A		
Dissolved Sodium			N/A	150	N/A	N/A	N/A	N/A	N/A	25	N/A	N/A	N/A	110	N/A	N/A	6.8	N/A	N/A		
Dissolved Vanadium TOTAL METALS BY 200.8 - (mg/L)	0.26		N/A	0.005 U	N/A	N/A	N/A	N/A	N/A	0.005 U	N/A	N/A	N/A	0.005 U	N/A	N/A	0.005 U	N/A	N/A	0	
Total Antimony	0.006	0.006	0.001 U	N/A	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	N/A	0.001 U	0.001 U	0.001 U	N/A	0.001 U	0.001 U	N/A	0.001 U	0.001 U	0	0
Total Arsenic	0.01	0.00	0.0019	N/A	0.0039	0.01	0.0097	0.001 U	0.001 U	N/A	0.0011	0.0012	0.0011	N/A	0.024	0.001 U	N/A	0.0032	0.001 U	2	2
Total Barium		2	0.054	N/A	0.18	0.039	0.038	0.0023	0.046	N/A	0.032	0.031	0.043	N/A	0.0061	0.0011	N/A	0.017	0.13		0
Total Beryllium	0.004	0.004	0.001 U	N/A	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	N/A	0.001 U	0.001 U	0.001 U	N/A	0.001 U	0.001 U	N/A	0.001 U	0.001 U	0	0
Total Calcium			25 J+	N/A	61 J+	45 J+	43 J+	0.42 J+	90 J+	N/A	35 J+	35 J+	27 J+	N/A	7.3 J+	2.3 J+	N/A	12 J+	240 J+		
Total Chromium Total Iron	0.05	0.1	0.001 U 0.77 J+	N/A N/A	0.001 U	0.001 U 3.2 J+	0.001 U 3 J+	0.001U	0.001 U	N/A N/A	0.001 U 0.05 UJ	0.001 0.91 J+	0.085	N/A N/A	0.01 0.49 J+	0.0019 0.051 J+	N/A N/A	0.001 U 0.05 U	0.028 0.1 J+	1	0
Total Lead	0.015	0.015	0.77 J+	N/A	15 J+ 0.001 U	0.001 U	0.001 U	0.069 J+ 0.001U	0.24 J+ 0.001 U	N/A	0.05 UJ 0.001 U	0.91 J+	0.15 J+ 0.001 U	N/A N/A	0.49 J+ 0.001 U	0.001 J+	N/A N/A	0.001 U	0.13+ 0.001 U	0	0
Total Magnesium			19	N/A	21	18	18	0.24	12	N/A	0.001 0	0.39	0.05 U	N/A	0.001 0	0.26	N/A	3.1	0.056		
Total Manganese	0.3	0.84	0.18	N/A	2.1	0.41	0.4	0.014	0.005 U	N/A	0.005 U	0.006	0.005 U	N/A	0.0065	0.005 U	N/A	0.005 U	0.005 U	2	1
Total Nickel	0.1	0.1	0.001 U	N/A	0.001 U	0.0064	0.0062	0.001 U	0.001 U	N/A	0.001 U	0.001 U	0.001 U	N/A	0.0011	0.001	N/A	0.001 U	0.0027	0	0
Total Potassium		160	7.1	N/A	15	6.3	6.1	1.8	4.8	N/A	4.8	4.7	51	N/A	9.1	5.3	N/A	4.9	52		
Total Sodium Total Vanadium	0.26		37 0.005 U	N/A N/A	800 0.005 U	120 0.005 U	120 0.005 U	68 0.005 U	280 0.005 U	N/A N/A	71 0.005 U	68 0.005 U	130 0.011	N/A N/A	82 0.015	89 0.005 U	N/A N/A	34 0.005 U	95 0.005 U	0	
PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFIED			0.000 0	19/73	0.000 0	0.000 0	0.0000	0.000 0	0.000 0	14/74	0.000 0	0.000 0	0.011	14/74	0.010	0.000 0	14/74	0.000 0	0.000 0	·	
Perfluorobutanoic Acid (PFBA)			3.00 J	1.93 J	4.5 U	31.5	27	4.39 U	1.68 J	4.42 U	4.36 R	4.37 R	4.33 R	18	4.39 UJ	4.54 R	4.25 U	4.37 UJ	4.24 R	Ι Ι	
Perfluoropentanoic acid (PFpEA)			5.53	5.88	4.5 U	61.6	52.7	4.39 U	1.96 J	4.42 U	4.36 UJ	4.37 UJ	2.94 J	29.7	4.39 UJ	4.54 UJ	4.25 U	4.37 U	4.24 UJ		
Perfluorobutanesulfonic acid (PFBS)			3.19 J	4.43 U	4.5 U	17	13.2	4.39 U	4.16 U	4.42 U	4.36 U	4.37 U	4.33 U	7.85	4.39 U	4.54 U	4.25 U	4.37 U	4.24 UJ		
Perfluorohentanoic acid (PFHxA)			13.8	8.83	4.5 U	101	97.9	4.39 U 4.39 U	4.16 U	4.42 U	4.36 U	4.37 U 0.944 J	3.15 J	55.3 61.5	4.39 U	4.54 U	4.25 U	4.37 U	4.24 UJ		
Perfluoroheptanoic acid (PFHpA) Perfluorohexanesulfonic acid (PFHxS)		18 ²	8.02 8.00	4.43 U 2.87 J	4.5 U 4.5 U	138 68.3	132 64.9	4.39 U 4.39 U	0.925 J 4.16 U	4.42 U 4.42 U	1.29 J 4.36 U	0.944 J 4.37 U	3.19 J 2.48 J	61.5 27.4	4.39 U 4.39 U	4.54 U 4.54 U	4.25 U 4.25 U	4.37 U 4.37 U	4.24 U 4.24 U		2
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS)			4.44 U	4.43 U	4.5 U	4.6 U	4.71 U	4.39 U	4.16 U	4.42 U	4.36 U	4.37 U	4.33 U	4.3 U	4.39 U	3.0 J	4.25 U	4.37 U	4.24 U		
Perfluorooctanoic acid (PFOA)	70	12 ²	39.2	18.1	2.59 J	324	279	4.39 U	5.06	4.42 U	2.6 J	2.32 J	11.2	192	4.39 U	4.54 U	4.25 U	4.37 U	4.24 U	2	4
Perfluoroheptanesulfonic Acid (PFHpS)			4.44 U	4.43 U	4.5 U	5.58	4.28 J	4.39 U	4.16 U	4.42 U	4.36 U	4.37 U	4.33 U	4.3 U	4.39 U	4.54 U	4.25 U	4.37 U	4.24 U		
Perfluorononanoic acid (PFNA) Perfluorooctanesulfonamide (PFOSA)		11 ²	4.44 U 3.11 J	4.43 U 17.7	4.5 U 4.5 U	30.8 10.2	29.9 7.73	4.39 U 4.39 U	4.16 U 4.16 U	4.42 U 4.42 U	4.36 U 4.49	4.37 U 2.72 J	4.33 U 4.33 U	13.4 16	4.39 U 4.39 U	4.54 U 4.54 U	4.25 U 4.25 U	4.37 U 4.37 U	4.24 U 4.24 U		2
Perfluorooctanesulfonic (PFOSA) Perfluorooctanesulfonic (PFOS)	70	15 ²	5.04	2.53 J	4.5 U	168	1.73	4.39 U	11.4	4.42 U 4.42 U	4.49 4.36 U	4.37 U	4.33 U 4.33 U	29	4.39 U	4.54 U	4.25 U	4.37 U	4.24 U	1	2
Perfluorodecanoic Acid (PFDA)			4.44 U	4.43 U	4.5 U	2.40 J	2.43 J	4.39 U	4.16 U	4.42 U	4.36 U	4.37 U	4.33 U	4.3 U	4.39 U	4.54 U	4.25 U	4.37 U	4.24 U		
1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS)			4.44 U	4.43 U	4.5 U	4.6 U	4.71 U	4.39 U	4.16 U	4.42 U	4.36 U	4.37 U	4.33 U	4.3 U	4.39 U	4.54 U	4.25 U	4.37 U	4.24 U		
N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)			4.44 U	4.43 U	4.5 U	4.6 U	4.71 U	4.39 U	4.16 U	4.42 U	4.36 U	4.37 U	4.33 U	4.3 U	4.39 U	4.54 U	4.25 U	4.37 U	4.24 U		
N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA)			4.44 U	4.43 U	4.5 U	4.6 U	4.71 U	4.39 U	4.16 U	4.42 U	4.36 U	4.37 U	4.33 U	4.3 U	4.39 U	4.54 U	4.25 U	4.37 U	4.24 U		
Perfluoroundecanoic Acid (PFUnA) Perfluorodecanesulfonic Acid (PFDS)			4.44 U 4.44 U	4.43 U 4.43 U	4.5 U 4.5 U	4.6 U 4.6 U	4.71 U 4.71 U	4.39 U 4.39 U	4.16 U 4.16 U	4.42 U 4.42 U	4.36 U 4.36 U	4.37 U 4.37 U	4.33 U 4.33 U	4.3 U 4.3 U	4.39 U 4.39 U	4.54 U 4.54 U	4.25 U 4.25 U	4.37 U 4.37 U	4.24 U 4.24 U		
Perfluorodecanesulfonic Acid (PFDs) Perfluorododecanoic Acid (PFDoA)			4.44 U	4.43 U	4.5 U	4.6 U	4.71 U 4.71 U	4.39 U 4.39 U	4.16 U	4.42 U 4.42 U	4.36 U	4.37 U	4.33 U 4.33 U	4.3 U	4.39 U	4.54 U	4.25 U	4.37 U	4.24 U		
N-Methyl Perfluorooctane Sulfonamide (MeFOSA)			22.2 U	22.2 U	22.5 UJ	22.5 UJ	23.6 U	22.0 U	20.8 U	22.1 U	21.8 UJ	21.7 UJ	21.7 U	21.5 U	21.9 U	22.7 U	21.2 U	21.9 U	21.2 U		
Perfluorotrodecanoic Acid (PFTrDA)			4.44 U	4.43 U	4.5 U	4.6 U	4.71 U	4.39 U	4.16 U	4.42 U	4.36 U	4.37 U	4.33 U	4.3 U	4.39 U	4.54 U	4.25 U	4.37 U	4.24 U		
Perfluorotetradecanoic Acid (PFTeDa)			4.44 U	4.43 U	4.5 U	4.6 U	4.71 U	4.39 U	4.16 U	4.42 U	4.36 U	4.37 U	4.33 U	4.3 U	4.39 U	4.54 U	4.25 U	4.37 U	4.24 U		
N-Ethyl Perfluorooctane Sulfonamide (EtFOSA)			22.2 U	22.2 U	22.5 UJ	22.5 UJ	23.6 U	22.0 U	20.8 U	22.1 U	21.8 UJ	21.7 UJ	21.7 U	21.5 U	21.9 U	22.7 U	21.2 U	21.9 U	21.2 U		
Perfluorogexadecanoic Acid (PFHxDA)			4.44 U 22.2 U	4.43 U 22.2 U	4.5 U 22.5 U	4.6 U 23.0 U	4.71 U 23.6 U	4.39 U 22.0 U	4.16 U 20.8 U	4.42 U 22.1 U	4.36 U 21.8 U	4.37 U	4.33 U 21.7 U	4.3 U 21.5 U	4.39 U 21.9 U	4.54 UJ 22.7 U	4.25 U 21.2 U	4.37 U 21.9 U	4.24 U 21.2 U		
N-Methyl Perfluorooctanesulfonamido Ethanol (MeFOSE) N-Ethyl Perfluorooctanesulfonamido Ethanol (EtFOSE)			22.2 U	22.2 U	22.5 U	23.0 U	23.6 U	22.0 U	20.8 U	22.1 U 22.1 U	21.8 U	21.8 U 21.8 U	21.7 U	21.5 U	21.9 U	22.7 U	21.2 U	21.9 U	21.2 U		
Combination of PFOA and PFOS	70		44.24	20.63 J	2.59 J	492	425	ND	16.46	ND	2.6 J	2.32 J	11.2	221	ND	ND	ND	ND	ND	2	
FIELD PARAMETERS																					
Dissolved Oxygen (mg/l)			1	1.4	1.8	0.9	N/A	0.6	6.1	8.7	0.6	N/A	1.1	1.5	1.7	3.0	5.3	0.6	1.4		
Oxidation Reduction Potential (mV)			-153	-16	-89	-147	N/A	-171	117	199	-170	N/A	-121	-103	-68	-22	146	-71	-87		
pH (standard units)			7.6	7	6.9	7.5	N/A	8.4	6.6	6.3	11.6	N/A	11.9	7.5	10.5	10.5	6.3	9.8	12.7		
Specific Conductance (us/cm) Temperature (degrees Celcius)			456 12	1,120 14	5,271 14	829 10	N/A N/A	338 13	2,019	215 8	730 9	N/A N/A	1,373 10	941	467 10	443 8	98	239 9	5,267 10		
Turbidity (NTU)			< 5	< 5	< 5	<5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	9	< 5	<5		
* * * * * * * * * * * * * * * * * * * *																					

