



January 18, 2016

Mr. Eric Hausmann  
Environmental Engineer  
Division of Environmental Remediation  
NYS Dept. of Environmental Conservation  
625 Broadway  
Albany, NY 12233-7012

**RE: NYSDEC Standby Engineering Contract D007625  
WA#24 IRM Remedial Design - Former Air Force Plant 51  
Pre-Design Investigation Summary Report**

Dear Mr. Hausmann:

Henningson, Durham & Richardson Architecture and Engineering, P.C. (HDR) has prepared this letter report to summarize the results of the pre-design investigation (PDI) conducted at two interim remedial measure (IRM) areas at the Former Air Force Plant 51 site located in Greece, New York (Figure 1). The purpose of the pre-design investigation was to collect additional site-specific data necessary to better define the horizontal and vertical limits of excavation within the two IRM areas, provide data that can be used for waste characterization purposes, locate subsurface features associated with the IRM areas, and refine dewatering and other field needs during future IRM implementation. The PDI tasks completed and summarized in this report included the collection of soil, sediment, and water samples and excavation of testpits in the Former Septic System / Leach Field IRM and Stormwater Outfall IRM areas.

### **1.0 Field Methods**

SBJ/Empire Geo Services (EGS) was subcontracted by NYSDEC to perform the testpit and direct push drilling activities during the October 2015 PDI work. HDR field staff were present on-site to observe the testpit excavation and drilling and to direct EGS to the investigation testpit and probe locations. The work was performed in general accordance with HDR's PDI Work Plan (dated October 6, 2015).

Upon arrival to the site and prior to intrusive activities, HDR and EGS personnel reviewed the available historic utility maps and figures to ensure drilling and testpit locations would be situated away from known underground utilities. In addition, EGS began site work with brush cutting in the Former Septic System / Leach Field IRM and Stormwater Outfall IRM areas to allow better access and observations during the PDI. Brush cutting was done with a Brush-Hog mounted to a Bobcat rig.

Testpit excavation was performed by EGS with a Cat 308E2 Excavator with a maximum reach to approximately 11 feet bgs. Direct push borings were advanced using a GeoProbe® 6620DT rig. Borings were advanced into the subsurface using a four foot Macro-Core sampler with dedicated acetate liners to collect soil samples for field screening and, in some cases, submittal for laboratory analysis. At the completion of each probe point, soil cuttings were returned to the open boreholes to the extent practical and the locations graded. At the completion of a subset of the probe points, a groundwater sampler was placed into the boring and a grab sample was collected. Groundwater probe samples were collected using an expandable sampling point system and polyethylene tubing fitted with a check valve. Between probing locations, the probe



tooling was decontaminated using a bucket wash and clean water rinse. Decontamination water was drummed and staged for future disposal.

Excavated overburden materials from the testpit locations were collected for sample analysis or returned to the excavations from where they originated. Testpit locations were graded after backfilling. During testpit excavation, air monitoring was conducted with a RAE Systems Multi-RAE 4 gas meter with PID to screen the background and the immediate work area for VOCs, percent oxygen, hydrogen sulfide, carbon monoxide, and lower explosive limit (LEL). During the testpit and probe work, the Multi-RAE was also used to screen the soils for investigation purposes. Elevated PID readings were not detected in the breathing zone at anytime during the PDI work.

The approximate location of each probe boring and the limits of the testpits were recorded by HDR field staff. Boring logs were completed for each probe point completed during this PDI work. These logs include a description of soils along with PID readings and other observations of potential significance noted during the screening of the cores. Logs were also developed for each testpit that include observations noted during the excavation and dimensions of the testpit. The HDR field staff leader was in contact with the HDR Project Manager on a daily basis, and site activities were routinely discussed. Subsequent to the PDI work, the probe points and other features of importance to the IRM remedial designs were surveyed by Popli Design Group (a licensed land surveyor under subcontract to HDR). The survey data is being integrated into the design work. A copy of the Popli survey maps is included in Appendix A.

All soil and groundwater samples designated for laboratory analysis were submitted to the NYSDEC's Standby Laboratory Contractor, Test America of Buffalo, New York. Samples were submitted and transported (via lab-provided courier) to Test America under chain of custody protocols as described in HDR's NYSDEC Standby Engineering Contract Program Field Activities Plan.

Soil boring logs are provided in Appendix B. Testpit logs are provided in Appendix C. Notable photos collected by HDR during the testpit and probe activities are included in Appendix D. A copy of the laboratory data deliverables are furnished on a DVD included in Appendix E. A data validation report prepared by Data Validation Services is included in Appendix F. Correspondence from the laboratory was provided to Data Validation Services in response to questions posed by the data validator. The final data tables have been updated based on comments from the data validation report. No major issues with the PDI laboratory data were reported.

## 2.0 Stormwater Outfall IRM area

### 2.1 SAMPLING

As part of the PDI, three (3) soil borings were advanced by EGS on October 28 at pre-selected locations within the Stormwater Outfall IRM area. These borings were conducted to verify existing soil contamination results and/or to fill in data gaps, and also to assist with the remedial design in the for Stormwater Outfall IRM area (i.e., refinement of excavation limits). Approximate soil boring locations for OF1 through OF3 are shown on Figure 2.

All soil borings were advanced to a depth of 16 feet below ground surface (bgs). The subsurface soils recovered from each boring were characterized and logged. In addition, soils recovered from the borings were field screened with a PID meter.



Five (5) testpits were excavated in this IRM area by EGS on October 27, 2015. These testpits were conducted to locate or confirm the location of subsurface features and refine dewatering and other field needs during future IRM implementation. Approximate testpit locations for OF-TP1 through OF-TP4 and the CB-1 testpits are shown on Figure 2.

The depth of each testpit varied based on the presence of infrastructure or other subsurface features / obstructions. Testpit depths varied between 2.5 – 5 feet bgs in this IRM area, and the testpit lengths ranged between 10 – 25 feet. The subsurface soils excavated from each boring were characterized and logged. In addition, soils recovered from the testpits were field screened with a PID meter.

Two (2) surface water samples in the Stormwater Outfall IRM area during the PDI. One was collected at the outfall pipe at the NW portion of the outfall IRM, and one was obtained from standing water observed next to CB-1.

Four (4) testpit samples, two (2) surface water samples, a composite TCLP sample of soils collected during the PDI in this IRM area (plus associated QA/QC samples) were submitted for laboratory analysis. Sample intervals designated for analysis were selected based on field screening (PID, visual, olfactory) and with the intent to delineate extent of contaminant within the Outfall IRM. Analytical results are discussed in Section 2.4 below, and can be found in Figure 2 and Tables 1, 2, and 5.

## 2.2 FIELD OBSERVATIONS

The 18" stormwater pipe between CB-2 and CB-1 (see Figure 2) was located in testpits OF-TP1, OF-TP2 and CB1S. The pipe is spaced 12 – 14 feet west of the former Building #1 at a depth of 2 – 3.5 feet bgs. The pipe itself is composed of concrete with no evidence of pipe cracks / separations noted in any of the testpits. Depth to top-of-pipe was noted to be approximately 2.5 feet bgs at OF-TP1. This particular testpit is located about halfway between CB-2 and the loading dock. The ground surface-to-pipe depth varies between CB-2 and CB-1, as top-of-pipe was measured at 2.2 feet bgs to the top of the pipe at OF-TP2, where it appears to enter a subsurface concrete structure (perhaps part of a historic foundation or wall) (see Photo 1 in Appendix D). This subsurface concrete feature is likely associated with an old building that historically existed next to this portion of the former Building #1 (as evidenced on historic site maps). Excavation of the pipe in this section will thus need to consider the buried concrete and other subsurface debris encountered in this area. In addition, smaller clay tile pipes were observed to enter the 18" stormwater pipe likely from the former Building #1 foundation (from the east) at OF-TP2.

The 18" stormwater pipe enters into CB-1 on the south side of the catch basin at a depth of approximately 3.5 feet below surrounding grade, and exits CB-1 at a depth of 5.5 feet as measured from the top of the CB-1 cover to the top-of-pipe. This 18" stormwater pipe trends from CB-1 to the northwest toward the outfall terminus (Figure 2). It should be noted that during a rain event that occurred while sampling, there was no indication of outflow from the terminus of the outfall pipe.

In addition to the building debris identified along the CB-2 to CB-1 section, notable observations were made regarding soils and other subsurface material located in parts of this IRM area. Soils surrounding CB-1 were observed to have red/black staining with PID hits of up to 80 ppm. Household and construction-type waste and debris were discovered in OF-TP3 closer to the outfall terminus (refer to Figure 2). The material from this testpit was noted to include coal, used



copper, broken glassware and discarded soda bottles (see Photo 2 in Appendix D). The 18" stormwater pipe was observed to trend directly beneath this testpit area.

At CB-1, in addition to the 18" stormwater piping entering the catch basin from the south, and exiting north-northwest, there were two (2) other pipes connected to CB-1. On the north side of CB-1, another 18" concrete pipe was found at a depth of approximately 5 feet measured from the top of the CB-1 cover to the top-of-pipe and trends in a north-south direction. This pipe is likely an historic stormwater discharge pipe that used to drain to the former ship canal but that has been out of service for decades (i.e., perhaps since the new outfall piping was routed to the northwest). A fourth pipe, a smaller, possible 6" clay tile pipe was observed from inside CB-1. This pipe connected to CB-1 from the east side, and is likely another drainpipe from the former Building #1. The depth of this pipe is probably 1 feet bgs (the grade on the east side of CB-1 is sloped downward toward CB-1) just above a sizable hole where surface water is draining into CB-1.

At CB-2 (see Figure 2), in addition to the 18" stormwater pipe trending north to CB-1, three other pipes were found identified during the PDI. These pipes include a 12" stormwater pipe that enters into CB-2 directly from the south, at approximately the same depth as the pipe exiting to the north; a pipe (12" – 18" diameter) enters CB-2 from the southeast at a slightly deeper depth (likely trending at an oblique angle from beneath the former Building #1 slab), and a smaller 6" pipe connected to CB-2 from the east (possible drainpipe from former Building #1). These notes on the three pipes were based on visual inspection only from the entry grate atop CB-2 but the depths are all similar to the northward trending pipe, as each was visible at or above the water line inside CB-2 at the time of the inspection. The pipe entering CB-2 from the south may be composed of vitrified tile based on historical data, while the pipe entering from the southeast appears to be composed of concrete, the same or similar as the 18" stormwater pipe trending north to CB-1. The smaller pipe may be a clay tile pipe, but was difficult to observe during the PDI.

### 2.3 GENERAL LITHOLOGY

Generalized lithology of the Stormwater Outfall IRM area can be subdivided into the CB-2 to CB-1 pipe run, and from CB-1 to the outfall. The CB-2 to CB-1 portion contains poorly sorted clays with fill/debris overlying silty clays, with varying levels of silt and layers containing pebbles. From CB-1 to the outfall terminus, the lithology contains a thin layer of soil overlying native mottled clays. Approaching the property boundary, the area of buried household/construction waste (vicinity of testpit OF-TP3 on Figure 2) sits above native clays. Future IRM-related activities will need to consider the presence of this debris.

Specific detail regarding lithology at sampling locations in the IRM area can be found in the soil boring and testpit logs in Appendix B and C, respectively.

### 2.4 SAMPLE ANALYTICAL RESULTS

For the Stormwater Outfall IRM area, a total of four (4) soil samples from four (4) testpit locations were submitted for laboratory analysis. In addition, two (2) groundwater samples were also collected for laboratory analysis from this IRM area. Analytical results indicate measureable quantities of VOCs, SVOCs, PCBs, pesticides, and metals across portions of the Stormwater Outfall IRM area. The highest concentrations of VOCs occur along portions of the Outfall IRM from the CB-1 area and along the 18" stormwater piping that connect CB-1 with the outfall. In



particular, samples from testpit CB1N indicate quantities of cis-1,2 DCE at 360 ug/kg which is in exceedance of the applicable NYSDEC Part 375 soil cleanup objective (SCO) for the protection of groundwater. The highest observed concentrations of TCE in soil during the PDI were measured at testpit OF-TP4, at a concentration of 210 ug/kg. Multiple SVOCs, several of which are in exceedance of applicable SCOs, were measured in testpit OF-TP3 and may be related to the wastes identified during the testpit excavation. PCB's were found in samples taken along stormwater infrastructure between CB-2 and CB-1, while pesticides were also detected in the PDI samples. In terms of water samples, VOCs, metals, and PCBs were recorded in excess of the NYSDEC Part 703 water quality standards at one or both surface water sample sites.

Summaries of analytical results of the soil and water sampling in the Stormwater Outfall IRM area are included on Figure 2 and Tables 1 and 2. In addition, TCLP composite samples of the Stormwater Outfall Area can be found in Table 5. The TCLP results indicate that no analytes exceed its respective criterion for classifying the materials as hazardous in this IRM area.

### **3.0 Former Septic System / Leach Field IRM**

#### **3.1 SAMPLING**

As part of the PDI, eleven (11) soil borings were advanced by EGS from October 21 through October 22, 2015 at pre-selected locations within the Former Septic System / Leach Field IRM area. These borings were conducted to verify existing soil contamination quantities and/or fill in data gaps, and also to assist with the remedial design in for this IRM area (i.e., refinement of excavation limits). Approximate soil boring locations for LFS1 through LFS11 are shown on Figure 3b.

All soil borings were advanced to the depth of 16 feet below ground surface (bgs), except for LFS6 and LFS11, which were advanced to 8 feet bgs. The subsurface soils recovered from each boring were characterized and logged. In addition, soils recovered from the borings were field screened with a PID meter.

Eight (8) testpits were excavated in this IRM area by EGS on October 26 and October 27, 2015. These testpits were conducted to locate subsurface features associated with the IRM area, and refine dewatering and other field needs during future IRM implementation. Approximate testpit locations for LFS-TP1 through LFS-TP8 are shown on Figure 3a and 3b.

The depth of each testpit varied based on the presence of infrastructure or other subsurface features / obstructions. Testpit depths varied between 2.5 – 11 feet bgs. The length of each testpit ranged from 10 – 45 feet. The subsurface soils excavated from each pit were characterized and logged. In addition, soils recovered from the testpits were field screened with a PID meter.

Two (2) grab groundwater samples were taken via 1" piezometer with a screened interval of 5 – 15 feet bgs. Both water samples were collected from the central portion of the Leach Field area.

Eight (8) soil boring samples, three (3) testpit samples, two (2) groundwater samples, a composite TCLP sample of soils collected during the PDI in this IRM area (plus associated QA/QC samples) were submitted for laboratory analysis. Sample intervals designated for analysis were selected based on field screening (PID, visual, olfactory) and with the intent to delineate extent of contaminant within the Former Septic System / Leach Field IRM area. Two (2) additional samples from testpit LFS-TP1 (named LFS-TP1A and LFS-TP1B) were submitted



for analysis due to the discovery of distinct contamination composed of black tar-like sludge and white precipitate along with buried scrap metal. Analytical results are discussed in Section 3.4 below, and can be found in Figures 3a - 3b and Tables 3, 4 and 5.