2020 Semi-Annual Summary Report

Coakley Landfill Superfund Site - Greenland and North Hampton, New Hampshire

NOTES	
1.	Monitored Zone / Unit identifies the hydrogeological unit within the screened/open interval. The hydrogeology of the site is comprised of four principle geological units include including bedrock, glacial till, marine sediments consisting of predominately of silt and clay, and sandy outwash. Bedrock well screened intervals vary as follows: "OBH-BR" wells are standard 6-inch diameter wells with steel casing set in bedrock and open boreholes (typical water supply well construction). "SBR" indicates the screen interval is the upper most section of bedrock. "DBR" is used to differentiate a screened interval that is below the uppermost section of bedrock (i.e.; MW-55 versus MW-50). "MSC" defines marine silt and clay.
2.	Bolded values denote concentration exceeding the USEPA Cleanup Level (CL).
3.	Shaded values denote concentration exceeding the NHDES Ambient Groundwater Quality Standard.
4.	The list of volatile organic compounds (VOCs) provided includes analytes detected in OU-1 or OU-2 since 2006, and all VOCs that have ICLs. ICLs were established for 1,2-dichloropropane and tetrachloroethylene (PCE), however, no detections have been reported at groundwater sampling points included in the long-term monitoring events since 1998. An ICL was established for trans-1,2-dichloroethene, however, no detections have been reported at groundwater sampling points included in the long-term monitoring events since 1999.
5.	An ICL was established for the semi-volatile organic compounds (SVOCs) diethyl phthalate and phenol. However, in May 1998 and April 1999, groundwater samples were submitted for analysis of SVOCs and no exceedances were reported; therefore, SVOCs were removed from the long-term monitoring plan.
6.	Result for groundwater primary/duplicate samples are provided in this table: MW-4/MW-4-DUP, AE-3A/AE-3A-DUP, GZ-105/GZ-105-DUP, and MW-20D1/MW-20D1-DUP.
ABBREVIATIONS	
	N/A Sample was not analyzed/measured for indicated parameter
	J Estimated concentration
	J+ Estimated high
	J- Estimated low
	R Data rejected #.## U Not Detected at the reporting detection limit indicated
	#.## U Not Detected at the reporting detection limit indicated UJ Undetected estimated
	NHDES AGQS NH Department of Environmental Services Ambient Groundwater Quality Standard (Env-Or-600, Table 600-1)
	USEPA CL US Environmental Protection Agency Cleanup Level established in 2015 Fifth Explanation of Significant Difference.
	uS/cm microsiemens per centimeter
	ug/L micrograms per liter, parts per billion
	mg/L milligram per liter, parts per million
	ng/L nanograms per liter, parts per trillion
	NTU nephelometric turbidity unit
	mV millivolt * Field parameter result qualified due to failed OA/OC or suspected issues with measurements, as noted on field
	 Field parameter result qualified due to failed QA/QC or suspected issues with measurements, as noted on field The AGQS for xylenes is for total xylene or the sum of all isomers, including: m&p-Xylene and o-Xylene.
	The AGQs for xylenes is for total xylene or the sum or all isomers, including: mαρ-xylene and o-xylene. <# Less than # indicated.
	1 Monitoring well resampled for PFAS on June 9 through 11, 2020 due to the initial sample arriving at the lab outside of
	2 NHDES Ambient Groundwater Quality Standards effective September 3, 2020.

Draft Table 4 - Analytical Results for Off-Site Water Supply Wells: Spring 2020

2020 Semi-Annual Summary Report Coakley Landfull Superfund Site Greenland and North Hampton, New Hampshire

SAMPLE IDENTIFICATION	USEPA	NHDES	USEPA	339 BHR	346 BHR	415 BHR	R-3 R-3 DUP	4 SMW	9 SMW	10 SMW	16 SMW	19 SMW	21 SMW	21 SMW DUP	4 ROD	10 ROD	25 FW	*5 BFL	*9 BFL	*15 BFL	340 BHR	463 BHR	7 WKD	8 WKD	27 BR	178A LR	67 NR	14PWC
DATE SAMPLED	CL	AGQS	MCL	20-May-20	20-May-20	21-May-20	18-May-20 18-May-2	21-May-20	22-May-20	18-May-20	NA	20-May-20	19-May-20	19-May-20	18-May-20	19-May-20	19-May-20	18-May-20	18-May-20	18-May-20	20-May-20	20-May-20	NA	21-May-20	21-May-20	20-May-20	21-May-20	18-May-20
VOLATILE ORGANIC COMPOUNDS																												
1,4-dioxane (ug/L)	3	0.32	-	0.28	<0.2	<0.2	0.260 0.210	<0.2	<0.2	<0.2	NS	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NS	<0.2	<0.2	<0.2	<0.2	<0.2
FIELD PARAMETERS																												
Temperature (degrees Celcius)			-	13	11	11	11 NA	12	11	11	NS	10	11	NA	10	11	10	11	11	11	13	11	NS	10	13	11	10	11
Conductivity (uS/cm)				434	799	463	441 NA	596	445	479	NS	824	752	NA	664	655	439	647	380	539	152	774	NS	355	576	474	79	147
Dissolved Oxygen (mg/L)	-	-		1.4	1.4	<0.5	<0.5 NA	<0.5	<0.5	2.8	NS	0.7	<0.5	NA	6.5	0.5	<0.5	< 0.5	2.8	0.7	5.4	<0.5	NS	<0.5	7.8	1.1	6	<0.5
pH (standard units)	-		-	7.1 118	6.8 1	8.4	8.1 NA -164 NA	7	7.9	35	NS	7.7 -119	8.9	NA NA	- /-	101	8.3	7.1	6.5	7.2	6.6	7.6	NS NC	7.9 44	6.7	6.6	171	6.9
Oxidation/Reduction Potential (mV) Turbidity (NTU)	-	<u> </u>		118	119	62 <5	-164 NA <5 NA	45 <5	-196 5	- 35 - <5	NS N	-119 11	-195 <5	NA NA	-65 <5	101	-122	-12 14	161 <5	δ <5	128 <5	-76 <5	NS NS	44 <5	110 <5	144	171 <5	-55 <5
SAMPLE IDENTIFICATION	USEPA	NUDES	-	339 BHR	346 BHR	415 BHR	R-3 R-3 DUP	4 SMW	9 SMW	10 SMW	16 SMW	19 SMW		21 SMW DUP	4 ROD	10 ROD	25 FW	5 BFL	9 BFL	15 BFL	340 BHR	463 BHR	7 WKD	8 WKD	27 BR	178A LR	67 NR	14 PWC
DATE SAMPLED	USEPA	AGOS		11-Jun-20	11-Jun-20	9 Jun 20	19 May 20 19 May 2	4 SW VV	22 May 20	10 SWW 20	NA NA	0 Jun 20	0 Jun 20	9-Jun-20	19-May-20	10-Jun-20	0-1up-20	19_May(-20	9-Jun-20	19-May-20	11-Jun-20	9-Jun-20	NA NA	11-Jun-20	10-Jun-20	9-1up-20	10-Jun-20	19-May-20
PER- & POLY-FLUORINATED ALKYL SUBSTANCES BY MODIFI	ED 527 (r	AGQ3		11-Juli-20	11-5un-20	5-Juli-20	10-Iviay=20 10-Iviay=2	J 10-Juli-20	22=IVIdy=20	10-Iviay=20	IVA	5-Juli-20	5-Juli-20	5-Juli-20	10-1-ldy-20	10-3011-20	3-Juli-20	10-1-ldy-20	3-Juli-20	10-1-ldy-20	11-Juli-20	9-Juli-20	IVA	11-Juli-20	10-3011-20	9-Juli-20	10-3411-20	10-14dy-20
Perfluorobutanoic Acid (PFBA)		ig/L)		1.79 J	4.28 U	4.31 U	1.82 J 2.14 J	4.31 U	4.22 U	1.6.J	NS	4.46 U	4.37 []	4.33 U	2.18 1	4.57 U	4.37 U	1.19 1	4 36 11	4 34 11	4.39 U	4.30 U	NS	4.56 U	4.28 U	1.99 1	4.33 U	4.37 U
Perfluoropentanoic acid (PFpEA)				3.23 J	4.28 U	4.31 U	4.32 U 4.37 U	4.31 U	4.22 U	4.41 U	NS	4.46 U	4.37 U	4.33 U	4.18 U	4.57 U	4.37 U	4.41 U	4.36 U	4.34 U	4.39 U	4.30 U	NS NS	4.56 U	2.03 1	3.10 1	4.33 U	4.37 U
Perfluorobutanesulfonic acid (PFBS)				2.04 J	4.28 U	4.31 U	4.32 U 4.37 U	4.31 U	4.22 U	4.41 U	NS	4.46 U	4.37 U	4.33 U	3.32 J	4.20 J	4.37 U	4.41 U	4.36 U	4.34 U	4.39 U	4.30 U	NS NS	4.56 U1	4.28 U	2.04 1	4.33 U	4.37 U
Perfluorohexanoix Acid (PFHxA)				4.57 J	4.28 UJ	4.31 UJ	4.32 U 4.37 U	4.31 UJ	4.22 U	4.41 U	NS	4.46 UJ	4.37 U.I	4.33 UJ	4.18 U	4.57 UJ	4.37 UJ	4.41 U	4.36 UJ	4.34 U	4.39 UJ	4.30 UJ	NS NS	4.56 UJ	4.28 UJ	4.46 UJ	4.33 UJ	4.37 U
Perfluoroheptanoic acid (PFHxA)				4.57 J 6.47	4.28 U	4.31 UJ	1.73 J 4.37 U	0.886 J	4.22 U	4.41 U	NS NS	4.46 UJ	4.37 UJ	4.33 UJ	4.18 U	4.57 UJ	4.37 U	4.41 U	4.36 UJ	4.34 ()	4.39 UJ	4.30 U	NS NS	4.56 UJ	4.28 U	1.91 J	4.33 U1	4.37 U
Perfluorohexanesulfonic acid (PFHxS)		18**		1.53 J	4.28 U	2.19 J	4.32 U 4.37 U	1.40 J	2.71 J	1.54 J	NS NS	4.46 U	4.37 UJ	4.33 UJ	2.15 J	1.46 J	4.37 U	4.41 U	1.76 1	4.34 U	4.39 U	6.97	NS NS	1.16 1	4.28 U	4.46 UJ	4.33 U	4.37 U
1H. 1H. 2H. 2H-Perfluorooctanesulfonic Acid (6:2FTS)		10		4.47 U	4.28 U	4.31 U	4.32 U 4.37 U	4.31 U	4.22 U	4.41 U	NS	4.46 U	4.37 U	4.33 U	4.18 U	4.57 U	4.37 U	4.41 U	4.36 U	4.34 U	4.39 U	4.30 U	NS NS	4.56 U	4.28 U	4.46 U	4.33 U	4.37 U
Perfluorooctanoic acid (PFOA)	70	12**		16.3	4.26 U	3.15 J	4.32 4.58	5.87	4.22 0	1.36 J	NS	4.40 U	4.37 U	4.33 U	4.13 1	4.57 U	3.34 1	1.86 1	4.09 1	5.93	2.70 1	6.46	NS NS	1.94 1	6.11	7.66	1.27 1	3.06 1
				16.3 4.47 U	1.56 J 4.28 U	4.31 U	4.32 J 4.58	4.31 U	4.87 4.22 U	1.36 J 4.41 IJ	NS NS	4.12 J 4.46 U.J	4.37 UJ	1.54 J 4.33 U.J	4.13 J	4.57 U	4.37 U	4.41 U	4.09 J	5.93 4.34 U	4.39 U	4.30 U	NS NS	4.56 U1	4.28 U	4.46 U1	4.33 U1	4.37 U
Perfluoroheptanesulfonic Acid (PFHpS)		11**		4.47 U	4.28 U	4.31 U	1.02 0 1.07 0	4.31 U	4.22 U	4.41 U			4.37 UJ	4.33 UJ 4.33 U	4.18 U	4.57 U	4.37 U	4.41 U	4.36 UJ	4.34 U	4.39 U	4.30 U	NS NS	4.56 UJ	4.28 U	4.46 UJ	4.33 UJ	4.37 U
Perfluorononanoic acid (PFNA)											NS	4.46 U																
Perfluorooctanesulfonamide (PFOSA)				6.65	18.5	10.1	11.8 J 27.4 J	63.4	23.4	15.3	NS	70.5	5.29	6.51	54.2	32	21.3	16.6	73.8	121	29	16.1	NS	11.3	19.3	14.1	37.8	30.3
Perfluorooctanesulfonic (PFOS)	70	15**		1.01 J	1.04 J	4.31 U	4.32 U 4.37 U	4.31 U	4.22 U	4.41 U	NS	4.46 UJ	4.37 UJ	4.33 UJ	4.18 U	4.57 U	4.37 U	4.42	4.98 J	0.895 J	4.39 U	6.17	NS	4.56 UJ	5.36	2.31 J	4.33 UJ	4.37 U
Perfluorodecanoic Acid (PFDA)				4.47 U	4.28 U	4.31 U	4.32 U 4.37 U	4.31 U	4.22 U	4.41 U	NS	4.46 U	4.37 U	4.33 U	4.18 U	4.57 U	4.37 U	4.41 U	4.36 U	4.34 U	4.39 U	4.30 U	NS	4.56 U	4.28 U	4.46 U	4.33 U	4.37 U
1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS)				4.47 U	4.28 U	4.31 U	4.32 U 4.37 U	4.31 U	4.22 U	4.41 U	NS	4.46 U	4.37 U	4.33 U	4.18 U	4.57 U	4.37 U	4.41 U	4.36 U	4.34 U	4.39 U	4.30 U	NS	4.56 U	4.28 U	4.46 U	4.33 U	4.37 U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA				4.47 U	4.28 U	4.31 U	4.32 U 4.37 U	4.31 U	4.22 U	4.41 U	NS	4.46 U	4.37 U	4.33 U	4.18 U	4.57 U	4.37 U	4.41 U	4.36 U	4.34 U	4.39 U	4.30 U	NS	4.56 U	4.28 U	4.46 U	4.33 U	4.37 U
N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA)				4.47 U	4.28 U	4.31 U	4.32 U 4.37 U	4.31 U	4.22 U	4.41 U	NS	4.46 U	4.37 U	4.33 U	4.18 U	4.57 U	4.37 U	4.41 U	4.36 U	4.34 U	4.39 U	4.30 U	NS	4.56 U	4.28 U	4.46 U	4.33 U	4.37 U
Perfluoroundecanoic Acid (PFUnA)				4.47 U	4.28 U	4.31 UJ	4.32 U 4.37 U	4.31 UJ	4.22 U	4.41 U	NS	4.46 UJ	4.37 U	4.33 UJ	4.18 U	4.57 UJ	4.37 U	4.41 U	4.36 UJ	4.34 U	4.39 UJ	4.30 U	NS	4.56 UJ	4.28 UJ	4.46 UJ	4.33 UJ	4.37 U
Perfluorodecanesulfonic Acid (PFDS)				4.47 U	4.28 U	4.31 U	4.32 U 4.37 U	4.31 U	4.22 U	4.41 U	NS	4.46 UJ	4.37 UJ	4.33 UJ	4.18 U	4.57 U	4.37 U	4.41 U	4.36 UJ	4.34 U	4.39 U	4.30 U	NS	4.56 UJ	4.28 U	4.46 UJ	4.33 UJ	4.37 U
Perfluorododecanoic Acid (PFDoA)				4.47 U	4.28 U	4.31 U	4.32 U 4.37 U	4.31 U	4.22 U	4.41 U	NS	4.46 U	4.37 U	4.33 U	4.18 U	4.57 U	4.37 U	4.41 U	4.36 U	4.34 U	4.39 U	4.30 U	NS	4.56 U	4.28 U	4.46 U	4.33 U	4.37 U
N-Methyl Perfluorooctane Sulfonamide (MeFOSA)				22.3 U	21.4 U	21.6 U	21.8 UJ 21.5 UJ	21.5 U	21.1 U	22.1 UJ	NS	22.3 U	21.4 UJ	22.6 UJ	22.6 UJ	22.9 U	21.8 U	22.0 UJ	21.8 U	21.8 UJ	22.0 U	21.5 U	NS	22.8 U	21.4 U	22.3 U	21.6 U	21.1 UJ
Perfluorotrodecanoic Acid (PFTrDA)				4.47 U	4.28 U	4.31 U	4.32 U 4.37 U	4.31 U	4.22 U	4.41 U	NS	4.46 U	4.37 U	4.33 U	4.18 U	4.57 U	4.37 U	4.41 U	4.36 U	4.34 U	4.39 U	4.30 U	NS	4.56 U	4.28 U	4.46 U	4.33 U	4.37 U
Perfluorotetradecanoic Acid (PFTeDa)				4.47 U	4.28 U	4.31 U	4.32 U 4.37 U	4.31 U	4.22 U	4.41 U	NS	4.46 U	4.37 U	4.33 U	4.18 U	4.57 U	4.37 U	4.41 U	4.36 U	4.34 U	4.39 U	4.30 U	NS	4.56 U	4.28 U	4.46 U	4.33 U	4.37 U
N-Ethyl Perfluorooctane Sulfonamide (EtFOSA)				22.3 U	21.4 U	21.6 U	21.8 UJ 21.5 UJ	21.5 U	21.1 U	22.1 UJ	NS	22.3 U	21.4 UJ	22.6 UJ	22.6 UJ	22.9 U	21.8 U	22.0 UJ	21.8 U	21.8 UJ	22.0 U	21.5 U	NS	22.8 U	21.4 U	22.3 U	21.6 U	21.1 UJ
Perfluorogexadecanoic Acid (PFHxDA)				4.47 U	4.28 U	4.31 U	4.32 U 4.37 U	4.31 UJ	4.22 U	4.41 U	NS	4.46 U	4.37 U	4.33 U	4.18 U	4.57 U	4.37 U	4.41 U	4.36 U	4.34 U	4.39 U	4.30 U	NS	4.56 U	4.28 U	4.46 U	4.33 U	4.37 U
N-Methyl Perfluorooctanesulfonamido Ethanol (MeFOSE)				22.3 U	21.4 U	21.6 U	21.6 U 21.8 U	21.5 U	21.1 U	22.1 U	NS	22.3 U	21.8 U	21.7 U	20.9 U	22.9 U	21.8 U	22.1 U	21.8 U	21.7 U	22.0 U	21.5 U	NS	22.8 U	21.4 U	22.3 U	21.6 U	21.9 U
N-Ethyl Perfluorooctanesulfonamido Ethanol (EtFOSE)				22.3 U	21.4 U	21.6 U	21.6 U 21.8 U	21.5 U	21.1 U	22.1 U	NS	22.3 U	21.8 U	21.7 U	20.9 U	22.9 U	21.8 U	22.1 U	21.8 U	21.7 U	22.0 U	21.5 U	NS	22.8 U	21.4 U	22.3 U	21.6 U	21.9 U
Combination of PFOA and PFOS	70			17.31 J	2.60 J	3.15 J	4.32 4.58	5.87	4.87	1.36 J	NS	4.12 J	1.71 J	1.54 J	4.13 J	3.59 J	3.34 J	6.28 J	9.07 J	6.825 J	2.70 J	12.63	NS	1.94 J	11.47	9.97 J	1.27 J	3.06 J