### 3.2 FIELD OBSERVATIONS

The 12" concrete septic pipe was located in testpits LFS-TP8, LFS-TP1, LFS-TP2 and LFS-TP3 before terminating at the concrete septic box at the top the leach field (Figure 3A and 3B; Photo 3 in Appendix D). It is noted that the historic septic system / leach field which is the subject of this IRM is no longer in-service (and was reportedly abandoned in-place several years ago). Depths of the 12" pipe range between 0.5 – 4 feet bgs, and the pipe is structurally compromised in several areas. The pipe condition as observed in testpit LFS-TP3 was found to be broken and contained evidence of animals possibly living within or around the pipe / pipe corridor. The pipe was observed to terminate at the eastern end of the septic box at the top of the leach field area. The box itself has dimensions of 16 x 21 feet, with a smaller 6 x 10.5 feet portion extending outwards along the western side.

Groundwater in the Former Septic System / Leach Field IRM area was observed to be approximately 5 - 8 feet bgs. An approximate depth-to-groundwater observation of 8 feet below grade was observed in testpit LFS-TP1, located upgradient of the leach field, while an approximate depth-to-groundwater observation of 5 feet bgs was observed in LFS2 (as measured in a 1" piezometer with a screened portion of 5 to 15 feet bgs). However, when excavating testpits LFS-TP4, LFS-TP5, and LFS-TP6 (to a maximum depths of 11 feet bgs), only TP5 and TP6 had very slight inflows of groundwater (see Photo 4 of Appendix D). This observation indicates tightly packed clays prohibiting the upward flow of groundwater.

In addition, several notable observations were made in this IRM area particularly at testpits LFS-TP8 and LFS-TP1 (refer to Figure 3a). In LFS-TP8, a vault (CB-3) was uncovered, and the 12" sanitary line was observed running from the foundation of former Building #1 outwards toward the leach field. A secondary 6" pipe was found to drain into CB-3. It is conceivable that this is a floor drain from Building #8, and would provide an avenue for PCB's to migrate outwards to the leach field. Clay tile and cast iron pipes were also noted trending parallel to the former Building #1 within the trench, west of CB-3. These pipes, although not uncovered during additional testpitting further north in the Stormwater Outfall IRM area, perhaps due to a change in trend or depth, may be encountered during IRM activities. At the northern part of testpit LFS-TP1, five (5) electrical conduits trending east to west, and ranging in size from 3/4" - 2" feet bgs were located 10 feet north of the 12" concrete septic pipe. The source of these conduits is visible along the foundation wall of former Building #1. Approximately 30 feet north of the conduits, a small buried trash pile composed primarily of scrap metal covered in a tar-like substance along with a white precipitate was uncovered (see Photo 5 of Appendix D). Soil samples LFS-TP1A and LFS-TP1B were taken of this area (LFS-TP1 is of the soil in the southern part of the test pit, beneath the 12" sanitary pipe). LFS-TP1A is a sample of the contaminated soil surrounding the tar-like substance and precipitate, while LFS-TP1B is a sample containing the contaminants directly. These samples were taken to quantify the extent of potential contamination that may be encountered during future IRM activities.

A clay tile outfall pipe, comprising the northern part of the Former Septic System / Leach Field IRM area (see Figure 3a) was located in testpit LFS-TP7 trending from the pipe's outfall upgradient towards the former Building #10. The pipe was observed to have an interior diameter of 8" and can be found at depths of 0 feet bgs (at the outfall terminus) to approximately 6 feet bgs as observed in testpits. The pipe is extremely fragile and is likely compromised in several locations. The trend of the pipe can be detected by a slight depression in the topography. An exploratory testpit dug outside of the IRM boundaries confirmed the trend of the clay outfall



pipe, although the starting (upgradient) point of the pipe is unclear. It was confirmed that this clay tile pipe has been non-functional for several years.

Selected notable observations from the PDI field work are included on Figures 3a and 3b.

### 3.3 GENERAL LITHOLOGY

Generalized lithology of the Former Septic System / Leach Field IRM area can be subdivided into the upgradient section between the former Building #1 and the fence line (Figure 3a), and between the fence line to the western extent of the leach field itself. In the upgradient section, the lithology consists of fill soils overlaying native silts and clays. For future IRM-related activities, it is likely that removal of the historic 12" septic system piping will require the removal of up to 1 foot total of asphalt and sand/gravel fill in some areas in the vicinity of the former Building #1, in addition to several feet of silty clays. In the downgradient section, the occurrence of fill is less likely. Some fill may exist surrounding the septic box itself, but the rest of the IRM area contains several inches of soil followed by silty, mottled clays with varying layers of hard silty clay with pebble/cobble inclusions (see Photo 6 of Appendix D). Beneath this intermediate silty clay layer, is a distinct, well-indurated reddish glacial till composed of a variety of silts, clays and a lesser extent of sands and pebbles.

Groundwater was observed at 8 feet bgs in LFS-TP1, upgradient of the leach field, while an approximate depth-to-groundwater of approximately 5 feet bgs was observed in LFS2 via a 1" piezometer with a screened portion of 5 to 15 feet bgs. However, when excavating LFS-TP4, LFS-TP5, and LFS-TP6, to a maximum depth of 11 feet bgs, only TP5 and TP6 locations were noted to have slight inflows of groundwater (see Photo 4 of Appendix D). This indicates tightly packed clays prohibiting the upward flow of groundwater.

Specific detail regarding lithology at sampling locations in the IRM area can be found in the soil boring and testpit logs in Appendix B and C, respectively.

### 3.4 SAMPLE ANALYTICAL RESULTS

For the Septic System / Leach Field IRM area, a total of thirteen (13) soil samples from ten (10) testpit and probe locations were submitted for laboratory analysis. In addition, two (2) groundwater samples were also collected for laboratory analysis from this IRM area. Analytical results indicate measurable quantities of primarily metals with nearly all soil samples indicating a concentration of total chromium in exceedance of applicable SCo's. Lower levels of PCB's (AROCOLOR 1254 and 1260), pesticides and SVOCs were also recorded in both soil and water samples. Samples taken outside the approximate limits of soil excavation did not contain any SVOCs or PCBs affirming historical boundaries of contamination. Additional analysis was performed for LFS-TP1, which noted a small trash pile composed primarily of scrap metal covered in a tar-like substance during excavation of the testpit. Analysis of soils located in and around this portion of the testpit (LFS-TP1A and LFS-TP1B) indicated concentrations of compounds indicative of motor oil (at 18,000 ug/kg), unknown hydrocarbons at 7,300 mg/kg, and oil & grease at 16,400 mg/kg as reported by the laboratory. In addition, pesticides in exceedance of applicable SCo's were noted at both LFS-TP1A and LFS-TP1B with the highest concentration measured at 97 ug/kg of DDE.

Complete results of the soil and water sampling analysis, along with notable observations are found in Figures 3a and 3b, and Tables 3 and 4. In addition, data from a TCLP composite sample of soils from the Former Septic System / Leach Field IRM area can be found in Table 5.



The TCLP results indicate that no analytes exceed its respective criterion for classifying the materials as hazardous in this IRM area.

If you have any questions or require additional information, please do not hesitate to contact me at 201-335-9412.

Very truly yours,

A handwritten signature in black ink that appears to read "JCS".

Justin C. Starr  
Geologist

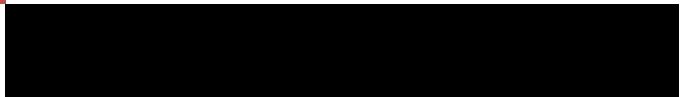
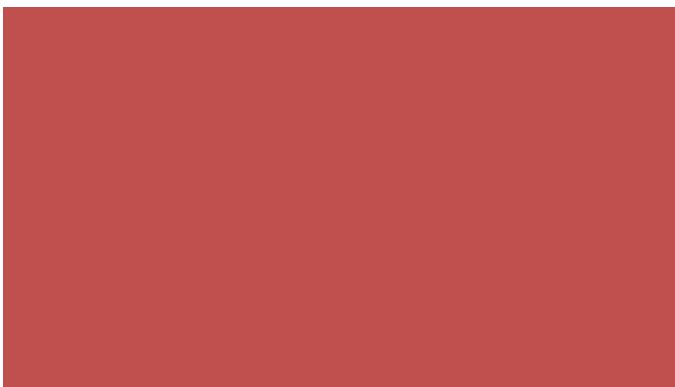
A handwritten signature in black ink that appears to read "Michael P. Musso, P.E.".

Michael P. Musso, P.E.  
Project Manager

Cc:  
HDR File



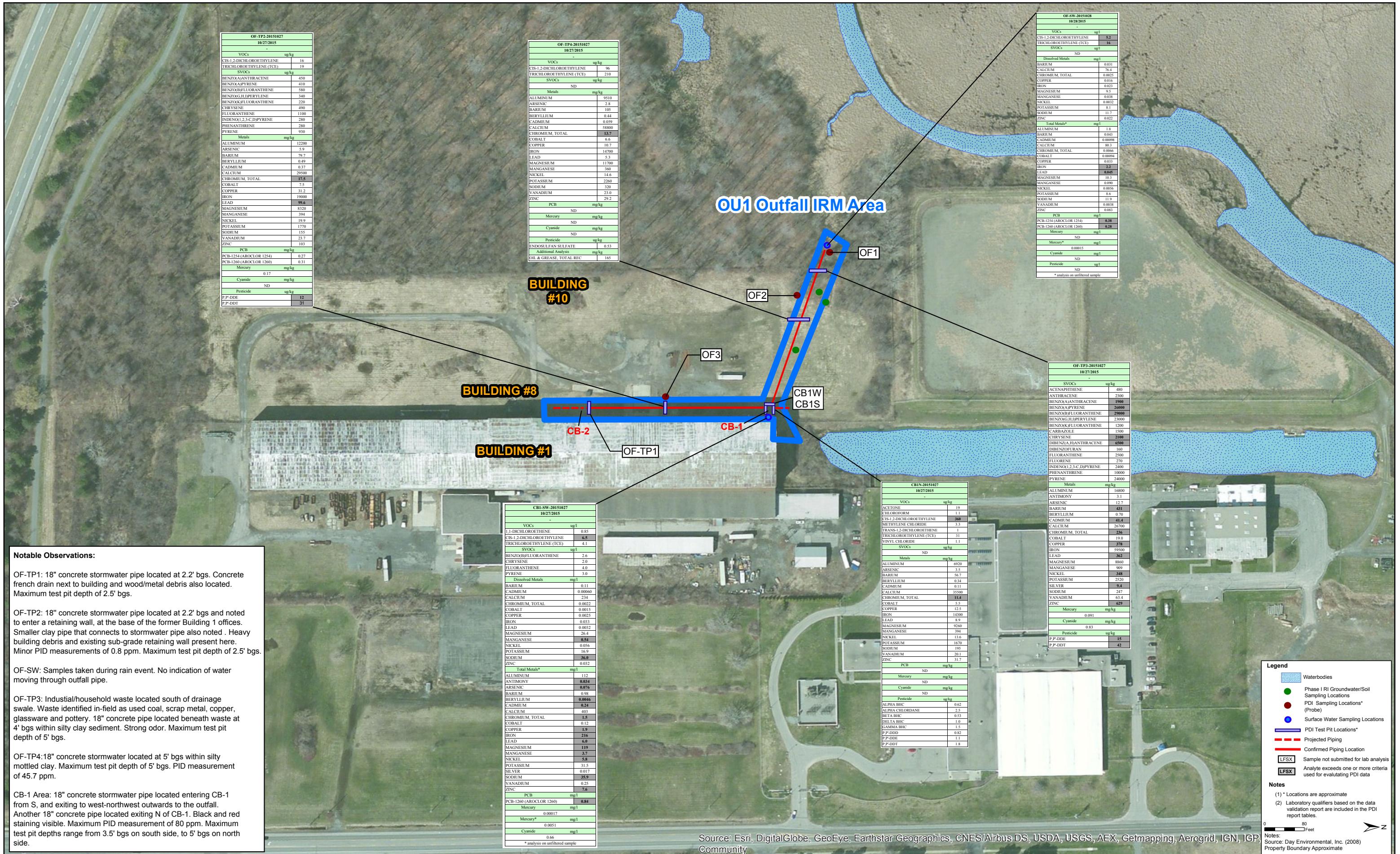
## Figures





Former Air Force Plant No. 51 (NYSDEC Site No. 828156)  
Greece, Monroe County, NY

Figure 1  
USGS Topographic Quadrangles  
12/15/2015



Former Air Force Plant No. 51 (NYSDEC Site No. 828156)  
Greece, Monroe County, New York

DATE  
01/14/2016

FIGURE  
2

PDI Analytical Results and Field Observations for the Former Stormwater Outfall IRM Area

**Legend**

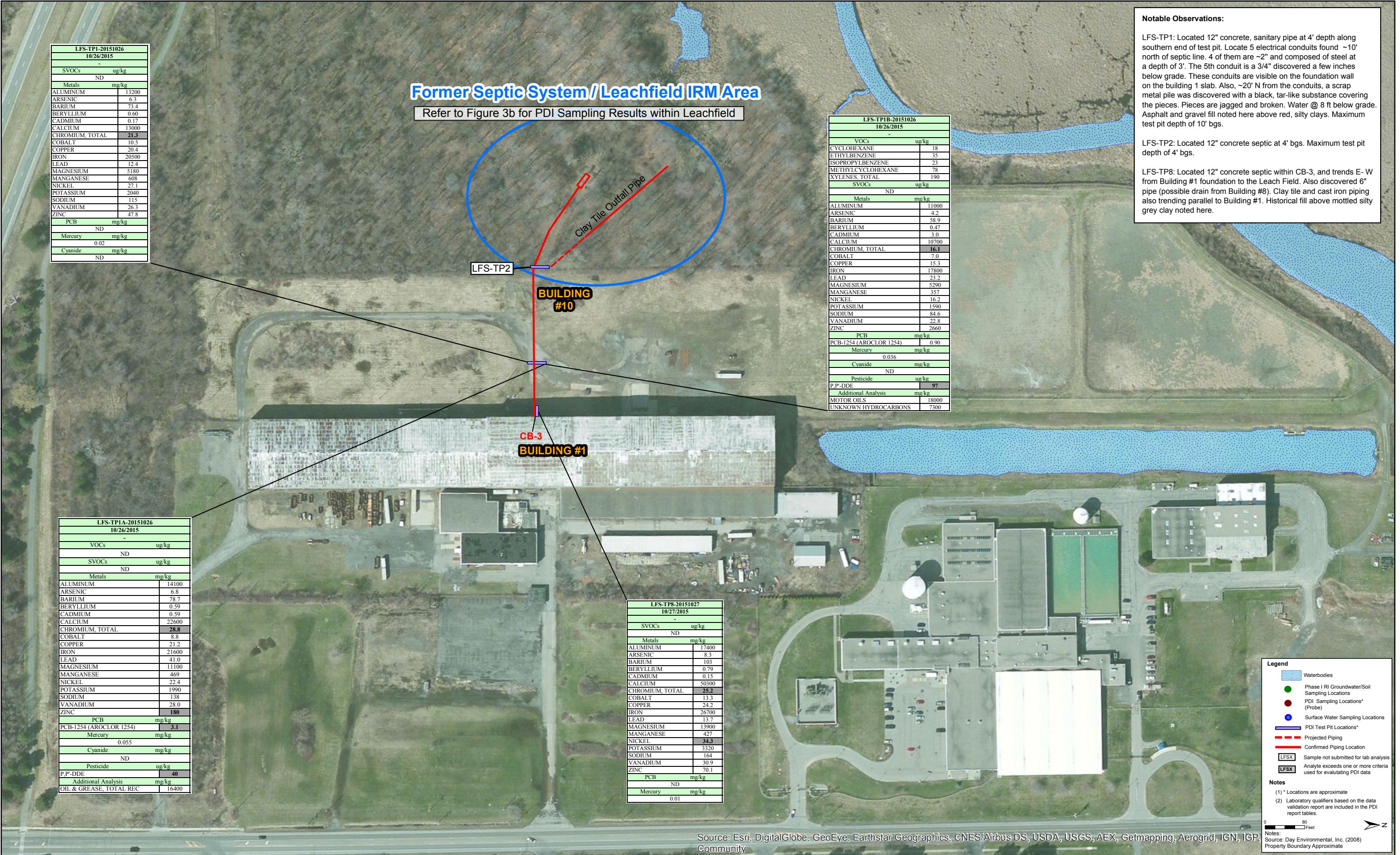
- Waterbodies
- Phase I RI Groundwater/Soil Sampling Locations
- PDI Sampling Locations\* (Probe)
- Surface Water Sampling Locations
- PDI Test Pit Locations\*
- Projected Piping
- Confirmed Piping Location
- LFSX Sample not submitted for lab analysis
- LFSX Analyte exceeds one or more criteria used for evaluating PDI data