TABLE NOTES:

TABLE ABBREVIATIONS:

NA = Not Analyzed

NM = Not Measured

NR = Not Recorded - field parameter measurement did not meet QA/QC criteria and were rejected uS/cm = microSiemens per centimeter

ug/L = micrograms per liter (parts per billion)

mg/L = miligrams per liter (parts per million)

ng/L = nanograms per liter (parts per trillion)

NTU - Nephelometric Turbidity Units

mV = millivolts

< = parameter concentration below detection limit indicated

DIP = dunicates sample collected

< = parameter concentration below detection limit indicated</p>
DUP = duplicate sample collected.
B = Result is associated with lab contamination. PFHpA concentration in the blank was higher than the result in the sample.
Q = The ion transition ratio is outside the acceptable limits.
J = The reported analyte is an estimated concentration between the method detection limit and the reporting limit.
J = The reported analyte is an estimated concentration with a low bias.
R = The reported analyte is rejected due to preservation outside the method requirement or analysis outside the technical holding time.
U = undetected estimated
U = undetected
I th should be noted that 3 and 5 Berry Farm Lane share one well, 9 and 11 Berry Farm Lane share one well, and 15 and 17 Berry Fram Lane share one well.
** NHDES Ambient Groundwater Quality Standard effective September 3, 2020.

NHDES AGQS = NHDES Ambient Groundwater Quality Standard
USEPA MCL = USEPA Primary Drinking Water Standard
USEPA CL = USEPA Groundwater Quality Standard
USEPA CL = USEPA Groundwater Quality Standard
Bold values denote concentration exceeding the USEPA Cleanup Level (CL).
Shaded values denote concentration exceeding the NHDES Ambient Groundwater Quality Standard
Post = Post treatment sample collected for arsenic and manganese.

* Manganese concentrations compared to USEPA HA of 0.3 mg/L

BFL = Berry Farm Lane
BHR = Breakfast Hill Road
BR = Birch Road
FW = Falls Way
LR = Lafayette Road
NN = North Road
PWC = Pinewood Circle
RCD = Ridgerest Drive
ROD = Red Oak Drive
R-3 = 368 Breakfast Hill Road
SMW = Stone Meadow Way

WKD = Woodknoll Drive

Draft Table 5 - Summary of Surface Water Analytical Data: Spring 2020 2020 Semi-Annual Summary Report Coakley Landfull Superfund Site Greenland and North Hampton, New Hampshire