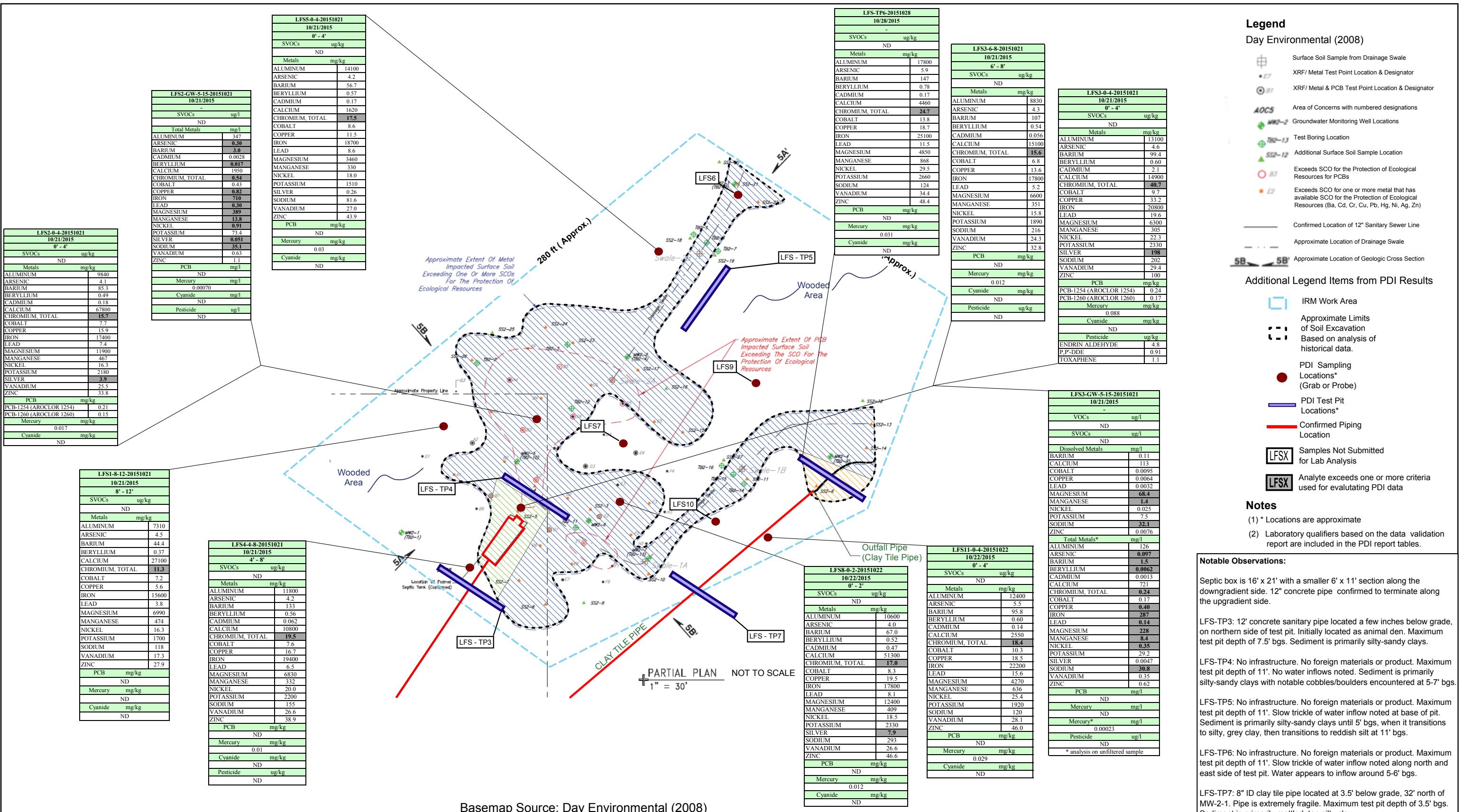
**Notes**

(1) \* Locations are approximate  
(2) Laboratory qualifiers based on the data validation report are included in the PDI report tables.

0 80 Feet

Source: Day Environmental, Inc. (2008)  
Property Boundary Approximate



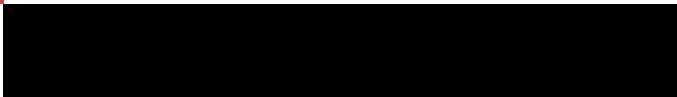
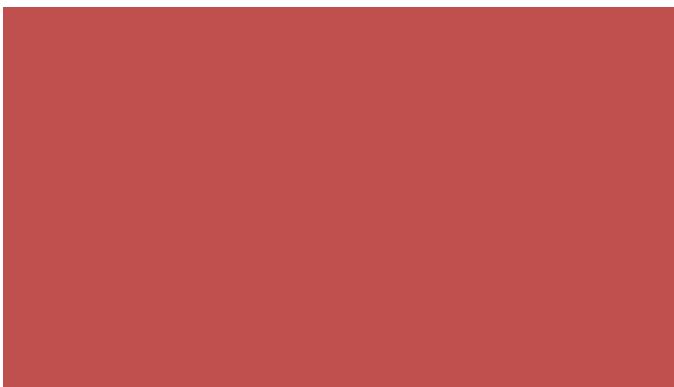


Former Air Force Plant No. 51 (NYSDEC Site No. 828156 )  
Greece, Monroe County, New York

DATE  
01/14/2016  
FIGURE  
3b



# Tables



Sample Location	CUSCOs	IUSCOs	ERSCOs	GWSCOs	OF-TP2	OF-TP4	CB1N
Sample Name					OF-TP2-20151027	OF-TP4-20151027	CB1N-20151027
Sample Date					10/27/2015	10/27/2015	10/27/2015
Constituent	CUSCOs	IUSCOs	ERSCOs	GWSCOs			
1,1,1-TRICHLOROETHANE	500000	1000000	NS	680	ND	U	ND
1,1,2,2-TETRACHLOROETHANE	NS	NS	NS	NS	ND	U	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	NS	NS	NS	NS	ND	U	ND
1,1,2-TRICHLOROETHANE	NS	NS	NS	NS	ND	U	ND
1,1-DICHLOROETHANE	240000	480000	NS	270	ND	U	ND
1,1-DICHLOROETHENE	30000	1000000	NS	NS	ND	U	ND
1,2,4-TRICHLOROBENZENE	NS	NS	NS	NS	ND	U	ND
1,2-DIBROMO-3-CHLOROPROPANE	NS	NS	NS	NS	ND	U	ND
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	NS	NS	NS	NS	ND	U	ND
1,2-DICHLOROBENZENE	500000	1000000	NS	1100	ND	U	ND
1,2-DICHLOROETHANE	30000	60000	10000	20	ND	U	ND
1,2-DICHLOROPROPANE	NS	NS	NS	NS	ND	U	ND
1,3-DICHLOROBENZENE	280000	560000	NS	2400	ND	U	ND
1,4-DICHLOROBENZENE	130000	250000	20000	1800	ND	U	ND
1,4-DIOXANE (P-DIOXANE)	NS	NS	NS	NS	ND	U	ND
2-HEXANONE	NS	NS	NS	NS	ND	U	ND
ACETONE	500000	1000000	2200	50	ND	U	ND
BENZENE	44000	89000	70000	60	ND	U	ND
BROMODICHLOROMETHANE	NS	NS	NS	NS	ND	U	ND
BROMOFORM	NS	NS	NS	NS	ND	U	ND
BROMOMETHANE	NS	NS	NS	NS	ND	U	ND
CARBON DISULFIDE	NS	NS	NS	NS	ND	U	ND
CARBON TETRACHLORIDE	22000	44000	NS	760	ND	U	ND
CHLOROBENZENE	500000	1000000	40000	1100	ND	U	ND
CHLOROETHANE	NS	NS	NS	NS	ND	U	ND
CHLOROFORM	350000	700000	12000	370	ND	U	ND
CHLOROMETHANE	NS	NS	NS	NS	ND	U	ND
CIS-1,2-DICHLOROETHYLENE	500000	1000000	NS	250	16	96	<b>360</b>
CIS-1,3-DICHLOROPROPENE	NS	NS	NS	NS	ND	U	ND
CYCLOHEXANE	NS	NS	NS	NS	ND	U	ND
DIBROMOCHLOROMETHANE	NS	NS	NS	NS	ND	U	ND
DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	ND	U	ND
ETHYLBENZENE	390000	780000	NS	1000	ND	U	ND
Isopropylbenzene (Cumene)	NS	NS	NS	NS	ND	U	ND
METHYL ACETATE	NS	NS	NS	NS	ND	U	ND
METHYL ETHYL KETONE (2-BUTANONE)	500000	1000000	NS	120	ND	UT	ND
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	NS	NS	NS	NS	ND	U	ND
METHYLCYCLOHEXANE	NS	NS	NS	NS	ND	U	ND
METHYLENE CHLORIDE	500000	1000000	12000	50	ND	U	ND
STYRENE	NS	NS	NS	NS	ND	U	ND
TERT-BUTYL METHYL ETHER	NS	NS	NS	NS	ND	U	ND
TETRACHLOROETHYLENE(PCE)	150000	300000	2000	1300	ND	U	ND
TOLUENE	500000	1000000	36000	700	ND	U	ND
TRANS-1,2-DICHLOROETHENE	500000	1000000	NS	190	ND	U	ND
TRANS-1,3-DICHLOROPROPENE	NS	NS	NS	NS	ND	U	ND
TRICHLOROETHYLENE (TCE)	200000	400000	2000	470	19	210	31
TRICHLOROFLUOROMETHANE	NS	NS	NS	NS	ND	U	ND
VINYL CHLORIDE	13000	27000	NS	20	ND	U	ND
XYLEMES, TOTAL	500000	1000000	260	1600	ND	U	ND

Sample Location	Sample Name	Sample Date	OF-TP2				OF-TP4				CB1N		OF-TP3	
			OF-TP2-20151027				OF-TP4-20151027				CB1N-20151027		OF-TP3-20151027	
			10/27/2015				10/27/2015				10/27/2015		10/27/2015	
Constituent	CUSCOs	IUSCOs	ERSCOs	GWSCOs										
2,4,5-TRICHLOROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2,4,6-TRICHLOROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2,4-DICHLOROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2,4-DIMETHYLPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2,4-DINITROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2,4-DINITROTOLUENE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2,6-DINITROTOLUENE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2-CHLORONAPHTHALENE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2-CHLOROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2-METHYLNAPHTHALENE	500000	1000000	NS	330	ND	U	ND	U	ND	U	ND	U	ND	U
2-METHYLPHENOL (O-CRESOL)	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2-NITROANILINE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2-NITROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
3,3'-DICHLOROBENZIDINE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
3-NITROANILINE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4,6-DINITRO-2-METHYLPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-BROMOPHENYL PHENYL ETHER	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-CHLORO-3-METHYLPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-CHLOROANILINE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-CHLOROPHENYL PHENYL ETHER	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-METHYLPHENOL (P-CRESOL)	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-NITROANILINE	500000	1000000	NS	330	ND	U	ND	U	ND	U	ND	U	ND	U
4-NITROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
ACENAPHTHENE	500000	1000000	20000	98000	ND	U	ND	U	ND	U	ND	U	480	J
ACENAPHTHYLENE	500000	1000000	NS	107000	ND	U	ND	U	ND	U	ND	U	ND	U
ACETOPHENONE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
ANTHACENE	500000	1000000	NS	1000000	ND	U	ND	U	ND	U	ND	U	2300	
ATRAZINE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BENZALDEHYDE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BENZO(A)ANTHRACENE	5600	11000	2600	1000	450	J	ND	U	ND	U	1900			
BENZO(A)PYRENE	1000	1100	NS	22000	410	J	ND	U	ND	U	26000			
BENZO(B)FLUORANTHENE	5600	11000	NS	1700	580	J	ND	U	ND	U	29000			
BENZO(G,H,I)PERYLENE	500000	1000000	NS	1000000	340	J	ND	U	ND	U	23000			
BENZO(K)FLUORANTHENE	56000	110000	NS	1700	220	J	ND	U	ND	U	1200			
BENZYL BUTYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BIPHENYL (DIPHENYL)	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BIS(2-CHLOROETHOXY) METHANE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BIS(2-CHLOROISOPROPYL) ETHER	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BIS(2-ETHYLHEXYL) PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
CAPROLACTAM	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
CARBAZOLE	NS	NS	NS	NS	ND	U	ND	U	ND	U	1500			
CHRYSENE	56000	110000	NS	1000	490	J	ND	U	ND	U	2100			
DIBENZ(A,H)ANTHRACENE	560	1100	NS	1000000	ND	U	ND	U	ND	U	6500	J		
DIBENZOFURAN	NS	NS	NS	NS	ND	U	ND	U	ND	U	160			
DIETHYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
DIMETHYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
DI-N-BUTYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
DI-N-OCTYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
FLUORANTHENE	500000	1000000	NS	1000000	1100		ND	U	ND	U	2500			
FLUORENE	5600	1000000	30000	386000	ND	U	ND	U	ND	U	270			
HEXAChLOROBENZENE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
HEXAChLOROBUTADIENE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
HEXAChLOROCYCLOPENTADIENE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
HEXAChLOROETHANE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
INDENO(1,2,3-C,D)PYRENE	5600	11000	NS	8200	280	J	ND	U	ND	U	2400			
ISOPHORONE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
NAPHTHALENE	500000	1000000	NS	12000	ND	U	ND	U	ND	U	ND	U	ND	U
NITROBENZENE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
N-NITROSODI-N-PROPYLAMINE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
N-NITROSODIPHENYLAMINE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
PENTACHLOROPHENOL	6700	55000	800	800	ND									