March Company Compan																
10													!			
		Acute	Chronic	5/14/2020	5/14/2020	5/14/2020	5/14/2020	5/14/2020	5/15/2020	5/14/2020	5/14/2020	5/15/2020	1			
### STATE FIRST 1976			1	10.11	10 P	10.11	10.11	10.11	10.11	10.11	10.11	10.11	1			
Text				100	10 K	100	100	100	100	100	10 0	10.0	ı			
Martines				Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	1			
Memory Color	Aluminum	0.75	0.087										1			
Marie	Antimony	9	1.6	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	l			
Barylane	Arsenic*	0.34	0.15	0.001 U	0.0043	0.0046	0.001 U	0.001 U	0.001 U	0.001 U	0.0017	0.001 U	1			
Emmark	Barium			0.0043		<u> </u>	0.0077	0.0048				0.0065				
California	-															
Processing																
Control Cont	Calcium			9.9 J+	25 J+	29 J+	25 J+	15 J+	11 J+	14 J+	14 J+	21 J+	l			
Copper	Chromium (Cr+3 + Cr+6)*			0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Image: Class 1																
Section Control Cont																
Nagester													ł			
Designation _ _ _ _ _ _ _ _													1			
Marier	-												l			
Parameter 0.13 0.013 0.011 0.0099 0.0003 0.0014 0.0011 0.0015 0.0044 0.0014 0.	·												1			
December													ĺ			
Sherf	Potassium			1.5	6.8	6.7	6.8	2.1	1.8	1.4	2.2	2.8	l			
Sestion			0.005													
Trailum																
													1			
Tel-Stokens by \$2508 SM ugs. Tel-Stokens by \$2508 SM ugs.													-			
Amount Company State State Company State Company C													1			
CASCARDATE PRINCIPATION PRINCIPA		0.03	0.03	0.0095	0.005 0	0.005 0	0.005 0	0.0057	0.0067	0.005 0	0.005 0	0.0072				
Ammonia* (mgs)			l	0.2	1.7	1.8	0.86	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1			
Ammonia* (rigit) Part Dependent OS U								.					USEPA Scree	ning Levels	USEPA Scre	ening Levels
## CFF CHEMPORAYSED CHEMPORALS BY MODIFIED ST - (incl.) ## Furthur/Openstance Acid (FPRA)							ı	1	ı	1		1	Adult	Child	Adult	Child
Perfluorobutanois Acid (PFBA)	Ammonia** (mg/L)	pH D	ependent	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	Recreator	Recreator	Recreator	Recreator
Perfluoropentanoic acid (PFPGA)													EF = 45	Days	EF = 1	20 Days
Perfluorobutanesulfonic acid (PFBS)																
Perfluorohexanoix Acid (PFHAA)	,															
Perfluoroheptanoic acid (PFHA)	\ /															
Perfluoronchexanesulfonic acid (PFHxS)	, ,															
H. H. P.H. Z.H. Perfluoroctanesulfonic Acid (6:2FTS)																
Perfluoroteptanesulfonic Acid (PFHpS)	` '															
Perfluoronotanesusid (PFNA)	Perfluorooctanoic acid (PFOA)	-		114	709 J	719	594	160	50.1	13.6	118	280	18,300	2,030	6,850	760
Perfluoroctanesulfonamide (PFOSA)				1.67 J	6.94		7.53	2.11 J	4.53 U	4.42 U	1.90 J	2.47 J				
Perfluoroctanesulfonic (PFOS)	, ,															
Perfluorodecanoic Acid (PFDA) 4.28 U 259 J 186 J 291 19.9 4.76 4.42 U 10.4 62.6	\ /															
H. H. 2H. 2H-Perfluorodecanesulfonic Acid (8:2FTS)	(- /															
N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	` /															
N-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA) 4.28 U 4.63 U 4.52 U 4.67 U 4.74 U 4.53 U 4.42 U 4.48 U 4.46 U	, , ,					-										
Perfluoroundecanoic Acid (PFUA)																
Perfluorododecanoic Acid (PFDoA)	Perfluoroundecanoic Acid (PFUnA)						26.7	4.74 U								
N-Methyl Perfluorooctane Sulfonamide (MeFOSA)				4.28 U	4.63 U					4.42 U	4.48 U	4.46 U				
Perfluorotrodecanoic Acid (PFTrDA)																
Perfluorotetradecanoic Acid (PFTeDa) 4.28 U 4.63 U 4.52 U 4.67 U 4.74 U 4.53 U 4.42 U 4.48 U 4.46 U	IN-Methyl Perfluorooctane Sulfonamide (MeEOSA)															
N-Ethyl Perfluorooctane Sulfonamide (EtFOSA)				■ 4 28 II	4.63 U	4.52 U										
Perfluorogexadecanoic Acid (PFHXDA) 4.28 U 4.63 U 4.52 U 4.67 U 4.74 U 4.53 U 4.42 U 4.48 U 4.46 U	Perfluorotrodecanoic Acid (PFTrDA)				4.00.11	4.50.11		 4 /4 II 	■ 4.53 U	■ 4.42 U	4.48 U	■ 4.46 U				
N-Methyl Perfluorooctanesulfonamido Ethanol (MeFOSE) 21.4 U 23.1 U 22.6 U 23.3 U 23.7 U 22.7 U 22.1 U 22.4 U 22.3 U	Perfluorotrodecanoic Acid (PFTrDA) Perfluorotetradecanoic Acid (PFTeDa)			4.28 U												
N-Ethyl Perfluoroctanesulfonamido Ethanol (EtFOSE) 28.6 23.1 U 22.6 U 23.3 U 23.7 U 22.7 U 22.1 U 22.4 U 22.3 U	Perfluorotrodecanoic Acid (PFTrDA) Perfluorotetradecanoic Acid (PFTeDa) N-Ethyl Perfluorooctane Sulfonamide (EtFOSA)			4.28 U 21.4 R	23.1 U	22.6 U	23.3 U	23.7 U	22.1 UJ	19.6 UJ	22.4 U	22.3 U	-			
Combination of PFOA and PFOS 149.6 1,769 J 1,779 1,674 309 93.8 17.05 J 209.1 580 149.6 1,769 J 1,779 1,674 309 93.8 17.05 J 209.1 580 14 14 14 NA 13 10 14 12 12 13	Perfluorotrodecanoic Acid (PFTrDA) Perfluorotetradecanoic Acid (PFTeDa) N-Ethyl Perfluorooctane Sulfonamide (EtFOSA) Perfluorogexadecanoic Acid (PFHxDA)			4.28 U 21.4 R 4.28 U	23.1 U 4.63 U	22.6 U 4.52 U	23.3 U 4.67 U	23.7 U 4.74 U	22.1 UJ 4.53 U	19.6 UJ 4.42 U	22.4 U 4.48 U	22.3 U 4.46 U				
FIELD PARAMETERS Temperature (degrees C) 14 14 NA 13 10 14 12 12 13	Perfluorotrodecanoic Acid (PFTrDA) Perfluorotetradecanoic Acid (PFTeDa) N-Ethyl Perfluorooctane Sulfonamide (EtFOSA) Perfluorogexadecanoic Acid (PFHxDA) N-Methyl Perfluorooctanesulfonamido Ethanol (MeFOSE)			4.28 U 21.4 R 4.28 U 21.4 U	23.1 U 4.63 U 23.1 U	22.6 U 4.52 U 22.6 U	23.3 U 4.67 U 23.3 U	23.7 U 4.74 U 23.7 U	22.1 UJ 4.53 U 22.7 U	19.6 UJ 4.42 U 22.1 U	22.4 U 4.48 U 22.4 U	22.3 U 4.46 U 22.3 U	 	 		
	Perfluorotrodecanoic Acid (PFTrDA) Perfluorotetradecanoic Acid (PFTeDa) N-Ethyl Perfluorooctane Sulfonamide (EtFOSA) Perfluorogexadecanoic Acid (PFHxDA) N-Methyl Perfluorooctanesulfonamido Ethanol (MeFOSE) N-Ethyl Perfluorooctanesulfonamido Ethanol (EtFOSE)			4.28 U 21.4 R 4.28 U 21.4 U 28.6	23.1 U 4.63 U 23.1 U 23.1 U	22.6 U 4.52 U 22.6 U 22.6 U	23.3 U 4.67 U 23.3 U 23.3 U	23.7 U 4.74 U 23.7 U 23.7 U	22.1 UJ 4.53 U 22.7 U 22.7 U	19.6 UJ 4.42 U 22.1 U 22.1 U	22.4 U 4.48 U 22.4 U 22.4 U	22.3 U 4.46 U 22.3 U 22.3 U	 	 		
pH (Standard Units) 6.4 6.9 NA 6.9 6.8 6.6 7 6.4 6.6	Perfluorotrodecanoic Acid (PFTrDA) Perfluorotetradecanoic Acid (PFTeDa) N-Ethyl Perfluorooctane Sulfonamide (EtFOSA) Perfluorogexadecanoic Acid (PFHxDA) N-Methyl Perfluorooctanesulfonamido Ethanol (MeFOSE) N-Ethyl Perfluorooctanesulfonamido Ethanol (EtFOSE) Combination of PFOA and PFOS			4.28 U 21.4 R 4.28 U 21.4 U 28.6	23.1 U 4.63 U 23.1 U 23.1 U	22.6 U 4.52 U 22.6 U 22.6 U	23.3 U 4.67 U 23.3 U 23.3 U	23.7 U 4.74 U 23.7 U 23.7 U	22.1 UJ 4.53 U 22.7 U 22.7 U	19.6 UJ 4.42 U 22.1 U 22.1 U	22.4 U 4.48 U 22.4 U 22.4 U	22.3 U 4.46 U 22.3 U 22.3 U	 	 		
	Perfluorotrodecanoic Acid (PFTrDA) Perfluorotetradecanoic Acid (PFTeDa) N-Ethyl Perfluorocatane Sulfonamide (EtFOSA) Perfluorogexadecanoic Acid (PFHxDA) N-Methyl Perfluorocatanesulfonamido Ethanol (MeFOSE) N-Ethyl Perfluorocatanesulfonamido Ethanol (EtFOSE) Combination of PFOA and PFOS FIELD PARAMETERS			4.28 U 21.4 R 4.28 U 21.4 U 28.6 149.6	23.1 U 4.63 U 23.1 U 23.1 U 1,769 J	22.6 U 4.52 U 22.6 U 22.6 U 1,779	23.3 U 4.67 U 23.3 U 23.3 U 1,674	23.7 U 4.74 U 23.7 U 23.7 U 309	22.1 UJ 4.53 U 22.7 U 22.7 U 93.8	19.6 UJ 4.42 U 22.1 U 22.1 U 17.05 J	22.4 U 4.48 U 22.4 U 22.4 U 209.1	22.3 U 4.46 U 22.3 U 22.3 U 580	 	 		
Specific Conductance (us/cm) 102 337 NA 249 204 220 242 179 268	Perfluorotrodecanoic Acid (PFTrDA) Perfluorotetradecanoic Acid (PFTeDa) N-Ethyl Perfluorocatane Sulfonamide (EtFOSA) Perfluorogexadecanoic Acid (PFHxDA) N-Methyl Perfluorocatanesulfonamido Ethanol (MeFOSE) N-Ethyl Perfluorocatanesulfonamido Ethanol (EtFOSE) Combination of PFOA and PFOS FIELD PARAMETERS Temperature (degrees C)			4.28 U 21.4 R 4.28 U 21.4 U 28.6 149.6	23.1 U 4.63 U 23.1 U 23.1 U 1,769 J	22.6 U 4.52 U 22.6 U 22.6 U 1,779	23.3 U 4.67 U 23.3 U 23.3 U 1,674	23.7 U 4.74 U 23.7 U 23.7 U 309	22.1 UJ 4.53 U 22.7 U 22.7 U 93.8	19.6 UJ 4.42 U 22.1 U 22.1 U 17.05 J	22.4 U 4.48 U 22.4 U 22.4 U 209.1	22.3 U 4.46 U 22.3 U 22.3 U 580	 	 		
Dissolved Oxygen (mg/L) 6.7 <0.5 NA 1.2 7.5 6.8 10.4 7 3.7	Perfluorotrodecanoic Acid (PFTrDA) Perfluorotetradecanoic Acid (PFTeDa) N-Ethyl Perfluorocatane Sulfonamide (EtFOSA) Perfluorogexadecanoic Acid (PFHxDA) N-Methyl Perfluorocatanesulfonamido Ethanol (MeFOSE) N-Ethyl Perfluorocatanesulfonamido Ethanol (EtFOSE) Combination of PFOA and PFOS FIELD PARAMETERS Temperature (degrees C) pH (Standard Units) Specific Conductance (us/cm)			4.28 U 21.4 R 4.28 U 21.4 U 28.6 149.6	23.1 U 4.63 U 23.1 U 23.1 U 1,769 J 14 6.9 337	22.6 U 4.52 U 22.6 U 22.6 U 1,779 NA NA NA	23.3 U 4.67 U 23.3 U 23.3 U 1,674 13 6.9 249	23.7 U 4.74 U 23.7 U 23.7 U 309	22.1 UJ 4.53 U 22.7 U 22.7 U 93.8 14 6.6 220	19.6 UJ 4.42 U 22.1 U 22.1 U 17.05 J	22.4 U 4.48 U 22.4 U 22.4 U 209.1 12 6.4 179	22.3 U 4.46 U 22.3 U 22.3 U 580 13 6.6 268	 	 		
	Perfluorotrodecanoic Acid (PFTrDA) Perfluorotetradecanoic Acid (PFTrDa) N-Ethyl Perfluorooctane Sulfonamide (EtFOSA) Perfluorogexadecanoic Acid (PFHxDA) N-Methyl Perfluorooctanesulfonamido Ethanol (MeFOSE) N-Ethyl Perfluorooctanesulfonamido Ethanol (EtFOSE) Combination of PFOA and PFOS FIELD PARAMETERS Temperature (degrees C) pH (Standard Units) Specific Conductance (us/cm) Dissolved Oxygen (mg/L)			4.28 U 21.4 R 4.28 U 21.4 U 28.6 149.6 14 6.4 102 6.7	23.1 U 4.63 U 23.1 U 23.1 U 1,769 J 14 6.9 337 <0.5	22.6 U 4.52 U 22.6 U 22.6 U 1,779 NA NA NA	23.3 U 4.67 U 23.3 U 23.3 U 1,674 13 6.9 249 1.2	23.7 U 4.74 U 23.7 U 23.7 U 309 10 6.8 204 7.5	22.1 UJ 4.53 U 22.7 U 22.7 U 93.8 14 6.6 220 6.8	19.6 UJ 4.42 U 22.1 U 22.1 U 17.05 J 12 7 242 10.4	22.4 U 4.48 U 22.4 U 22.4 U 209.1 12 6.4 179 7	22.3 U 4.46 U 22.3 U 22.3 U 580 13 6.6 268 3.7	 	 		
Oxidation Reduction Potential (mV) 176 -106 NA 110 46 92 77 113 12	Perfluorotrodecanoic Acid (PFTrDA) Perfluorotetradecanoic Acid (PFTeDa) N-Ethyl Perfluorooctane Sulfonamide (EtFOSA) Perfluorogexadecanoic Acid (PFHxDA) N-Methyl Perfluorooctanesulfonamido Ethanol (MeFOSE) N-Ethyl Perfluorooctanesulfonamido Ethanol (EtFOSE) Combination of PFOA and PFOS FIELD PARAMETERS Temperature (degrees C) pH (Standard Units) Specific Conductance (us/cm) Dissolved Oxygen (mg/L) Turbidity (NTU)			4.28 U 21.4 R 4.28 U 21.4 U 28.6 149.6 14 6.4 102 6.7 < 5	23.1 U 4.63 U 23.1 U 23.1 U 1,769 J 14 6.9 337 <0.5 30	22.6 U 4.52 U 22.6 U 22.6 U 1,779 NA NA NA	23.3 U 4.67 U 23.3 U 23.3 U 1,674 13 6.9 249 1.2 5	23.7 U 4.74 U 23.7 U 23.7 U 309 10 6.8 204 7.5 < 5	22.1 UJ 4.53 U 22.7 U 22.7 U 93.8 14 6.6 220 6.8 5	19.6 UJ 4.42 U 22.1 U 22.1 U 17.05 J 12 7 242 10.4 9	22.4 U 4.48 U 22.4 U 22.4 U 209.1 12 6.4 179 7 6	22.3 U 4.46 U 22.3 U 22.3 U 580 13 6.6 268 3.7 <5	 	 		

Draft Table 5 - Summary of Surface Water Analytical Data: Spring 2020

2020 Semi-Annual Summary Report Coakley Landfull Superfund Site Greenland and North Hampton, New Hampshire

NOTES:

- VOCs list is limited to analytes detected in samples
- 2. --- no standard has been established for the indicated parameter.
- 3. NHDES Surface Water Standards are listed in Env Wg 1700, Table 1703.1
- 4. There are no ROD ICLs established for surface water.
- 5. Highlighting: Bold values denote NHDES Acute Surface Water Criteria Exceedances; Gray shaded values denote NHDES Chronic Criteria Exceedances. Blue shaded values denote EPA Screening Level Child Recreator Exceedances, EF = 120 days
- 6. The reporting detection limit (RDL) for zinc, silver and lead are consistent with RDLs specified in the SAP; however, they exceed the "default" (see footnote *) acute and/or chronic standards.
- 7. Perfluorinated chemicals were re-extracted beyond the 14-day holding time limit (27 days) due to method blank contamination. The results from the reextracted sample (SW-110) was used in the decision making.
- * Acute and chronic standards based on "default" values listed in Env Wq 1700, Table 1703.1. Actual standards may vary based on the water
- ** The freshwater and saltwater aquatic life criteria for ammonia are pH dependent. Refer to Env-Wq 1703.25 through Env-Wq 1703.31.