Sample Location					OF-TP2		OF-TP4		CB1N		OF-TP3
Sample Name					OF-TP2-20151027		OF-TP4-20151027		CB1N-20151027		OF-TP3-20151027
Sample Date					10/27/2015		10/27/2015		10/27/2015		10/27/2015
Sample Depth											
Constituent	IUSCOs	GWSCOs	ERSCOs	CUSCOs							
ALUMINUM	NS	NS	NS	NS	12200		9510		6920		16800
ANTIMONY	NS	NS	NS	NS	ND	U	ND	U	ND	U	3.1
ARSENIC	16	16	13	16	5.9		2.8		3.5		12.7
BARIUM	10000	820	433	400	79.7		105		56.7		431
BERYLLIUM	2700	47	10	590	0.49		0.44		0.34		0.70
CADMIUM	60	7.5	4	9.3	0.37		0.059	J	0.11	J	41.4
CALCIUM	NS	NS	NS	NS	29500	B	58800	B	35500	B	26700
CHROMIUM, TOTAL	800	19	1	400	17.5		13.7		11.4		236
COBALT	NS	NS	NS	NS	7.5		6.6		5.5		19.0
COPPER	10000	1720	50	270	31.2		10.7		12.5		378
IRON	NS	NS	NS	NS	19000		14700		14300		59500
LEAD	3900	450	63	1000	99.6		5.3		8.9		362
MAGNESIUM	NS	NS	NS	NS	8320		11700		9260	B	8860
MANGANESE	10000	2000	1600	10000	394		360		394	B	909
NICKEL	6800	130	30	310	19.9		14.6		13.6		348
POTASSIUM	NS	NS	NS	NS	1770		2260		1670		2520
SELENIUM	6800	4	3.9	1500	ND	U	ND	U	ND	U	ND
SILVER	6800	8.3	2	1500	ND	U	ND	U	ND	U	9.4
SODIUM	NS	NS	NS	NS	155	J	320		195		247
THALLIUM	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND
VANADIUM	NS	NS	NS	NS	23.7		23.0		20.1		63.4
ZINC	10000	2480	109	1000	103		29.2		31.7		629
MERCURY	5.7	0.73	0.18	2.8	0.17		ND	U	ND	U	0.091
CYANIDE	10000	40	NS	27	ND	U	ND	U	ND	U	0.83

Sample Location						OF-TP2		OF-TP4		CB1N		OF-TP3
Sample Name						OF-TP2-20151027		OF-TP4-20151027		CB1N-20151027		OF-TP3-20151027
Sample Date						10/27/2015		10/27/2015		10/27/2015		10/27/2015
Sample Depth												
Constituent	CUSCOs	IUSCOs	ERSCOs	GWSCOs	Units							
ALDRIN	680	1400	140	190	ug/kg	ND	U	ND	U	ND	U	ND
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	3400	6800	40	20	ug/kg	ND	U	ND	U	0.62	J	ND
ALPHA CHLORDANE	24000	47000	1300	2900	ug/kg	ND	U	ND	U	2.5	J	ND
ALPHA ENDOSULFAN	200000	920000	NS	102000	ug/kg	ND	U	ND	U	ND	U	ND
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	3000	14000	1300	90	ug/kg	ND	U	ND	U	0.53	NJ	ND
BETA ENDOSULFAN	200000	920000	NS	102000	ug/kg	ND	U	ND	U	ND	U	ND
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	500000	14000	40	250	ug/kg	ND	U	ND	U	1.0	NJ	ND
DIELDRIN	1400	2800	6	100	ug/kg	ND	U	ND	U	ND	U	ND
ENDOSULFAN SULFATE	200000	920000	NS	1000000	ug/kg	ND	U	0.53	J	ND	U	ND
ENDRIN	89000	410000	14	60	ug/kg	ND	U	ND	U	ND	U	ND
ENDRIN ALDEHYDE	NS	NS	NS	NS	ug/kg	ND	U	ND	U	ND	U	ND
ENDRIN KETONE	NS	NS	NS	NS	ug/kg	ND	U	ND	U	ND	U	ND
GAMMA BHC (LINDANE)	9200	23000	6000	100	ug/kg	ND	U	ND	U	1.5	J	ND
HEPTACHLOR	15000	29000	140	380	ug/kg	ND	U	ND	U	ND	U	ND
HEPTACHLOR EPOXIDE	NS	NS	NS	NS	ug/kg	ND	U	ND	U	ND	U	ND
METHOXYCHLOR	NS	NS	NS	NS	ug/kg	ND	U	ND	U	ND	U	ND
P,P'-DDD	92000	180000	3.3	14000	ug/kg	ND	U	ND	U	0.82	J	ND
P,P'-DDE	62000	120000	3.3	17000	ug/kg	12	J	ND	U	1.1	J	15
trans-Chlordane	NS	NS	NS	NS	ug/kg	ND	U	ND	U	ND	U	NJ
P,P'-DDT	47000	94000	3.3	136000	ug/kg	31	U	ND	U	1.8	J	42
TOXAPHENE	NS	NS	NS	NS	ug/kg	ND	U	ND	U	ND	U	ND
PCB-1016 (AROCLOR 1016)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND	U	NA
PCB-1221 (AROCLOR 1221)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND	U	NA
PCB-1232 (AROCLOR 1232)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND	U	NA
PCB-1242 (AROCLOR 1242)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND	U	NA
PCB-1248 (AROCLOR 1248)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND	U	NA
PCB-1254 (AROCLOR 1254)	1	25	1	3.2	mg/kg	0.27		ND	U	ND	U	NA
PCB-1260 (AROCLOR 1260)	1	25	1	3.2	mg/kg	0.31	J+	ND	U	ND	U	NA

Sample Location		OF-TP4	CB1N
Sample Name		OF-TP4-20151027	CB1N-20151027
Sample Date		10/27/2015	10/27/2015
Constituent	Units		
CLAY	%	28.2	23.1
COARSE SAND	%	0.0	3.8
FINE SAND	%	13.4	20.3
GRAVEL	%	0.0	2.2
HYDROMETER, READING 1, PERCENT PASSING	%	59.6	68.1
HYDROMETER, READING 2, PERCENT PASSING	%	53.3	49.2
HYDROMETER, READING 3, PERCENT PASSING	%	42.0	34.9
HYDROMETER, READING 4, PERCENT PASSING	%	35.8	30.2
HYDROMETER, READING 5, PERCENT PASSING	%	28.2	23.1
HYDROMETER, READING 6, PERCENT PASSING	%	19.1	16.0
HYDROMETER, READING 7, PERCENT PASSING	%	11.6	10.1
Medium Sand	%	2.5	5.3
SAND	%	15.9	29.4
SIEVE NO. 10, PERCENT PASSING	%	100.0	94.0
SIEVE NO. 200, PERCENT PASSING	%	84.1	68.4
SIEVE NO. 4, PERCENT PASSING	%	100.0	97.8
SIEVE NO. 40, PERCENT PASSING	%	97.5	88.7
SIEVE NO. 80, PERCENT PASSING	%	93.2	81.8
SIEVE, 19000 MICRONS, PERCENT PASSING	%	100.0	100.0
SIEVE, 25000 MICRONS, PERCENT PASSING	%	100.0	100.0
SIEVE, 37500 MICRONS, PERCENT PASSING	%	100.0	100.0
SIEVE, 50000 MICRONS, PERCENT PASSING	%	100.0	100.0
SIEVE, 75000 MICRONS, PERCENT PASSING	%	100.0	100.0
SIEVE, 9500 MICRONS, PERCENT PASSING	%	100.0	100.0
SIEVE, NO. 100, PERCENT PASSING	%	91.6	79.8
SIEVE, NO. 20, PERCENT PASSING	%	99.1	91.3
SIEVE, NO. 60, PERCENT PASSING	%	95.3	84.8
SILT	%	55.9	45.3
OIL & GREASE, TOTAL REC	mg/kg	165	B
			NA

<b>VOCs</b>	
Units - $\mu\text{g}/\text{kg}$	<b>Bold/</b> <b>highlighted cell</b> – exceedance of one or more criteria
Qualifiers -	NA - Not Analyzed NS - Criteria not specified R - rejected B – also detected in associated method blank J – estimated value J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high ND – not detected NDJ – not detected, estimated reporting limit NJ – positive identification of tentatively identified compound, estimated value P – greater than 40% difference between primary and confirmation analyses U - compound analyzed for, but not detected T - Result is tentatively identified compound - an estimated value
Criteria –	New York State Department of Environmental Conservation - 6 NYCRR Part 375 Environmental Remediation Programs
	CUSCOs - Commercial Use Soil Cleanup Objectives IUSCOs - Industrial Use Soil Cleanup Objectives ERSCOs - Protection of Ecological Resources Soil Cleanup Objectives GWSCOs - Protection of Groundwater Soil Cleanup Objectives

<b>SVOCs</b>	
Units - $\mu\text{g}/\text{kg}$	<b>Bold/</b> <b>highlighted cell</b> – exceedance of one or more criteria
Qualifiers -	NA - Not Analyzed NS - Criteria not specified R - rejected B – also detected in associated method blank J – estimated value J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high ND – not detected NDJ – not detected, estimated reporting limit NJ – positive identification of tentatively identified compound, estimated value P – greater than 40% difference between primary and confirmation analyses U - compound analyzed for, but not detected T - Result is tentatively identified compound - an estimated value
Criteria –	New York State Department of Environmental Conservation - 6 NYCRR Part 375 Environmental Remediation Programs
	CUSCOs - Commercial Use Soil Cleanup Objectives IUSCOs - Industrial Use Soil Cleanup Objectives ERSCOs - Protection of Ecological Resources Soil Cleanup Objectives GWSCOs - Protection of Groundwater Soil Cleanup Objectives

<b>Metals &amp; Cyanide</b>	
Units - $\text{mg}/\text{kg}$	<b>Bold/</b> <b>highlighted cell</b> – exceedance of one or more criteria
Qualifiers -	NA - Not Analyzed NS - Criteria not specified R - rejected B – also detected in associated method blank J – estimated value J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high ND – not detected NDJ – not detected, estimated reporting limit NJ – positive identification of tentatively identified compound, estimated value P – greater than 40% difference between primary and confirmation analyses U - compound analyzed for, but not detected T - Result is tentatively identified compound - an estimated value
Criteria –	New York State Department of Environmental Conservation - 6 NYCRR Part 375 Environmental Remediation Programs
	CUSCOs - Commercial Use Soil Cleanup Objectives IUSCOs - Industrial Use Soil Cleanup Objectives ERSCOs - Protection of Ecological Resources Soil Cleanup Objectives GWSCOs - Protection of Groundwater Soil Cleanup Objectives

<b>PCBs &amp; Pesticides</b>	
Units - $\text{mg}/\text{kg}$	<b>Bold/</b> <b>highlighted cell</b> – exceedance of one or more criteria
Qualifiers -	NA - Not Analyzed NS - Criteria not specified R - rejected B – also detected in associated method blank J – estimated value J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high ND – not detected NDJ – not detected, estimated reporting limit NJ – positive identification of tentatively identified compound, estimated value P – greater than 40% difference between primary and confirmation analyses
Criteria –	New York State Department of Environmental Conservation - 6 NYCRR Part 375 Environmental Remediation Programs
	CUSCOs - Commercial Use Soil Cleanup Objectives IUSCOs - Industrial Use Soil Cleanup Objectives ERSCOs - Protection of Ecological Resources Soil Cleanup Objectives GWSCOs - Protection of Groundwater Soil Cleanup Objectives

<b>Grain Size, &amp; Oil and Grease</b>	
Units - $\text{mg}/\text{kg}$	<b>Bold/</b> <b>highlighted cell</b> – exceedance of one or more criteria
Qualifiers -	NA - Not Analyzed NS - Criteria not specified R - rejected B – also detected in associated method blank J – estimated value J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high ND – not detected NDJ – not detected, estimated reporting limit NJ – positive identification of tentatively identified compound, estimated value P – greater than 40% difference between primary and confirmation analyses

Sample Location		OF-SW		OF-SW		TB		CB1	
Sample Name		DUPE 1-20151028		OF-SW-20151028		TB-2-20151028		CB1-SW-20151027	
Sample Date		10/28/2015		10/28/2015		10/28/2015		10/27/2015	
Constituent	Criteria								
1,1,1-TRICHLOROETHANE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,1,2,2-TETRACHLOROETHANE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,1,2-TRICHLOROETHANE	1	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,1-DICHLOROETHANE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,1-DICHLOROETHENE	5	ND	UJ	ND	UJ	ND	UJ	0.85	J-
1,2,4-TRICHLOROBENZENE	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.0006	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,2-DICHLOROBENZENE	3	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,2-DICHLOROETHANE	0.6	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,2-DICHLOROPROPANE	1	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,3-DICHLOROBENZENE	3	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,4-DICHLOROBENZENE	3	ND	UJ	ND	UJ	ND	UJ	ND	UJ
1,4-DIOXANE (P-DIOXANE)	NS	ND	R	ND	R	ND	R	ND	R
2-HEXANONE	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ
ACETONE	50	ND	UJ	ND	UJ	ND	UJ	ND	UJ
BENZENE	1	ND	UJ	ND	UJ	ND	UJ	ND	UJ
BROMODICHLOROMETHANE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
BROMOFORM	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
BROMOMETHANE	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ
CARBON DISULFIDE	60	ND	UJ	ND	UJ	ND	UJ	ND	UJ
CARBON TETRACHLORIDE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
CHLOROBENZENE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
CHLOROETHANE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
CHLOROFORM	7	ND	UJ	ND	UJ	ND	UJ	ND	UJ
CHLOROMETHANE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
CIS-1,2-DICHLOROETHYLENE	5	4.9	J-	5.2	J-	ND	UJ	6.5	J-
CIS-1,3-DICHLOROPROPENE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
CYCLOHEXANE	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ
DIBROMOCHLOROMETHANE	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ
DICHLORODIFLUOROMETHANE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
ETHYLBENZENE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
Isopropylbenzene (Cumene)	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
METHYL ACETATE	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ
METHYL ETHYL KETONE (2-BUTANONE)	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ
METHYLCYCLOHEXANE	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ
METHYLENE CHLORIDE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
STYRENE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
TERT-BUTYL METHYL ETHER	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ
TETRACHLOROETHYLENE(PCE)	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
TOLUENE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
TRANS-1,2-DICHLOROETHENE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
TRANS-1,3-DICHLOROPROPENE	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ
TRICHLOROETHYLENE (TCE)	5	16	J-	16	J-	ND	UJ	4.1	J-
TRICHLOROFLUOROMETHANE	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ
VINYL CHLORIDE	2	ND	UJ	ND	UJ	ND	UJ	ND	UJ
XYLENES, TOTAL	NS	ND	UJ	ND	UJ	ND	UJ	ND	UJ