 J Concentration detected is below the reporting limit/LOQ.
- R Data rejected
- #.## U Not detetced at the reporting limit.
- UJ Undetcted estimated
- uS/cm microsiemens per centimeter
- ug/L micrograms per liter, parts per billion
- mg/L milligram per liter, parts per million
- ng/L nanograms per liter, parts per trillion
- NTU nephelometric turbidity unit
- mV millivolt
- EF Effective Days
- <# Less than number indicated</p>

Draft Table 6 - Summary of Sediment Analytical Data: Spring 2020

2020 Semi-Annual Summary Report Coakley Landfull Superfund Site Greenland and North Hampton, New Hampshire

	00 100 000	0.00								ī			
Sampling Point ID	SQuiRT TEC	SED-4	SED-5	SED-5-DUP	SED-110	SED-111	SED-LR	SED-BB1	SED-BB2				
Date of Sample Collection	(Dry Weight)	5/14/2020	5/14/2020	5/14/2020	5/14/2020	5/15/2020	5/15/2020	5/14/2020	5/14/2020				
TOTAL METALS BY 6020 - (mg/kg)										Notes:			
Total Aluminum		8,000 EB	8,600 EB	8,700 EB	9,700 EB	12,000 EB	17,000 EB	22,000 EB	5,900 EB	U =	Not detected above	e the reporting lim	it indicated.
Total Antimony		0.5 U	1.7	1.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	J =	Estimated		
Total Arsenic	9.79	4.4	13	13	9.5	6	18	18	9.8	UJ =	Undetected estimate	ated	
Total Barium		58 EB	66 EB	75 EB	33 EB	46 EB	67 EB	89 EB	34 EB	EB =	Parameter detecte	ed in associated ed	uipment blank.
Total Beryllium		0.5 U	0.55	0.5 U	0.5 U	0.5 U	0.82	1.1	0.5 U	EF =	Effective Days		
Total Cadmium	0.99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	ND =	Not detcted		
Fotal Calcium		11,000 EB	5,600 EB	5,700 EB	1,100 EB	1,200 EB	2,700 EB	690 EB	1,100 EB	mg/kg =	Milligrams per kilo	grams	
Fotal Chromium	43.4	12	23	28	29	32	56	36	14		no standard has b		r the indicated para
Fotal Cobalt		1.4	8.8	8.5	7.4	7.3	14	16	4.1				
otal Copper	31.6	12	47	49	18	11	24	22	13	•			
otal Iron		2,500 EB	18,000 EB	20,000 EB	15,000 EB	14,000 EB	25,000 EB	30,000 EB	13,000 EB				
otal Itoli	35.8	29	63	63	24	8.9	38	12	13,000 LB				
		1,600	2,600	3,000	4,000	4,200	7,500	6,400	2,000				
otal Magnesium		,				<u> </u>			,	•			
otal Manganese	0.40	410	380	430	300	180	530	720	180				
otal Mercury	0.18	0.21	0.54	0.59	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U				
otal Nickel	22.7	6.1	22	23	24	21	41	38	11				
otal Potassium		1,300 EB	1,500 EB	1,700 EB	830 EB	1,600 EB	2,600 EB	3,700 EB	1,200 EB				
otal Selenium		1.4	0.5 U	0.9	0.5 U	0.5 U	0.87	0.56	0.5 U	,			
otal Silver		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				
otal Sodium		240	210	200	92	200	290	100	100 U				
otal Thallium		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				
otal Vanadium		20	33	36	20	27	40	41	15				
otal Zinc	121	66	75	75	49	37	99	61	32				
4-Dioxane by 8260B SIM mg/kg										USEPA Scre	eening Levels	USEPA Scre	ening Levels
4-Dioxane		0.9 UJ	0.5 U	0.6 UJ	0.1 U	0.1 U	0.3 U	0.1 U	0.2 U	Adult Recreator	Child Recreator	Adult Recreator	Child Recreator
ERFLUORINATED CHEMICALS BY MODIFIED 537 - (mg/kg)	•	•		•		•	<u> </u>	•		EF = 4	45 days		20 days
erfluorobutanoic Acid (PFBA)		0.000499 U	0.000499 U	0.000497 U	0.000484 U	0.000488 U	0.000491 U	0.000493 U	0.000494 U				
erfluoropentanoic acid (PFpEA)		0.000499 U	0.000537	0.000549	0.000484 U	0.000488 U	0.000491 U	0.000493 U	0.000494 U				
erfluorobutanesulfonic acid (PFBS)		0.000499 U		0.000349 0.000497 U	0.000484 U	0.000488 U	0.000491 U			9,120	983	3,420	369
, ,			0.000499 U			1			0.000494 U	,			
erfluorohexanoix Acid (PFHxA)		0.000499 UJ	0.000499 UJ	0.000613 J	0.000484 U	0.000488 U	0.000491 U	0.000493 U	0.000494 UJ				
erfluoroheptanoic acid (PFHpA)		0.000885	0.00195	0.00179	0.000484 U	0.000488 U	0.000491 U	0.000493 U	0.000494 U				
erfluorohexanesulfonic acid (PFHxS)		0.000499 U	0.000499 U	0.000497 U	0.000484 U	0.000488 U	0.000491 U	0.000493 U	0.000494 U				
H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS)		0.000997 U	0.000997 U	0.000995 U	0.000969 U	0.000976 U	0.000982 U	0.000987 U	0.000989 U				
erfluorooctanoic acid (PFOA)		0.00226	0.00896	0.00806	0.000484 U	0.000488 U	0.000491 U	0.000493 U	0.00107	9.12	0.98	3.42	0.369
erfluoroheptanesulfonic Acid (PFHpS)		0.000997U	0.000997 U	0.000995 U	0.000969 U	0.000976 U	0.000982 U	0.000987 U	0.000989 U				
erfluorononanoic acid (PFNA)		0.00148	0.0119	0.0111	0.000484 U	0.000488 U	0.000491 U	0.000493 U	0.00134				
erfluorooctanesulfonamide (PFOSA)		0.0015 U	0.0015 U	0.00149 U	0.00145 U	0.00146 U	0.00147 U	0.00148 U	0.00148 U				
erfluorooctanesulfonic (PFOS)		0.00293	0.0906	0.0984	0.00246	0.000488 U	0.000836	0.000493 U	0.0126	9.12	0.98	3.42	0.369
erfluorodecanoic Acid (PFDA)		0.000499 UJ	0.0197 J	0.0187	0.000484 U	0.000488 U		0.000493 UJ	0.00252 J			1	
/ /						1					 		
H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS)		0.000997U	0.000997 U		0.000969 U	0.000976 U		0.000987 U					
-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)		0.000997U	0.000997 U	0.000995 U	0.000969 UJ	0.000976 U		0.000987 U	0.000989 U				
-Ethyl Perfluorooctanesulfonamidoacetic (EtFOSAA)		0.000997U	0.00175	0.00172	0.000969 UJ	0.000976 U		0.000987 UJ					
erfluoroundecanoic Acid (PFUnA)		0.000499 UJ	0.00539	0.00564	0.000484 UJ	0.000488 UJ		0.000493 UJ					
erfluorodecanesulfonic Acid (PFDS)		0.000997U	0.00116	0.00118	0.000969 U	0.000976 U	0.000982 U	0.000987 U	0.000989 U				
erfluorododecanoic Acid (PFDoA)		0.000499 U	0.000538	0.000513	0.000484 U	0.000488 U	0.000491 U	0.000493 U	0.000494 U				
-Methyl Perfluorooctane Sulfonamide (MeFOSA)		0.00997 U	0.00991 U	0.010 U	0.00975 U	0.00976 U	0.00982 U	0.00965 U	0.00989 U				
erfluorotrodecanoic Acid (PFTrDA)		0.000499 U	0.000499 U	0.000497 U	0.000484 U	0.000488 U	0.000491 U		0.000494 U				
erfluorotetradecanoic Acid (PFTeDa)		0.000499 U	0.000499 U	0.000497 U	0.000484 U	0.000488 U	0.000491 U		0.000494 U				
, ,	1										 	†	
-Ethyl Perfluorooctane Sulfonamide (EtFOSA)		0.00997 U	0.00991 U	0.010 U	0.00975 U	0.00976 U	0.00982 U		0.00989 U				
erfluorogexadecanoic Acid (PFHxDA)		0.000499 U	0.000496 U	0.000502 U	0.000488 U	0.000488 UJ	0.000491 U		0.000494 UJ				
-Methyl Perfluorooctanesulfonamido Ethanol (MeFOSE)		0.00997 U	0.00997 U	0.00995 U	0.00969 U	0.00976 U	0.00982 U	0.00987 U	0.00989 U				
-Ethyl Perfluorooctanesulfonamido Ethanol (EtFOSE)		0.00997 U	0.00997 U	0.00995 U	0.00969 U	0.00976 U	0.00982 U	0.00987 U	0.00989 U				
ombination of PFOA and PFOS		0.00519	0.09956	0.10646	0.00246	ND	0.000836	ND	0.01367				
OTAL SOLIDS BY 2540G-91 - (Percent - %)													
olids Total		19.4	30.3	28.1	70.5	82.3	49.5	76.4	60				
	L									L			

NOTES:

- 1. Beginning in 2014, sediment data was qualified in accordance with EPA's Tier I Plus data validation guidelines.
- 2. The EPA has not established a cleanup standard for sediment.
- 3. Sediment laboratory analytical data are compared to the NHDES Draft Evaluation of Sediment Quality Guidance Document, dated April 2005, that includes the "National Oceanic and Atmospheric Administration Screening Quick Reference Tables (NOAA SQuiRT Tables for Inorganics in Sediment Freshwater). Current SQuiRT Tables are located on the NOAA website: http://archive.orr.noaa.gov/book_shelf/122_NEW-SQuiRTs.pdf. TEC is Threshold Effect Concentration, which is consensus-based and incorporates the Ontario Ministry of the Environment lowest-observed effect levels (LELs).
- 4. Shaded values denote concentrations exceeding the NOAA SQuiRT TEC standard.