Sample Location		CB1		OF-SW		OF-SW		EB	
Sample Name		CB1-SW-20151027		DUPE 1-20151028		OF-SW-20151028		EB-1-20151021	
Sample Date		10/27/2015		10/28/2015		10/28/2015		10/21/2015	
Constituent	Criteria								
2,4,5-TRICHLOROPHENOL	NS	ND	U	ND	U	ND	U	ND	U
2,4,6-TRICHLOROPHENOL	NS	ND	U	ND	U	ND	U	ND	U
2,4-DICHLOROPHENOL	NS	ND	U	ND	U	ND	U	ND	U
2,4-DIMETHYLPHENOL	NS	ND	U	ND	U	ND	U	ND	U
2,4-DINITROPHENOL	NS	ND	U	ND	U	ND	U	ND	U
2,4-DINITROTOLUENE	5	ND	U	ND	U	ND	U	ND	U
2,6-DINITROTOLUENE	5	ND	U	ND	U	ND	U	ND	U
2-CHLORONAPHTHALENE	NS	ND	U	ND	U	ND	U	ND	U
2-CHLOROPHENOL	NS	ND	U	ND	U	ND	U	ND	U
2-METHYLNAPHTHALENE	NS	ND	U	ND	U	ND	U	ND	U
2-METHYLPHENOL (O-CRESOL)	NS	ND	U	ND	U	ND	U	ND	U
2-NITROANILINE	5	ND	U	ND	U	ND	U	ND	U
2-NITROPHENOL	NS	ND	U	ND	U	ND	U	ND	U
3,3'-DICHLOROBENZIDINE	5	ND	U	ND	U	ND	U	ND	U
3-NITROANILINE	5	ND	U	ND	U	ND	U	ND	U
4,6-DINITRO-2-METHYLPHENOL	NS	ND	U	ND	U	ND	U	ND	U
4-BROMOPHENYL PHENYL ETHER	NS	ND	U	ND	U	ND	U	ND	U
4-CHLORO-3-METHYLPHENOL	NS	ND	U	ND	U	ND	U	ND	U
4-CHLOROANILINE	5	ND	UT	ND	UT	ND	UT	ND	U
4-CHLOROPHENYL PHENYL ETHER	NS	ND	U	ND	U	ND	U	ND	U
4-METHYLPHENOL (P-CRESOL)	NS	ND	U	ND	U	ND	U	ND	U
4-NITROANILINE	5	ND	U	ND	U	ND	U	ND	U
4-NITROPHENOL	NS	ND	U	ND	U	ND	U	ND	U
ACENAPHTHENE	NS	ND	U	ND	U	ND	U	ND	U
ACENAPHTHYLENE	NS	ND	U	ND	U	ND	U	ND	U
ACETOPHENONE	NS	ND	U	ND	U	ND	U	ND	U
ANTHRACENE	NS	ND	U	ND	U	ND	U	ND	U
ATRAZINE	NS	ND	U	ND	U	ND	U	ND	U
BENZALDEHYDE	NS	ND	UT	ND	UT	ND	UT	1.1	J-
BENZO(A)ANTHRACENE	NS	ND	U	ND	U	ND	U	ND	U
BENZO(A)PYRENE	NS	ND	U	ND	U	ND	U	ND	U
BENZO(B)FLUORANTHENE	NS	2.6	J	ND	U	ND	U	ND	U
BENZO(G,H,I)PERYLENE	NS	ND	U	ND	U	ND	U	ND	U

Sample Location		CB1		OF-SW		OF-SW		EB	
Sample Name		CB1-SW-20151027		DUPE 1-20151028		OF-SW-20151028		EB-1-20151021	
Sample Date		10/27/2015		10/28/2015		10/28/2015		10/21/2015	
Constituent	Criteria								
BENZO(K)FLUORANTHENE	NS	ND	U	ND	U	ND	U	ND	U
BENZYL BUTYL PHTHALATE	NS	ND	U	ND	U	ND	U	0.51	BJ
BIPHENYL (DIPHENYL)	NS	ND	U	ND	U	ND	U	ND	U
BIS(2-CHLOROETHOXY) METHANE	5	ND	U	ND	U	ND	U	ND	U
BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	5	ND	U	ND	U	ND	U	ND	U
BIS(2-CHLOROISOPROPYL) ETHER	5	ND	U	ND	U	ND	U	ND	U
BIS(2-ETHYLHEXYL) PHTHALATE	5	ND	U	ND	U	ND	U	2.3	J
CAPROLACTAM	NS	ND	U	ND	U	ND	U	ND	U
CARBAZOLE	NS	ND	U	ND	U	ND	U	ND	U
CHRYSENE	NS	2.0	J	ND	U	ND	U	ND	U
DIBENZ(A,H)ANTHRACENE	NS	ND	U	ND	U	ND	U	ND	U
DIBENZOFURAN	NS	ND	U	ND	U	ND	U	ND	U
DIETHYL PHTHALATE	NS	ND	U	ND	U	ND	U	ND	U
DIMETHYL PHTHALATE	NS	ND	U	ND	U	ND	U	ND	U
DI-N-BUTYL PHTHALATE	50	ND	U	ND	U	ND	U	ND	U
DI-N-OCTYLPHthalate	NS	ND	U	ND	U	ND	U	ND	U
FLUORANTHENE	NS	4.0	J	ND	U	ND	U	ND	U
FLUORENE	NS	ND	U	ND	U	ND	U	ND	U
HEXACHLOROBENZENE	0.04	ND	U	ND	U	ND	U	ND	U
HEXACHLOROBUTADIENE	NS	ND	U	ND	U	ND	U	ND	U
HEXACHLOROCYCLOPENTADIENE	5	ND	U	ND	U	ND	U	ND	U
HEXACHLOROETHANE	5	ND	U	ND	U	ND	U	ND	U
INDENO(1,2,3-C,D)PYRENE	NS	ND	U	ND	U	ND	U	ND	U
ISOPHORONE	NS	ND	U	ND	U	ND	U	ND	U
NAPHTHALENE	NS	ND	U	ND	U	ND	U	ND	U
NITROBENZENE	0.4	ND	U	ND	U	ND	U	ND	U
N-NITROSODI-N-PROPYLAMINE	NS	ND	U	ND	U	ND	U	ND	U
N-NITROSODIPHENYLAMINE	NS	ND	U	ND	U	ND	U	ND	U
PENTACHLOROPHENOL	1	ND	U	ND	U	ND	U	ND	U
PHENANTHRENE	NS	ND	U	ND	U	ND	U	ND	U
PHENOL	1	ND	U	ND	U	ND	U	ND	U
PYRENE	NS	3.0	J	ND	U	ND	U	ND	U

Sample Location		CB1		OF-SW		OF-SW		EB	
Sample Name		CB1-SW-20151027		DUPE 1-20151028		OF-SW-20151028		EB-1-20151021	
Sample Date		10/27/2015		10/28/2015		10/28/2015		10/21/2015	
Constituent	Criteria								
ALUMINUM	NS	ND	U	ND	U	ND	U	NA	
ANTIMONY	0.003	ND	U	ND	U	ND	U	NA	
ARSENIC	0.025	ND	U	ND	U	ND	U	NA	
BARIUM	1	0.11		0.031		0.031		NA	
BERYLLIUM	0.003	ND	U	ND	U	ND	U	NA	
CADMIUM	0.005	0.00060	J	ND	U	ND	U	NA	
CALCIUM	NS	234	B	72.1	B	76.4	B	NA	
CHROMIUM, TOTAL	0.05	0.0022	J	0.0018	J	0.0025	J	NA	
COBALT	NS	0.0015	J	ND	U	ND	U	NA	
COPPER	0.2	0.0025	J	0.015		0.016		NA	
IRON	0.3	0.033	J	0.019	J	0.023	J	NA	
LEAD	0.025	0.0032	J	ND	U	ND	U	NA	
MAGNESIUM	35	26.4		9.7		9.5		NA	
MANGANESE	0.3	0.54		0.028		0.038		NA	
NICKEL	0.1	0.056		0.0028	J	0.0032	J	NA	
POTASSIUM	NS	16.9		7.2		8.1		NA	
SELENIUM	0.01	ND	U	ND	U	ND	U	NA	
SILVER	0.05	ND	U	ND	U	ND	U	NA	
SODIUM	20	36.0		11.2		11.7		NA	
THALLIUM	0.0005	ND	U	ND	U	ND	U	NA	
VANADIUM	NS	ND	U	ND	U	ND	U	NA	
ZINC	2	0.032	B	0.019	B	0.022	B	NA	
MERCURY	NS	0.00017	J	ND	U	ND	U	NA	
CYANIDE	NS	0.66		ND	U	ND	U	NA	
ALUMINUM	NS	112		1.9		1.8		1.0	
ANTIMONY	0.003	0.034		ND	U	ND	U	ND	U
ARSENIC	0.025	0.076		ND	U	ND	U	ND	U
BARIUM	1	0.98		0.044		0.043		0.0076	
BERYLLIUM	0.003	0.0046		ND	U	ND	U	ND	U
CADMIUM	0.005	0.24		0.0011	J	0.00098	J	ND	U
CALCIUM	NS	403	B	80.1	B	80.3	B	0.70	B
CHROMIUM, TOTAL	0.05	1.5		0.0061		0.0066		0.0038	J
COBALT	NS	0.12		0.00092	J	0.00094	J	ND	U
COPPER	0.2	1.9		0.033		0.033		ND	U
IRON	0.3	216		2.3		2.2		1.2	
LEAD	0.025	6.0		0.045		0.045		ND	U
MAGNESIUM	35	119		10.7		10.3		0.26	
MANGANESE	0.3	3.7		0.091		0.090		0.018	B
NICKEL	0.1	5.8		0.0055	J	0.0056	J	0.0015	J
POTASSIUM	NS	31.5		8.6		8.6		0.36	J
SELENIUM	0.01	ND	U	ND	U	ND	U	ND	U
SILVER	0.05	0.017		ND	U	ND	U	ND	U
SODIUM	20	35.9		12.4		11.9		1.1	
THALLIUM	0.0005	ND	U	ND	U	ND	U	ND	U
VANADIUM	NS	0.25		0.0037	J	0.0038	J	0.0019	J
ZINC	2	7.6		0.088		0.083		0.0039	BJ
MERCURY	NS	0.0051		0.00013	J	0.00015	J	ND	U

Sample Location		CB1		OF-SW		OF-SW		EB	
Sample Name		CB1-SW-20151027		DUPE 1-20151028		OF-SW-20151028		EB-1-20151021	
Sample Date		10/27/2015		10/28/2015		10/28/2015		10/21/2015	
Constituent	Criteria								
PCB-1016 (AROCLOR 1016)	0.09	ND	U	ND	U	ND	U	ND	U
PCB-1221 (AROCLOR 1221)	0.09	ND	U	ND	U	ND	U	ND	U
PCB-1232 (AROCLOR 1232)	0.09	ND	U	ND	U	ND	U	ND	U
PCB-1242 (AROCLOR 1242)	0.09	ND	U	ND	U	ND	U	ND	U
PCB-1248 (AROCLOR 1248)	0.09	ND	U	ND	U	ND	U	ND	U
PCB-1254 (AROCLOR 1254)	0.09	ND	U	0.40	J+	0.38	J	ND	U
PCB-1260 (AROCLOR 1260)	0.09	0.84	J+	0.29	J+	0.28	J	ND	U
ALDRIN	NS	NA		ND	U	ND	U	NA	
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	0.01	NA		ND	U	ND	U	NA	
ALPHA CHLORDANE	NS	NA		ND	U	ND	U	NA	
ALPHA ENDOSULFAN	NS	NA		ND	U	ND	U	NA	
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	0.04	NA		ND	U	ND	U	NA	
BETA ENDOSULFAN	NS	NA		ND	U	ND	U	NA	
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	0.04	NA		ND	U	ND	U	NA	
DIELDRIN	0.004	NA		ND	U	ND	U	NA	
ENDOSULFAN SULFATE	NS	NA		ND	U	ND	U	NA	
ENDRIN	NS	NA		ND	U	ND	U	NA	
ENDRIN ALDEHYDE	5	NA		ND	U	ND	U	NA	
ENDRIN KETONE	5	NA		ND	U	ND	U	NA	
GAMMA BHC (LINDANE)	0.05	NA		ND	U	ND	U	NA	
HEPTACHLOR	0.04	NA		ND	U	ND	U	NA	
HEPTACHLOR EPOXIDE	0.03	NA		ND	U	ND	U	NA	
METHOXYCHLOR	35	NA		ND	U	ND	U	NA	
P,P'-DDD	0.3	NA		ND	U	ND	U	NA	
P,P'-DDE	0.2	NA		ND	U	ND	U	NA	
P,P'-DDT	0.2	NA		ND	U	ND	U	NA	
TOXAPHENE	0.06	NA		ND	U	ND	U	NA	
trans-Chlordane	NS	NA		ND	U	ND	U	NA	

VOCs	
Units - $\mu\text{g/l}$	<b>Bold/highlighted cell</b> – exceedance of criteria
Qualifiers -	NA - Not Analyzed NS - Criteria not specified R - rejected B – also detected in associated method blank J – estimated value J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high ND – not detected NDJ – not detected, estimated reporting limit compound, estimated value P – greater than 40% difference between primary and confirmation analyses
	Criteria – NYSDEC GWQS - New York State Department of Environmental Conservation Groundwater Quality Standards Part 703 (Class GA) & Technical & Operational Guidance Series 1.1.1

SVOCs	
Units - $\mu\text{g/l}$	<b>Bold/highlighted cell</b> – exceedance of criteria
Qualifiers -	NA - Not Analyzed NS - Criteria not specified R - rejected B – also detected in associated method blank J – estimated value J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high ND – not detected NDJ – not detected, estimated reporting limit NJ – positive identification of tentatively identified compound, estimated value P – greater than 40% difference between primary and confirmation analyses
	Criteria – NYSDEC GWQS - New York State Department of Environmental Conservation Groundwater Quality Standards Part 703 (Class GA) & Technical & Operational Guidance Series 1.1.1

Metals				
Units - $\text{mg/l}$	<b>Bold/highlighted cell</b> – exceedance of criteria			
Qualifiers -	NA - Not Analyzed NS - Criteria not specified R - rejected B – also detected in associated method blank J – estimated value J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high ND – not detected NDJ – not detected, estimated reporting limit NJ – positive identification of tentatively identified compound, estimated value P – greater than 40% difference between primary and confirmation analyses			
	Criteria – NYSDEC GWQS - New York State Department of Environmental Conservation Groundwater Quality Standards Part 703 (Class GA) & Technical & Operational Guidance Series 1.1.1			
	<table border="1" style="margin-left: 20px;"> <tr><td>Dissolved</td></tr> <tr><td>N/A</td></tr> <tr><td>Total</td></tr> </table>	Dissolved	N/A	Total
Dissolved				
N/A				
Total				

\* This table is designed to be printed in color. If printed in B&W please note that the Constituents above Cyanide are Dissolved and those below are Total.

PCBs & Pesticides	
Units - $\mu\text{g/l}$	<b>Bold/highlighted cell</b> – exceedance of criteria
Qualifiers -	NA - Not Analyzed NS - Criteria not specified R - rejected B – also detected in associated method blank J – estimated value J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high ND – not detected NDJ – not detected, estimated reporting limit NJ – positive identification of tentatively identified compound, estimated value P – greater than 40% difference between primary and confirmation analyses
	Criteria – NYSDEC GWQS - New York State Department of Environmental Conservation Groundwater Quality Standards Part 703 (Class GA) & Technical & Operational Guidance Series 1.1.1

Sample Location					LFS-TP1A		LFS-TP1B	
Sample Name					LFS-TP1A-20151026		LFS-TP1B-20151026	
Sample Date					10/26/2015		10/26/2015	
Constituent	CUSCOs	IUSCOs	ERSCOs	GWSCOs				
1,1,1-TRICHLOROETHANE	500000	1000000	NS	680	ND	U	ND	U
1,1,2,2-TETRACHLOROETHANE	NS	NS	NS	NS	ND	U	ND	U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	NS	NS	NS	NS	ND	U	ND	U
1,1,2-TRICHLOROETHANE	NS	NS	NS	NS	ND	U	ND	U
1,1-DICHLOROETHANE	240000	480000	NS	270	ND	U	ND	U
1,1-DICHLOROETHENE	30000	1000000	NS	NS	ND	U	ND	U
1,2,4-TRICHLOROBENZENE	NS	NS	NS	NS	ND	U	ND	U
1,2-DIBROMO-3-CHLOROPROPANE	NS	NS	NS	NS	ND	U	ND	U
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	NS	NS	NS	NS	ND	U	ND	U
1,2-DICHLOROBENZENE	500000	1000000	NS	1100	ND	U	ND	U
1,2-DICHLOROETHANE	30000	60000	10000	20	ND	U	ND	U
1,2-DICHLOROPROPANE	NS	NS	NS	NS	ND	U	ND	U
1,3-DICHLOROBENZENE	280000	560000	NS	2400	ND	U	ND	U
1,4-DICHLOROBENZENE	130000	250000	20000	1800	ND	U	ND	U
1,4-DIOXANE (P-DIOXANE)	NS	NS	NS	NS	ND	R	ND	R
2-HEXANONE	NS	NS	NS	NS	ND	U	ND	U
ACETONE	500000	1000000	2200	50	ND	U	ND	U
BENZENE	44000	89000	70000	60	ND	U	ND	U
BROMODICHLOROMETHANE	NS	NS	NS	NS	ND	U	ND	U
BROMOFORM	NS	NS	NS	NS	ND	U	ND	U
BROMOMETHANE	NS	NS	NS	NS	ND	U	ND	U
CARBON DISULFIDE	NS	NS	NS	NS	ND	U	ND	U
CARBON TETRACHLORIDE	22000	44000	NS	760	ND	U	ND	U
CHLOROBENZENE	500000	1000000	40000	1100	ND	U	ND	U
CHLOROETHANE	NS	NS	NS	NS	ND	U	ND	U
CHLOROFORM	350000	700000	12000	370	ND	U	ND	U
CHLOROMETHANE	NS	NS	NS	NS	ND	U	ND	U
CIS-1,2-DICHLOROETHYLENE	500000	1000000	NS	250	ND	U	ND	U
CIS-1,3-DICHLOROPROPENE	NS	NS	NS	NS	ND	U	ND	U
CYCLOHEXANE	NS	NS	NS	NS	ND	U	18	U
DIBROMOCHLOROMETHANE	NS	NS	NS	NS	ND	U	ND	
DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	ND	U	ND	U
ETHYLBENZENE	390000	780000	NS	1000	ND	U	35	
Isopropylbenzene (Cumene)	NS	NS	NS	NS	ND	U	23	NJ
METHYL ACETATE	NS	NS	NS	NS	ND	U	ND	
METHYL ETHYL KETONE (2-BUTANONE)	500000	1000000	NS	120	ND	U	ND	U
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	NS	NS	NS	NS	ND	U	ND	U
METHYLCYCLOHEXANE	NS	NS	NS	NS	ND	U	78	U
METHYLENE CHLORIDE	500000	1000000	12000	50	ND	U	ND	
STYRENE	NS	NS	NS	NS	ND	U	ND	U
TERT-BUTYL METHYL ETHER	NS	NS	NS	NS	ND	U	ND	U
TETRACHLOROETHYLENE(PCE)	150000	300000	2000	1300	ND	U	ND	U
TOLUENE	500000	1000000	36000	700	ND	U	ND	U
TRANS-1,2-DICHLOROETHENE	500000	1000000	NS	190	ND	U	ND	U
TRANS-1,3-DICHLOROPROPENE	NS	NS	NS	NS	ND	U	ND	U
TRICHLOROETHYLENE (TCE)	200000	400000	2000	470	ND	U	ND	U
TRICHLOROFLUOROMETHANE	NS	NS	NS	NS	ND	U	ND	U
VINYL CHLORIDE	13000	27000	NS	20	ND	U	ND	U
XYLEMES, TOTAL	500000	1000000	260	1600	ND	U	190	U

Sample Location					LF55	LFS-TP1B	LFS8	LFS11	LFS1	LFS2	LFS3	LFS3	LFS4	
Sample Name					LF55-0-4-20151021	LFS-TP1B-20151026	LFS8-0-2-20151022	LFS11-0-4-20151022	LFS1-8-12-20151021	LFS2-0-4-20151021	LFS3-0-4-20151021	LFS3-6-8-20151021	LFS4-4-8-20151021	
Sample Date					10/21/2015	10/26/2015	10/26/2015	10/22/2015	10/21/2015	10/21/2015	10/21/2015	10/21/2015	10/21/2015	
Sample Depth					0-4			0-2	0-4	8-12	0-4	0-4	6-8	4-8
Constituent	CUSCOs	IUSCOs	ERSCOs	GWSCOs										
2,4,5-TRICHLOROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2,4,6-TRICHLOROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2,4-DICHLOROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2,4-DIMETHYLPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2,4-DINITROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2,4-DINITROTOLUENE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2,6-DINITROTOLUENE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2-CHLORONAPHTHALENE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2-CHLOROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2-METHYLNAPHTHALENE	500000	1000000	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2-METHYLPHENOL (O-CRESOL)	NS	NS	NS	330	ND	U	ND	U	ND	U	ND	U	ND	U
2-NITROANILINE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
2-NITROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
3,3'-DICHLOROBENZIDINE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
3-NITROANILINE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4,6-DINITRO-2-METHYLPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-BROMOPHENYL PHENYL ETHER	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-CHLORO-3-METHYLPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-CHLOROANILINE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-CHLOROPHENYL PHENYL ETHER	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-METHYLPHENOL (P-CRESOL)	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-NITROANILINE	500000	1000000	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
4-NITROPHENOL	NS	NS	NS	330	ND	U	ND	U	ND	U	ND	U	ND	U
ACENAPHTHENE	500000	1000000	20000	NS	ND	U	ND	U	ND	U	ND	U	ND	U
ACENAPHTHYLENE	500000	1000000	NS	98000	ND	U	ND	U	ND	U	ND	U	ND	U
ACETOPHENONE	NS	NS	NS	107000	ND	U	ND	U	ND	U	ND	U	ND	U
ANTHRACENE	500000	1000000	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
ATRAZINE	NS	NS	NS	1000000	ND	U	ND	U	ND	U	ND	U	ND	U
BENZALDEHYDE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BENZO(A)ANTHRACENE	5600	11000	2600	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BENZO(A)PYRENE	1000	1100	NS	1000	ND	U	ND	U	ND	U	ND	U	ND	U
BENZO(B)FLUORANTHENE	5600	11000	NS	22000	ND	U	ND	U	ND	U	ND	U	ND	U
BENZO(G,H,I)PERYLENE	500000	1000000	NS	1700	ND	U	ND	U	ND	U	ND	U	ND	U
BENZO(K)FLUORANTHENE	56000	110000	NS	1000000	ND	U	ND	U	ND	U	ND	U	ND	U
BENZYL BUTYL PHTHALATE	NS	NS	NS	1700	ND	U	ND	U	ND	U	ND	U	ND	U
BIPHENYL (DIPHENYL)	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BIS(2-CHLOROETHOXY) METHANE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BIS(2-CHLOROISOPROPYL) ETHER	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
BIS(2-ETHYLHEXYL) PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
CAPROLACTAM	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
CARBAZOLE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
CHRYSENE	56000	110000	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
DIBENZ(A,H)ANTHRACENE	560	1100	NS	1000	ND	U	ND	U	ND	U	ND	U	ND	U
DIBENZOFURAN	NS	NS	NS	1000000	ND	U	ND	U	ND	U	ND	U	ND	U
DIETHYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
DIMETHYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
DI-N-BUTYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
DI-N-OCTYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
FLUORANTHENE	500000	1000000	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
FLUORENE	5600	1000000	30000	1000000	ND	U	ND	U	ND	U	ND	U	ND	U
HEXACHLOROBENZENE	NS	NS	NS	386000	ND	U	ND	U	ND	U	ND	U	ND	U
HEXACHLOROBUTADIENE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
HEXACHLOROCYCLOPENTADIENE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
HEXACHLOROETHANE	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
INDENO(1,2,3-C,D)PYRENE	5600	11000	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
ISOPHORONE	NS	NS	NS	8200	ND	U	ND	U	ND	U	ND	U	ND	U
NAPHTHALENE	500000	1000000	NS	NS	ND	U	ND	U	ND	U	ND	U	ND	U
NITROBENZENE	NS	NS	NS	12000	ND	U	ND	U	ND	U	ND	U	ND	U
N-NITROSODI-N-PROPYLAMINE	NS	NS												

Sample Location					LFS-TP6	LFS-TP1	LFS-TP1A	LFS-TP6	LFS-TP8
Sample Name					DUPE-20151027	LFS-TP1-20151026	LFS-TP1A-20151026	LFS-TP6-20151028	LFS-TP8-20151027
Sample Date					10/27/2015	10/26/2015	10/26/2015	10/27/2015	10/27/2015
Sample Depth									
Constituent	CUSCOs	IUSCOs	ERSCOs	GWSCOs					
2,4,5-TRICHLOROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND
2,4,6-TRICHLOROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND
2,4-DICHLOROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND
2,4-DIMETHYLPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND
2,4-DINITROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND
2,4-DINITROTOLUENE	NS	NS	NS	NS	ND	U	ND	U	ND
2,6-DINITROTOLUENE	NS	NS	NS	NS	ND	U	ND	U	ND
2-CHLORONAPHTHALENE	NS	NS	NS	NS	ND	U	ND	U	ND
2-CHLOROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND
2-METHYLNAPHTHALENE	500000	1000000	NS	NS	ND	U	ND	U	ND
2-METHYLPHENOL (O-CRESOL)	NS	NS	NS	330	ND	U	ND	U	ND
2-NITROANILINE	NS	NS	NS	NS	ND	U	ND	U	ND
2-NITROPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND
3,3'-DICHLOROBENZIDINE	NS	NS	NS	NS	ND	U	ND	U	ND
3-NITROANILINE	NS	NS	NS	NS	ND	U	ND	U	ND
4,6-DINITRO-2-METHYLPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND
4-BROMOPHENYL PHENYL ETHER	NS	NS	NS	NS	ND	U	ND	U	ND
4-CHLORO-3-METHYLPHENOL	NS	NS	NS	NS	ND	U	ND	U	ND
4-CHLOROANILINE	NS	NS	NS	NS	ND	U	ND	U	ND
4-CHLOROPHENYL PHENYL ETHER	NS	NS	NS	NS	ND	U	ND	U	ND
4-METHYLPHENOL (P-CRESOL)	NS	NS	NS	NS	ND	U	ND	U	ND
4-NITROANILINE	500000	1000000	NS	NS	ND	U	ND	U	ND
4-NITROPHENOL	NS	NS	NS	330	ND	U	ND	U	ND
ACENAPHTHENE	500000	1000000	20000	NS	ND	U	ND	U	ND
ACENAPHTHYLENE	500000	1000000	NS	98000	ND	U	ND	U	ND
ACETOPHENONE	NS	NS	NS	107000	ND	U	ND	U	ND
ANTHRACENE	500000	1000000	NS	NS	ND	U	ND	U	ND
ATRAZINE	NS	NS	NS	1000000	ND	U	ND	U	ND
BENZALDEHYDE	NS	NS	NS	NS	ND	U	ND	U	ND
BENZO(A)ANTHRACENE	5600	11000	2600	NS	ND	U	ND	U	ND
BENZO(A)PYRENE	1000	1100	NS	1000	ND	U	ND	U	ND
BENZO(B)FLUORANTHENE	5600	11000	NS	22000	ND	U	ND	U	ND
BENZO(G,H,I)PERYLENE	500000	1000000	NS	1700	ND	U	ND	U	ND
BENZO(K)FLUORANTHENE	56000	110000	NS	1000000	ND	U	ND	U	ND
BENZYL BUTYL PHTHALATE	NS	NS	NS	1700	ND	U	ND	U	ND
BIPHENYL (DIPHENYL)	NS	NS	NS	NS	ND	U	ND	U	ND
BIS(2-CHLOROETHOXY) METHANE	NS	NS	NS	NS	ND	U	ND	U	ND
BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NS	NS	NS	NS	ND	U	ND	U	ND
BIS(2-CHLOROISOPROPYL) ETHER	NS	NS	NS	NS	ND	U	ND	U	ND
BIS(2-ETHYLHEXYL) PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND
CAPROLACTAM	NS	NS	NS	NS	ND	U	ND	U	ND
CARBAZOLE	NS	NS	NS	NS	ND	U	ND	U	ND
CHRYSENE	56000	110000	NS	NS	ND	U	ND	U	ND
DIBENZ(A,H)ANTHRACENE	560	1100	NS	1000	ND	U	ND	U	ND
DIBENZOFURAN	NS	NS	NS	1000000	ND	U	ND	U	ND
DIETHYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND
DIMETHYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND
DI-N-BUTYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND
DI-N-OCTYL PHTHALATE	NS	NS	NS	NS	ND	U	ND	U	ND
FLUORANTHENE	500000	1000000	NS	NS	ND	U	ND	U	ND
FLUORENE	5600	1000000	30000	1000000	ND	U	ND	U	ND
HEXACHLOROBENZENE	NS	NS	NS	386000	ND	U	ND	U	ND
HEXACHLOROBUTADIENE	NS	NS	NS	NS	ND	U	ND	U	ND
HEXACHLOROCYCLOPENTADIENE	NS	NS	NS	NS	ND	U	ND	U	ND
HEXACHLOROETHANE	NS	NS	NS	NS	ND	U	ND	U	ND
INDENO(1,2,3-C,D)PYRENE	5600	11000	NS	NS	ND	U	ND	U	ND
ISOPHORONE	NS	NS	NS	8200	ND	U	ND	U	ND
NAPHTHALENE	500000	1000000	NS	NS	ND	U	ND	U	ND
NITROBENZENE	NS	NS	NS	12000	ND	U	ND	U	ND
N-NITROSODI-N-PROPYLAMINE	NS	NS	NS	NS	ND	U	ND	U	ND
N-NITROSODIPHENYLAMINE	NS	NS	NS	NS	ND	U	ND	U	ND
PENTACHLOROPHENOL	6700	55000	800	NS	ND	U	ND	U	ND
PHENANTHRENE	500000	1000000	NS	800	ND	U	ND	U	ND
PHENOL	500000	1000000	30000	1000000	ND	U	ND	U	ND
PYRENE	500000	1000000	NS	330	ND	U	ND	U	ND