Draft Table 7 - Summary of Seep Analytical Results : August 2001 through May 2020 2020 Semi-Annual Summary Report

Coakley Landfull Superfund Site Greenland and North Hampton, New Hampshire

SAMPLE IDENTIFICATION	NUDES	SUBEACE					1 11			- 11			1 11	1 11		I 1 DUD	- 14	I 1 DUB		I 1 DUD		I 1 DUD	11	I 1 DUR	- 11	I 1 DUB	11	I 1 DUR		I 1 DUB		I 1 DUD		L 1 DUB
DATE SAMPLED	WATER ST	TANDARDS	16-Aug-01	7-Aug-02	27-Aug-03	25-Aug-04	25-Aug-05	30-Nov-06	13-Nov-07	12-Aug	ΩR 19-Διμ	n-09 17-Aug	10 19-Aug-1	1 30-Aug-12	14-Aug-13	14-Aug-13	17-Sep-15	17-Sep-15	1- Jun-16	1- Jun-16	28-Anr-17	28-Apr-17 2	1-Sep-17 2	1-Sen-17	30-Apr-18	30-Apr-18	28-Oct-18	28-Oct-18	15-May-19	15-May-19	10-Oct-19	10-Oct-19	5/20/2020 ¹⁴ 5	/20/2020 ¹⁴
COMMENTS		CHRONIC	10-Aug-01	7-Aug-02	Zi -Aug-03	LU-Aug-U-	20-Aug-00	ID 104240	13-1401-07	IZ-Aug	00 13-Au,	4-03 17-Aug	To TS-Aug-1	1 50-Aug-12	14-Aug-1	7 IT-Aug-13	17-00p-10	11-009-10	1-Juli-10	1-ouii-10	EV-Api-II	20-Apr-17	1-00p-11 1	1-00p-17	30-Api-10	30-Apr-10	20-000-10	20-001-10	15-May-15	13-111dy-13	10-001-13	10-001-13	0/20/2020	
PARAMETER ANALYZED																																		
VOLATILE ORGANIC COMPOUNDS (ug/L)																																		
Acetone	NSE	NSE	NA	NA	NA	NA	NA	NA	NA .	NA	NA 1.0	NA.	NA	NA	NA	NA .	NA	NA .	NA	NA	NA	NA	NA	NA	NA	NA <1	NA	NA <1	NA	NA 1.4	1.5 J	5 U	10 U	10 U
Benzene Chlorobenzene	5300 250	NSE 50	3	2 15	18	2 U	2	2 18	3	10	1.9	24	2.0	2 15	2	2 14	2	1/1	1 1	1 12	1 U	1 U	1 12	12	<1 2.6	<1 2.7	<1	<1 <1	1.5 12	1.4	1.2	1.2	1 U	1.1 8.7
Chloroethane	NSF	NSF	8	6	6	3	6	2 U	6	5 U	4.4	5 U	4.1	5 U	5 U	5 U	511	5 I I	5 U	12 5 H	5 U	5 U	511	5 U	<5	<5	<5	<5	5 U	5 U	2.1	21	2 U	211
1,4 Dichlorobenzene (See Note 4)		1102	2 U	3	2	2 U	3	2	3	10	2.5		2.3	2	2	2	2	2	2 J	2 J	1 U	1 U	2	2	<1	<1	<1	<1	1.5	1.6	1.7 J	1.8 J	1.2	2 U 1.3
1,3-Dichlorobenzene (See Note 4)	1120	763	2 U	2 U	2 U	2 U	2 U	2 2 U	1 U	1 U	1 L	J 1U	1 U	1 U	1 U	1 U	1 U	1 U	2 J	1 U,J	1 U	1 U	1 U	1 U	<1	<1	<1	<1	1 U	1 U	2.5 U	2.5 U	1 U	1 U
1,2 Dichlorobenzene (See Note 4)			2 U	2 U	2 U	2 U	2 U	2 U	1	1 U			1.2	1	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U	<1	<1	<1	<1	1 U	1 U			1 U	1 U
Isopropylbenzene	NSE	NSE	2 U	2 U	2 U	2 U	2 U	2	2	1 U			1.6	1 10	1	1	1	BDL	1 U	1 U	1 U	1 U	1 U	1 U	<1	<1	<1	<1	1 U	1 U			1 U	1 U
Diethyl Ether	NSE 2300	NSE 620	31 10 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U	5 U 5 U	5 U	13 0.6	15 5 U	12 5 U	10 5 U	10 5 U	10 5 U	11 5 U	10 5 U	5 U	7 5 U	5 U 5 U	5 U 5 U	7 5 U	7 5 U	<5 <5	<5 <5	<5 <5	<5 <5	8.8 5 U	8.6 5 U	8.6 1.2 J	8.2	6.6 2 U	6.9 2 U 10 U
Naphthalene Tetrahydrofuran	NSF	NSF	32	30 U	30 U		30 U	30 U	20	10 U				10 U	10 U	10 U	10	10	10 U	10 U		10 U		10 U	<10	<10	<10	<10	10 U	10			10 U	10 11
Tert-Butyl Alcohol	NSE	NSE	NA	NA	NA	NA	NA	NA	NA NA	NA			NA	NA	NA.	NA NA	NA NA	NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA NA	11	2 U	30 U	30 U
Toluene	17500	NSE	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 l	J 1		1 U	1 U	1 U	1 U	2 J	1 U	1 U	1 U	1 U	1 U	1 U	<1	<1	<1	<1	1 U	1 U	0.75 U	0.75 U	1 U	1 U
LOW LEVEL 1,4-DIOXANE (ug/L)																																		
1,4-Dioxane	NSE	NSE		NA	NA		NA	NA	NA NA	NA		20	25	28	22	24	NA	NA	NA	NA	1.5	1.3	17	18	4.9	4.1	<0.2		12	12	15.3		8.8 J	9.6
METALS (ug/L)	750	0.7	Total	Total	Total		Total		Total Dissol	red Total				Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
Aluminum Antimony	750 9,000	1,600	3200	4100 2 U		29,000 4 U	18,000 6 U	NA NA	50 U 50 U		50 U		50 U 1 U	50 U	50 U	80 1 U	50 U	50 U 1 U	50 U 1 U	50 U	80 1 U	70 1 U	100 U 1 U	100 U 1 U	100 U 1 U	100 U 1 U	140 1 U	140 1 U	100 U 1 U		16.63		50 U	50 U
Arsenic	340	150	83	23	2 U 67	150	300	NA NA	7 6	4			6	4	5	7	6	6	3	3	2	2	5	5	1.1	1.2	2.3	2.3	2.1	2.1	1 U 4.246	3.998	1.8	1 U 2.2 66
Barium	NSE	NSE	1300	260	610	2,200	4,600	NA	97 99	11	100	100	97	87	92	110	100	96	74	73	11	10	75	78	25	25	6.2	6	71	70	92.02	93.52	62	66
Beryllium	130	5.3	3	4 U	4 U	3	2 U	NA	1U 1U		1 L		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium	0.39	0.21	2 U	2 U	2 U	4 U	6 U	NA	1U 1U				1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U		0.2 U	0.2 U	0.2 U
Calcium Chromium	NSE 152	NSE 19.8	120,000	97,000 13	100,000	140,000 55	150,000 70	NA NA	50,000 62,00 1 U 1 U	0 20,00	0 64,0 1 L		63,000 1 U	79,000 1 U	56,000 1 U	57,000 1 U	67,000 1 U	67,000 1 U	52,000 1 U	52,000 1 U	17,000 1 U	16,000	57,000 1 U	57,000 1 U	28,000 1 U	29,000 1 U	10,000 1.4	10,000	64,000 1 U		67,500 0.4608 J		58,000 J+ 1 U	59,000 J+ 1 U
Cohalt	NSF	NSE	20 2 U	3	6	11	10	NA NA	1U 1U	1 U	11		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 1 U	1 U	1 U	1 U	1 U	1.4 1 U	1./ 1 U	1 U		0.4608 J 0.8658 J		1 U	1 U
Copper	2.9	2.3	2 U	5		36		NA NA	10 1	8	11		1	10	1 U	10	1 U	1 U	10	1 U	9	8	1 U	1 U	5.6 J+	6.4 J+	13	13	1 U	1 U	1 U	1 U	1 U	1 U
Iron	NSE	1,000	350,000	130,000	330,000	36 1,000,000		NA	30,000 27,00	0 1,200						45,000	35,000	33,000	36,000	35,000	2,800			33,000	8,800	8,700		390			42,200			39,000
Lead	10.5	0.41	2 U	2		34	6 U	NA	1U 1U		1 L		1 U	1 U	1 U	1 U	1 U	1 U	. 0	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Magnesium	NSE NSE	NSE NSF	49,000 7,600		36,000		43,000	NA NA	20,000 25,00		,-		21,000	20,000	16,000 2,500	16,000	17,000	17,000	18,000	18,000				19,000	7,200	7,300	1,300	1,200	19,000	18,000				17,000
Manganese Mercury	1 4	0.77	7,600 0.2 U	5,700 0.2 U	5,900 0.2 U	10,000 0.2 U	9,800 0.2 U	NA NA	2,700 3,20 0.1 U 0.1 U	98	3,20	0 2,900 U 0.1 L		3,300 0.1 U	2,500 0.1 U	2,500 0.1 U	2,400 J+	2,200 J+ 0.1 U	2,700	2,700 0.1 U	400	370	2,800 0.2 U	2,900 0.2 U	1,200	1,200	0.1 U	23 0.1 U	2,800 0.1 U	2,900	4,009	4,015	3,300 0.1 U	3,300
Nickel	120	13.3	22	18	28	32	40	NA NA	7 8	0.1 U	0.1	6	0.1 U 4	6	5	5	0.1 U 5	5	0.1 U 5 J	5 J	0.1 U 4	0.1 U 3	5	5	3.7	0.2 U 4.5	2.1	2.4	4.7	0.1 U 5	0.2 U 5.503	5.615	5.1	0.1 U 5
Potassium	NSE	NSE	66	55	46,000		50,000	NA	34,000 40			00 33,00		31,000	25,000	27,000	26,000	27,000		25,000			25,000	26,000	11,000		3,500		26,000		30,600			24,000
Selenium	NSE	5	7	8	4	3	2 U	NA	1U 1U				2	5	5	5	5	5	3	3	4	3	4	4	10	1 U	1 U	1 U	1 U	1 U	5 U	5 U	1 U	1 U
Silver	0.2	NSE	2 U	2 U	2	4 U	6 U	NA	1U 1U	11	11	J 1U	1 U	1 U	1 U	1 U	1 U	1 U	1 U,J	1 U,J	1 U	1 U	1 U,J	1 U,J	1 U	1 U 24,000	1 U	1 U	1 U	1 U	0.4 U	0.4 U	1 U	1 U
Sodium Thallium	NSE 1.400	NSE 40	220,000		160,000		150,000	NA NA	130,000 150,0							76,000 1 U				62,000		8,000		71,000	23,000 1 U		5,000 U 1 U		71,000		83,440			58,000
Vanadium	NSE	NSE	2 U 46	2 U 13	2 U 36	4 U 89	6 U 220	NA NA	1U 1U	1 U	1 L	J 1U	1 U	1 U	1 U	1U	1 U	1 U	1 U 5 U	1 U 5 U	511	1 U	5 U	1 U	5 U	1 U		1 U 5 U	1 U 5 U	1 U 5 U	1 U 5 U	5 U	1 U 5 U	1 U
Zinc	30	30			140	390	690	NA.	5 U 650	56	12	6	1 U 5 U	5 U	5 U	10	5 U	5 U	5 U	5 U	38	5 U 34	5 U	5 U 5 U	34	5 U 37	19		9	14	10 U	8.138 J	7.2	5 U
PERFLUORINATED CHEMICALS BY MODIFIED 537 - (ng/L)																																		
Perfluorobutanoic Acid (PFBA)	NSE NSE	NSE	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	. NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.6	31.4	37.8	35.9 58.2
Perfluoropentanoic acid (PFpEA)	NSE	NSE	NA	NA	NA		NA	NA	NA NA	NA	N/A	NA.	NA		NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			60.1	58.2
Perfluorobutanesulfonic acid (PFBS)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA NA		NA			NA	NA		NA	NA	NA	NA				5.50 J	2.72 J				6.47	6.27	6.88			5.48
Perfluorohexanoix Acid (PFHxA) Perfluoroheptanoic acid (PFHpA)	NSE NSE	NSE NSE	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA					NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA 175	NA 170	NA 111	NA 109	NA 208	NA 196	NA 523	NA 483	NA 133	NA 134	80.7 127	82.9 130	101 J 164 J	101 J 170 J
Perfluoroneptanoic acid (PFHpA) Perfluoronexanesulfonic acid (PFHxS)	NSE	NSE	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	9 12 .1			19.4 J	12.0 J	11.6 J	10.8	9.77	18.1	18.7	25.6	24	25.7 J	23.8
Perfluorooctanoic acid (PFOA)	NSE	NSE	NA.	NA	NA	NA	NA.	NA	NA NA					NA.	NA.	NA NA	NA NA	NA.	NA NA	NA NA	656	736	319	310	532	492	1,040	948	369 J	369	340		501 J	456
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA NA	NΔ	NΔ	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.86 J	5.22		4.38 U
Perfluoroheptanesulfonic Acid (PFHpS)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA NA		NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.72	4.79	2.93 J	2.26 102
Perfluorononanoic acid (PFNA)	NSE	NSE	NA	NA	NA	NA	NA	NA		NA	NA			NA	NA	NA	NA	NA	NA	NA	308		70.3	75.6	207 J	193	366		83.6	80.5			114	
Perfluorooctanesulfonic (PFOS) Perfluorodecanoic Acid (PFDA)	NSE NSE	NSE NSF	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NIA	NIA			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NIA	NIA	164 J NA	150 NA	567 NA	571 NA	1210 NA	1,210 NA	137 J NA	147 NA	154 J+ 18.2	158	239 J 22 4	204 19.5
1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2FTS)	NSE	NSE	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA		17.9 1.45 J+		4.38 U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA NA	NA.	N.A			NA	NA	NA	NA	NA	NA NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA		2.18 U	2.21 U	4.58 U	4.38 U
Perfluoroundecanoic Acid (PFUnA)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.76 J	1.65 J	2.60 J	2.14 J
Perfluorodecanesulfonic Acid (PFDS)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.18 UJ	2.21 UJ	4.58 UJ	4.38 U
Perfluorooctanesulfonamide (FOSA)	NSE	NSE NSF	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	1.83 J	1.62 J	15.6	12 13.30
N-Ethyl Perfluorooctanesulfonamidoacetic (NEtFOSAA) Perfluorododecanoic Acid (PFDoA)	NSE NSE	NSE NSE	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		8.46 2.21 II	16.9 4.58 U	13.30 4.38 U
Perfluorotrodecanoic Acid (PFTrDA)	NSE	NSE	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		2.18 U			4.38 U
Perfluorotetradecanoic Acid (PFTA)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA NA	NA	NA.	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.18 U	2.21 U	4.58 U	4.38 U
Perfluorogexadecanoic Acid (PFHxDA)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA NA	NA	NA.	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.37 U	4.42 U	4.58 U	4.38 UJ
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.8 U			21.9 U
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	NSE NSE	NSE	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	21.8 U	22.1 U	23.4 UJ	21.9 U
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE) N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	NSE NSE	NSE NSE	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	54.6 U	55.3 U 55.3 U	22.9 U	21.9 U 21.9 U
Combination of PFOA and PFOS	NSE	NSE		NA NA	NA NA		NA NA	NA NA	NA NA						NA NA	NA NA	NA NA	NA NA					483 J	460	1,099	1,063		2,158						660
GENERAL CHEMISTRY																					_,	_,,			.,	.,500	_,_00	,						
Chemical Oxygen Demand (mg/l)	NSE	NSE	190	178	560	282	377	NA	70	50	50	54	40	44	52	68	32	43	19	18	28	33	55	48	20	19	46	44	18	25 J	49 J+		28	34
Ammonia-N (mg/l)	36.1	5.91	44	41	44.8		79	NA	33	0.62	21	22	25	24	21	19	23	23	110	100	1.5	1.3	19	19	5.8	6.2	0.15	0.16	17	17 J+			17.0	17.0
						FIELD PARA																												
IOTES:							ure (degrees Ce	elcius)	12	18	14	16	15	16	15	NA NA	15	NA NA	11	NA	11	NA NA	15	NA	9	NA NA	7	NA	8	NA NA	13	NA	12	NA NA
U = Not detected above the reporting limit. NA = Not Analyzed. J = estimated. J+ = estimated high. UJ = undected estimated. NSE indicates no standard has been established for the indicated parameter.						pH (stand		(cm)	6.2 1 enn	6.6 176	6.4 1.45		5.1 821	6.6 1.399	1.220	NA NA	6.4 1.283	NA NA	6.6	NA NA	6.7 189	NA NA	6.3 1.066	NA NA	6.4 550	NA NA	6.8 85	NA NA	6.4 1.044	NA NA	6.4 126	NA NA	6.5	NA NA
NSE indicates no standard has been established for the indicated parameter. NHDES Surface Water Standard are listed in Env Wq 1700						Conductivity (us/ I Oxygen (mg/l)	wil)	1,600	4.9						NA NA	2.6	NA NA	1,223	NA NA	5.1	NA NA	< 0.5	NA NA	5.6	NA NA	11.3	NA NA	< 0.5	NA NA	0.8	NA NA	904 3.2	NA NA	
Acute and chronic standards based on total dichlorobenzenes					Turbidity (18	90	10	9		2.3 17		NA NA	6	NA NA	0.8 10	NA NA	16	NA NA	18	NA	10	NA	43	NA	<5	NA NA	0.8 22		3.2 37	NA NA	
Acute and chronic standards based on total dichlorobenzenes Ammonia-N standard is based on pH of 7.0 at 14 C, salinoids not present.						Oxidation	Reduction Pote	ential (mV)	138	42	-38	-99	-73	-76	-102	NA	-111	NA	-60	NA	-25	NA	-36	NA	-23	NA	106	NA	-64	NA	-78	NA	-67	NA
6. A bold entry indicates the parameter exceeded the acute surface water standard						_	_			_		_	_	_	_		_										_	_						-

- 5. Ammonia-N standard is based on pH of 7.0 at 14 C, salinoids not present.
 6. A bold entry indicates the parameter exceeded the acute surface water standard.
 7. Shaded values indicate the parameter exceeded the chronic surface water standard.
 8. Bold and shaded values indicate exceedances of both NHDES acute and chronic criteria.
 9. Volatile organic compounds, 1,4-dioxane, and metals results are in micrograms per liter (µgf).
 10. Only volatile organic compounds detected in one or more leachate sample during the period shown are listed.
 11. Only volatile organic compounds detected in one or more leachate sample during the period shown are listed.
 12. Refer to Table 2 and 3 for Field Parameter unit abbreviations
 13. The laboratory detection limits (for 2013) were above the either the Acute or Chronic standard for the following parameters (detection limits (for 2013) were above the either the Acute or Chronic standard for the following parameters (detection limit in paramtheses): Cadmium (1 ug/L), Lead (1 ug/L) and Silver (1 ug/L).
 14. Location resampled for PFAS on June 10, 2020 due to the initial sample arriving at the lab outside of the required temperature range.
 15. Perfluorinated Chemical reults are in nanograms per liter (ng/L).
 16. <## = les than the number indicated.

LABORATORY ANALYTICAL METHODS (Not Confirmed for Analyses Performed Prior to 2010) 1. Volatile Organic Compounds (VOC) analyzed by EPA Method 8260B. 2. 1,4-dioxane (low level) analyzed by EPA Method 8260B SIM 3. Metals analyzed by EPA Method 200.8 4. Chemical Oxygen Demand analyzed by 4500-NH3 5. Ammonia-N analyzed by H8000