Sample Location					LFS5		LFS-TP1B		LFS8		LFS11		LFS1
Sample Name					LFS5-0-4-20151021		LFS-TP1B-20151026		LFS8-0-2-20151022		LFS11-0-4-20151022		LFS1-8-12-20151021
Sample Date					10/21/2015		10/26/2015		10/22/2015		10/22/2015		10/21/2015
Sample Depth					0-4				0-2		0-4		8-12
Constituent	IUSCOs	GWSCOs	ERSCOs	CUSCOs									
ALUMINUM	NS	NS	NS	NS	14100		11000		10600		12400		7310
ANTIMONY	NS	NS	NS	NS	ND	UJ	ND	U	ND	U	ND	U	ND
ARSENIC	16	16	13	16	4.2		4.2		4.0		5.5		4.5
BARIUM	10000	820	433	400	56.7	J	58.9		67.0		95.8		44.4
BERYLLIUM	2700	47	10	590	0.57		0.47		0.52		0.60		0.37
CADMIUM	60	7.5	4	9.3	0.17	J	3.0		0.47		0.14	J	ND
CALCIUM	NS	NS	NS	NS	1620	B	10700	B	51300	B	2550	B	27100
CHROMIUM, TOTAL	800	19	1	400	17.5		16.1		17.0		18.4		11.3
COBALT	NS	NS	NS	NS	8.6		7.0		8.3		10.3		7.2
COPPER	10000	1720	50	270	11.5		15.3		19.5		18.5		5.6
IRON	NS	NS	NS	NS	18700	B	17800		17800	B	22200		15600
LEAD	3900	450	63	1000	8.6		23.2		8.1		15.6		3.8
MAGNESIUM	NS	NS	NS	NS	3460	T	5290	B	12400		4270		6990
MANGANESE	10000	2000	1600	10000	330	B	357	B	409	B	636	B	474
NICKEL	6800	130	30	310	18.0		16.2		18.5		25.4		16.3
POTASSIUM	NS	NS	NS	NS	1510	J	1590		2330		1920		1700
SELENIUM	6800	4	3.9	1500	ND	U	ND	U	ND	U	ND	U	ND
SILVER	6800	8.3	2	1500	0.26	J	ND	U	7.9		ND	U	ND
SODIUM	NS	NS	NS	NS	81.6	J	84.6	J	293		120	J	118
THALLIUM	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND
VANADIUM	NS	NS	NS	NS	27.0		22.8		26.6		28.1		17.3
ZINC	10000	2480	109	1000	43.9	B	2660		46.6	B	46.0		27.9
MERCURY	5.7	0.73	0.18	2.8	0.03		0.036		0.012	J	0.029		ND
CYANIDE	10000	40	NS	27	ND	UJ	ND	UJ	ND	UJ	ND	U	ND

Sample Location					LFS2		LFS3		LFS3		LFS4		LFS-TP6
Sample Name					LFS2-0-4-20151021		LFS3-0-4-20151021		LFS3-6-8-20151021		LFS4-4-8-20151021		DUPE-20151027
Sample Date					10/21/2015		10/21/2015		10/21/2015		10/21/2015		10/27/2015
Sample Depth					0-4		0-4		6-8		4-8		
Constituent	IUSCOs	GWSCOs	ERSCOs	CUSCOs									
ALUMINUM	NS	NS	NS	NS	9840		13100		8830		11800		15800
ANTIMONY	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND
ARSENIC	16	16	13	16	4.1		4.6		4.3		4.2		5.8
BARIUM	10000	820	433	400	85.3	J	99.4		107		133		125
BERYLLIUM	2700	47	10	590	0.49		0.60		0.54		0.56		0.73
CADMIUM	60	7.5	4	9.3	0.18	J	2.1		0.056	J	0.062	J	0.13
CALCIUM	NS	NS	NS	NS	67800	J	14900	B	15100	B	10800	B	4070
CHROMIUM, TOTAL	800	19	1	400	15.7		40.7		15.6		19.5		22.2
COBALT	NS	NS	NS	NS	7.7		9.7		6.8		7.6		12.5
COPPER	10000	1720	50	270	15.9	T	33.2		13.6		16.7		18.4
IRON	NS	NS	NS	NS	17400	T	20800		17800		19400		24600
LEAD	3900	450	63	1000	7.4	T	19.6		5.2		6.5		10.6
MAGNESIUM	NS	NS	NS	NS	11900	J	6300		6600		6830		4550
MANGANESE	10000	2000	1600	10000	467	J	305	B	351	B	332	B	600
NICKEL	6800	130	30	310	16.3		22.3		15.8		20.0		27.3
POTASSIUM	NS	NS	NS	NS	2180	J	2330		1890		2200		2280
SELENIUM	6800	4	3.9	1500	ND	U	ND	U	ND	U	ND	U	ND
SILVER	6800	8.3	2	1500	3.9	J	198		ND	U	ND	U	ND
SODIUM	NS	NS	NS	NS	302		202		216		155		138
THALLIUM	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND	U	ND
VANADIUM	NS	NS	NS	NS	25.5		29.4		24.3		26.6		33.4
ZINC	10000	2480	109	1000	33.8	J	100		32.8		38.9		47.2
MERCURY	5.7	0.73	0.18	2.8	0.017	J	0.088		0.012	J	0.01	J	0.03
CYANIDE	10000	40	NS	27	ND	U	ND	U	ND	U	ND	U	ND

Sample Location					LFS-TP1		LFS-TP1A		LFS-TP6		LFS-TP8
Sample Name					LFS-TP1-20151026		LFS-TP1A-20151026		LFS-TP6-20151028		LFS-TP8-20151027
Sample Date					10/26/2015		10/26/2015		10/27/2015		10/27/2015
Sample Depth											
Constituent	IUSCOs	GWSCOs	ERSCOs	CUSCOs							
ALUMINUM	NS	NS	NS	NS	13200	J-	14100		17800		17400
ANTIMONY	NS	NS	NS	NS	ND	UJ	ND	U	ND	U	ND
ARSENIC	16	16	13	16	6.3		6.8		5.9		8.3
BARIUM	10000	820	433	400	73.4	J	78.7		147		103
BERYLLIUM	2700	47	10	590	0.60		0.59		0.78		0.79
CADMIUM	60	7.5	4	9.3	0.17		0.59		0.17	J	0.15
CALCIUM	NS	NS	NS	NS	13000	J-	22600	B	4460	B	50300
CHROMIUM, TOTAL	800	19	1	400	21.3	J-	28.8		24.7		25.2
COBALT	NS	NS	NS	NS	10.5		8.8		13.8		13.3
COPPER	10000	1720	50	270	20.4		21.2		18.7		24.2
IRON	NS	NS	NS	NS	20500	J-	21600		25100		26700
LEAD	3900	450	63	1000	12.4		41.0		11.5		13.7
MAGNESIUM	NS	NS	NS	NS	5180	J	11100	B	4850		13900
MANGANESE	10000	2000	1600	10000	608	J	469	B	868		427
NICKEL	6800	130	30	310	27.1		22.4		29.5		34.3
POTASSIUM	NS	NS	NS	NS	2040	J	1990		2660		3320
SELENIUM	6800	4	3.9	1500	ND	U	ND	U	ND	U	ND
SILVER	6800	8.3	2	1500	ND	U	ND	U	ND	U	ND
SODIUM	NS	NS	NS	NS	115	J	138	J	124	J	164
THALLIUM	NS	NS	NS	NS	ND	U	ND	U	ND	U	ND
VANADIUM	NS	NS	NS	NS	26.3	J-	28.0		34.4		30.9
ZINC	10000	2480	109	1000	47.8	J-	180		48.4		70.1
MERCURY	5.7	0.73	0.18	2.8	0.02	J	0.055		0.031		0.01
CYANIDE	10000	40	NS	27	ND	U	ND	U	ND	U	NA

Sample Location						LFS5		LFS-TP1B		LFS8
Sample Name						LFS5-0-4-20151021		LFS-TP1B-20151026		LFS8-0-2-20151022
Sample Date						10/21/2015		10/26/2015		10/22/2015
Sample Depth						0-4				0-2
Constituent	CUSCOs	IUSCOs	ERSCOs	GWSCOs	Units					
ALDRIN	680	1400	140	190	ug/kg	NA		ND	U	NA
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	3400	6800	40	20	ug/kg	NA		ND	U	NA
ALPHA CHLORDANE	24000	47000	1300	2900	ug/kg	NA		ND	U	NA
ALPHA ENDOSULFAN	200000	920000	NS	102000	ug/kg	NA		ND	U	NA
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	3000	14000	1300	90	ug/kg	NA		ND	U	NA
BETA ENDOSULFAN	200000	920000	NS	102000	ug/kg	NA		ND	U	NA
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	500000	14000	40	250	ug/kg	NA		ND	U	NA
DIELDRIN	1400	2800	6	100	ug/kg	NA		ND	U	NA
ENDOSULFAN SULFATE	200000	920000	NS	1000000	ug/kg	NA		ND	U	NA
ENDRIN	89000	410000	14	60	ug/kg	NA		ND	U	NA
ENDRIN ALDEHYDE	NS	NS	NS	NS	ug/kg	NA		ND	U	NA
ENDRIN KETONE	NS	NS	NS	NS	ug/kg	NA		ND	U	NA
GAMMA BHC (LINDANE)	9200	23000	6000	100	ug/kg	NA		ND	U	NA
HEPTACHLOR	15000	29000	140	380	ug/kg	NA		ND	U	NA
HEPTACHLOR EPOXIDE	NS	NS	NS	NS	ug/kg	NA		ND	U	NA
METHOXYCHLOR	NS	NS	NS	NS	ug/kg	NA		ND	U	NA
P,P'-DDD	92000	180000	3.3	14000	ug/kg	NA		ND	U	NA
P,P'-DDE	62000	120000	3.3	17000	ug/kg	NA		97	J	NA
trans-Chlordane	NS	NS	NS	NS	ug/kg	NA		ND	U	NA
P,P'-DDT	47000	94000	3.3	136000	ug/kg	NA		ND	UJ	NA
TOXAPHENE	NS	NS	NS	NS	ug/kg	NA		ND	U	NA
PCB-1016 (AROCLOR 1016)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND
PCB-1221 (AROCLOR 1221)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND
PCB-1232 (AROCLOR 1232)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND
PCB-1242 (AROCLOR 1242)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND
PCB-1248 (AROCLOR 1248)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND
PCB-1254 (AROCLOR 1254)	1	25	1	3.2	mg/kg	ND	U	0.90	J	ND
PCB-1260 (AROCLOR 1260)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND

Sample Location						LFS11		LFS1		LFS2
Sample Name						LFS11-0-4-20151022		LFS1-8-12-20151021		LFS2-0-4-20151021
Sample Date						10/22/2015		10/21/2015		10/21/2015
Sample Depth						0-4		8-12		0-4
Constituent	CUSCOs	IUSCOs	ERSCOs	GWSCOs	Units					
ALDRIN	680	1400	140	190	ug/kg	NA		NA		NA
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	3400	6800	40	20	ug/kg	NA		NA		NA
ALPHA CHLORDANE	24000	47000	1300	2900	ug/kg	NA		NA		NA
ALPHA ENDOSULFAN	200000	920000	NS	102000	ug/kg	NA		NA		NA
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	3000	14000	1300	90	ug/kg	NA		NA		NA
BETA ENDOSULFAN	200000	920000	NS	102000	ug/kg	NA		NA		NA
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	500000	14000	40	250	ug/kg	NA		NA		NA
DIELDRIN	1400	2800	6	100	ug/kg	NA		NA		NA
ENDOSULFAN SULFATE	200000	920000	NS	1000000	ug/kg	NA		NA		NA
ENDRIN	89000	410000	14	60	ug/kg	NA		NA		NA
ENDRIN ALDEHYDE	NS	NS	NS	NS	ug/kg	NA		NA		NA
ENDRIN KETONE	NS	NS	NS	NS	ug/kg	NA		NA		NA
GAMMA BHC (LINDANE)	9200	23000	6000	100	ug/kg	NA		NA		NA
HEPTACHLOR	15000	29000	140	380	ug/kg	NA		NA		NA
HEPTACHLOR EPOXIDE	NS	NS	NS	NS	ug/kg	NA		NA		NA
METHOXYCHLOR	NS	NS	NS	NS	ug/kg	NA		NA		NA
P,P'-DDD	92000	180000	3.3	14000	ug/kg	NA		NA		NA
P,P'-DDE	62000	120000	3.3	17000	ug/kg	NA		NA		NA
trans-Chlordane	NS	NS	NS	NS	ug/kg	NA		NA		NA
P,P'-DDT	47000	94000	3.3	136000	ug/kg	NA		NA		NA
TOXAPHENE	NS	NS	NS	NS	ug/kg	NA		NA		NA
PCB-1016 (AROCLOR 1016)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND U
PCB-1221 (AROCLOR 1221)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND U
PCB-1232 (AROCLOR 1232)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND U
PCB-1242 (AROCLOR 1242)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND U
PCB-1248 (AROCLOR 1248)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND U
PCB-1254 (AROCLOR 1254)	1	25	1	3.2	mg/kg	ND	U	ND	U	0.21 J
PCB-1260 (AROCLOR 1260)	1	25	1	3.2	mg/kg	ND	U	ND	U	0.15 J

Sample Location						LFS3		LFS3		LFS4		LFS-TP1
Sample Name						LFS3-0-4-20151021		LFS3-6-8-20151021		LFS4-4-8-20151021		LFS-TP1-20151026
Sample Date						10/21/2015		10/21/2015		10/21/2015		10/26/2015
Sample Depth						0-4		6-8		4-8		
Constituent	CUSCOs	IUSCOs	ERSCOs	GWSCOs	Units							
ALDRIN	680	1400	140	190	ug/kg	ND	U	ND	U	ND	U	NA
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	3400	6800	40	20	ug/kg	ND	U	ND	U	ND	U	NA
ALPHA CHLORDANE	24000	47000	1300	2900	ug/kg	ND	U	ND	U	ND	U	NA
ALPHA ENDOSULFAN	200000	920000	NS	102000	ug/kg	ND	U	ND	U	ND	U	NA
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	3000	14000	1300	90	ug/kg	ND	U	ND	U	ND	U	NA
BETA ENDOSULFAN	200000	920000	NS	102000	ug/kg	ND	U	ND	U	ND	U	NA
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	500000	14000	40	250	ug/kg	ND	U	ND	U	ND	U	NA
DIELDRIN	1400	2800	6	100	ug/kg	ND	U	ND	U	ND	U	NA
ENDOSULFAN SULFATE	200000	920000	NS	1000000	ug/kg	ND	U	ND	U	ND	U	NA
ENDRIN	89000	410000	14	60	ug/kg	ND	U	ND	U	ND	U	NA
ENDRIN ALDEHYDE	NS	NS	NS	NS	ug/kg	4.8	J	ND	U	ND	U	NA
ENDRIN KETONE	NS	NS	NS	NS	ug/kg	ND	U	ND	U	ND	U	NA
GAMMA BHC (LINDANE)	9200	23000	6000	100	ug/kg	ND	U	ND	U	ND	U	NA
HEPTACHLOR	15000	29000	140	380	ug/kg	ND	U	ND	U	ND	U	NA
HEPTACHLOR EPOXIDE	NS	NS	NS	NS	ug/kg	ND	U	ND	U	ND	U	NA
METHOXYCHLOR	NS	NS	NS	NS	ug/kg	ND	U	ND	U	ND	U	NA
P,P'-DDD	92000	180000	3.3	14000	ug/kg	ND	U	ND	U	ND	U	NA
P,P'-DDE	62000	120000	3.3	17000	ug/kg	0.91	J	ND	U	ND	U	NA
trans-Chlordane	NS	NS	NS	NS	ug/kg	1.1	J	ND	U	ND	U	NA
P,P'-DDT	47000	94000	3.3	136000	ug/kg	ND	U	ND	U	ND	U	NA
TOXAPHENE	NS	NS	NS	NS	ug/kg	ND	J	ND	U	ND	U	NA
PCB-1016 (AROCLOR 1016)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND	U	ND
PCB-1221 (AROCLOR 1221)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND	U	ND
PCB-1232 (AROCLOR 1232)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND	U	ND
PCB-1242 (AROCLOR 1242)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND	U	ND
PCB-1248 (AROCLOR 1248)	1	25	1	3.2	mg/kg	ND	U	ND	U	ND	U	ND
PCB-1254 (AROCLOR 1254)	1	25	1	3.2	mg/kg	0.24	J	ND	U	ND	U	ND
PCB-1260 (AROCLOR 1260)	1	25	1	3.2	mg/kg	0.17	J	ND	U	ND	U	ND

Sample Location						LFS-TP1A	LFS-TP6	LFS-TP8
Sample Name					LFS-TP1A-20151026	LFS-TP6-20151028	LFS-TP8-20151027	
Sample Date					10/26/2015	10/27/2015	10/27/2015	
Sample Depth								
Constituent	CUSCOs	IUSCOs	ERSCOs	GWSCOs	Units			
ALDRIN	680	1400	140	190	ug/kg	ND	U	NA
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	3400	6800	40	20	ug/kg	ND	U	NA
ALPHA CHLORDANE	24000	47000	1300	2900	ug/kg	ND	U	NA
ALPHA ENDOSULFAN	200000	920000	NS	102000	ug/kg	ND	U	NA
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	3000	14000	1300	90	ug/kg	ND	U	NA
BETA ENDOSULFAN	200000	920000	NS	102000	ug/kg	ND	U	NA
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	500000	14000	40	250	ug/kg	ND	U	NA
DIELDRIN	1400	2800	6	100	ug/kg	ND	U	NA
ENDOSULFAN SULFATE	200000	920000	NS	1000000	ug/kg	ND	U	NA
ENDRIN	89000	410000	14	60	ug/kg	ND	U	NA
ENDRIN ALDEHYDE	NS	NS	NS	NS	ug/kg	ND	U	NA
ENDRIN KETONE	NS	NS	NS	NS	ug/kg	ND	U	NA
GAMMA BHC (LINDANE)	9200	23000	6000	100	ug/kg	ND	U	NA
HEPTACHLOR	15000	29000	140	380	ug/kg	ND	U	NA
HEPTACHLOR EPOXIDE	NS	NS	NS	NS	ug/kg	ND	U	NA
METHOXYCHLOR	NS	NS	NS	NS	ug/kg	ND	U	NA
P,P'-DDD	92000	180000	3.3	14000	ug/kg	ND	U	NA
P,P'-DDE	62000	120000	3.3	17000	ug/kg	40	J	NA
trans-Chlordane	NS	NS	NS	NS	ug/kg	ND	U	NA
P,P'-DDT	47000	94000	3.3	136000	ug/kg	ND	U	NA
TOXAPHENE	NS	NS	NS	NS	ug/kg	ND	U	NA
PCB-1016 (AROCLOR 1016)	1	25	1	3.2	mg/kg	ND	U	ND
PCB-1221 (AROCLOR 1221)	1	25	1	3.2	mg/kg	ND	U	ND
PCB-1232 (AROCLOR 1232)	1	25	1	3.2	mg/kg	ND	U	ND
PCB-1242 (AROCLOR 1242)	1	25	1	3.2	mg/kg	ND	U	ND
PCB-1248 (AROCLOR 1248)	1	25	1	3.2	mg/kg	ND	U	ND
PCB-1254 (AROCLOR 1254)	1	25	1	3.2	mg/kg	3.1		U
PCB-1260 (AROCLOR 1260)	1	25	1	3.2	mg/kg	ND	U	ND

Sample Location		LFS1	LFS-TP1	LFS-TP1B	LFS-TP1A
Sample Name		LFS1-8-12-20151021	LFS-TP1-20151026	LFS-TP1B-20151026	LFS-TP1A-20151026
Sample Date		10/21/2015	10/26/2015	10/26/2015	10/26/2015
Constituent	Units				
CLAY	%	23.8	23.3	NA	NA
COARSE SAND	%	4.3	2.8	NA	NA
FINE SAND	%	13.9	15.1	NA	NA
GRAVEL	%	0.0	1.8	NA	NA
HYDROMETER, READING 1, PERCENT PASSING	%	59.2	47.3	NA	NA
HYDROMETER, READING 2, PERCENT PASSING	%	47.4	42.5	NA	NA
HYDROMETER, READING 3, PERCENT PASSING	%	35.6	35.3	NA	NA
HYDROMETER, READING 4, PERCENT PASSING	%	29.2	29.3	NA	NA
HYDROMETER, READING 5, PERCENT PASSING	%	23.8	23.3	NA	NA
HYDROMETER, READING 6, PERCENT PASSING	%	14.2	15.9	NA	NA
HYDROMETER, READING 7, PERCENT PASSING	%	7.8	9.9	NA	NA
Medium Sand	%	4.3	8.5	NA	NA
SAND	%	22.5	26.4	NA	NA
SIEVE NO. 10, PERCENT PASSING	%	95.7	95.4	NA	NA
SIEVE NO. 200, PERCENT PASSING	%	77.5	71.8	NA	NA
SIEVE NO. 4, PERCENT PASSING	%	100.0	98.2	NA	NA
SIEVE NO. 40, PERCENT PASSING	%	91.4	86.9	NA	NA
SIEVE NO. 80, PERCENT PASSING	%	87.1	77.9	NA	NA
SIEVE, 19000 MICRONS, PERCENT PASSING	%	100.0	100.0	NA	NA
SIEVE, 25000 MICRONS, PERCENT PASSING	%	100.0	100.0	NA	NA
SIEVE, 37500 MICRONS, PERCENT PASSING	%	100.0	100.0	NA	NA
SIEVE, 50000 MICRONS, PERCENT PASSING	%	100.0	100.0	NA	NA
SIEVE, 75000 MICRONS, PERCENT PASSING	%	100.0	100.0	NA	NA
SIEVE, 9500 MICRONS, PERCENT PASSING	%	100.0	100.0	NA	NA
SIEVE, NO. 100, PERCENT PASSING	%	85.6	76.3	NA	NA
SIEVE, NO. 20, PERCENT PASSING	%	93.3	93.3	NA	NA
SIEVE, NO. 60, PERCENT PASSING	%	89.2	81.0	NA	NA
SILT	%	53.7	48.5	NA	NA
GASOLINE COMPONENTS	mg/kg	NA	NA	ND	U
KEROSENE	mg/kg	NA	NA	ND	U
MOTOR OILS	mg/kg	NA	NA	18000	NA
PHC AS #2 FUEL OILS C10-C23 #2 DIESEL, #2 FUEL OIL	mg/kg	NA	NA	ND	U
PHC AS HEAVY/RESIDUAL FUEL OILS FUEL OILS #4, #5, #6	mg/kg	NA	NA	ND	U
UNKNOWN HYDROCARBONS WITH HIGHEST CONC.	mg/kg	NA	NA	7300	NA
OIL & GREASE, TOTAL REC	mg/kg	NA	NA	NA	16400
					B

VOCs	<b>Bold/highlighted cell</b> – exceedance of one or more criteria
Units - $\mu\text{g}/\text{kg}$	
Qualifiers -	
NA - Not Analyzed	
NS - Criteria not specified	
R - rejected	
B – also detected in associated method blank	
J – estimated value	
J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low	
J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high	
ND – not detected	
NDJ – not detected, estimated reporting limit	
NJ – positive identification of tentatively identified compound, estimated value	
P – greater than 40% difference between primary and confirmation analyses	
U - compound analyzed for, but not detected	
T - Result is tentatively identified compound - an estimated value	
Criteria – New York State Department of Environmental Conservation - 6 NYCRR Part 375	
Environmetnal Remediation Programs	
CUSCOs - Commercial Use Soil Cleanup Objectives	
IUSCOs - Industrial Use Soil Cleanup Objectives	
ERSCOs - Protection of Ecological Resources Soil Cleanup Objectives	
GWSCOs - Protection of Groundwater Soil Cleanup Objectives	

SVOCS	<b>Bold/highlighted cell</b> – exceedance of one or more criteria
Units - $\mu\text{g}/\text{kg}$	
Qualifiers -	
NA - Not Analyzed	
NS - Criteria not specified	
R - rejected	
B – also detected in associated method blank	
J – estimated value	
J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low	
J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high	
ND – not detected	
NDJ – not detected, estimated reporting limit	
NJ – positive identification of tentatively identified compound, estimated value	
P – greater than 40% difference between primary and confirmation analyses	
U - compound analyzed for, but not detected	
T - Result is tentatively identified compound - an estimated value	
Criteria – New York State Department of Environmental Conservation - 6 NYCRR Part 375	
Environmetnal Remediation Programs	
CUSCOs - Commercial Use Soil Cleanup Objectives	
IUSCOs - Industrial Use Soil Cleanup Objectives	
ERSCOs - Protection of Ecological Resources Soil Cleanup Objectives	
GWSCOs - Protection of Groundwater Soil Cleanup Objectives	

Metals	<b>Bold/highlighted cell</b> – exceedance of one or more criteria
Units - $\text{mg}/\text{kg}$	
Qualifiers -	
NA - Not Analyzed	
NS - Criteria not specified	
R - rejected	
B – also detected in associated method blank	
J – estimated value	
J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low	
J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high	
ND – not detected	
NDJ – not detected, estimated reporting limit	
NJ – positive identification of tentatively identified compound, estimated value	
P – greater than 40% difference between primary and confirmation analyses	
U - compound analyzed for, but not detected	
T - Result is tentatively identified compound - an estimated value	
Criteria – New York State Department of Environmental Conservation - 6 NYCRR Part 375	
Environmetnal Remediation Programs	
CUSCOs - Commercial Use Soil Cleanup Objectives	
IUSCOs - Industrial Use Soil Cleanup Objectives	
ERSCOs - Protection of Ecological Resources Soil Cleanup Objectives	
GWSCOs - Protection of Groundwater Soil Cleanup Objectives	

PCBs & Pesticide	<b>Bold/highlighted cell</b> – exceedance of one or more criteria
Units - $\mu\text{g}/\text{kg}$	
Qualifiers -	
NA - Not Analyzed	
NS - Criteria not specified	
R - rejected	
B – also detected in associated method blank	
J – estimated value	
J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low	
J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high	
ND – not detected	
NDJ – not detected, estimated reporting limit	
NJ – positive identification of tentatively identified compound, estimated value	
P – greater than 40% difference between primary and confirmation analyses	
Criteria – New York State Department of Environmental Conservation - 6 NYCRR Part 375	
Environmetnal Remediation Programs	
CUSCOs - Commercial Use Soil Cleanup Objectives	
IUSCOs - Industrial Use Soil Cleanup Objectives	
ERSCOs - Protection of Ecological Resources Soil Cleanup Objectives	
GWSCOs - Protection of Groundwater Soil Cleanup Objectives	

Grain Size, Oil and Grease, & NYS Petro	<b>Bold/highlighted cell</b> – exceedance of one or more criteria
Units - $\text{mg}/\text{kg}$	
Qualifiers -	
NA - Not Analyzed	
NS - Criteria not specified	
R - rejected	
B – also detected in associated method blank	
J – estimated value	
J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low	
J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high	
ND – not detected	
NDJ – not detected, estimated reporting limit	
NJ – positive identification of tentatively identified compound, estimated value	
P – greater than 40% difference between primary and confirmation analyses	

Sample Location		LFS3		TB	
Sample Name		LFS3-GW-5-15-20151021		TRIP BLANK-20151021	
Sample Date		10/21/2015		10/21/2015	
Constituent	Criteria				
1,1,1-TRICHLOROETHANE	5	ND	UJ	ND	UJ
1,1,2,2-TETRACHLOROETHANE	5	ND	UJ	ND	UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	NS	ND	UJ	ND	UJ
1,1,2-TRICHLOROETHANE	1	ND	UJ	ND	UJ
1,1-DICHLOROETHANE	5	ND	UJ	ND	UJ
1,1-DICHLOROETHENE	5	ND	UJ	ND	UJ
1,2,4-TRICHLOROBENZENE	NS	ND	UJ	ND	UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	ND	UJ	ND	UJ
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.0006	ND	UJ	ND	UJ
1,2-DICHLOROBENZENE	3	ND	UJ	ND	UJ
1,2-DICHLOROETHANE	0.6	ND	UJ	ND	UJ
1,2-DICHLOROPROPANE	1	ND	UJ	ND	UJ
1,3-DICHLOROBENZENE	3	ND	UJ	ND	UJ
1,4-DICHLOROBENZENE	3	ND	UJ	ND	UJ
1,4-DIOXANE (P-DIOXANE)	NS	ND	R	ND	R
2-HEXANONE	NS	ND	UJ	ND	UJ
ACETONE	50	ND	UJ	ND	UJ
BENZENE	1	ND	UJ	ND	UJ
BROMODICHLOROMETHANE	5	ND	UJ	ND	UJ
BROMOFORM	5	ND	UJ	ND	UJ
BROMOMETHANE	NS	ND	UJ	ND	UJ
CARBON DISULFIDE	60	ND	UJ	ND	UJ
CARBON TETRACHLORIDE	5	ND	UJ	ND	UJ
CHLOROBENZENE	5	ND	UJ	ND	UJ
CHLOROETHANE	5	ND	UJ	ND	UJ
CHLOROFORM	7	ND	UJ	ND	UJ
CHLOROMETHANE	5	ND	UJ	ND	UJ
CIS-1,2-DICHLOROETHYLENE	5	ND	UJ	ND	UJ
CIS-1,3-DICHLOROPROPENE	5	ND	UJ	ND	UJ
CYCLOHEXANE	NS	ND	UJ	ND	UJ
DIBROMOCHLOROMETHANE	NS	ND	UJ	ND	UJ
DICHLORODIFLUOROMETHANE	5	ND	UJ	ND	UJ
ETHYLBENZENE	5	ND	UJ	ND	UJ
Isopropylbenzene (Cumene)	5	ND	UJ	ND	UJ
METHYL ACETATE	NS	ND	UJ	ND	UJ
METHYL ETHYL KETONE (2-BUTANONE)	NS	ND	UJ	ND	UJ
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	NS	ND	UJ	ND	UJ
METHYLCYCLOHEXANE	NS	ND	UJ	ND	UJ
METHYLENE CHLORIDE	5	ND	UJ	ND	UJ
STYRENE	5	ND	UJ	ND	UJ
TERT-BUTYL METHYL ETHER	NS	ND	UJ	ND	UJ
TETRACHLOROETHYLENE(PCE)	5	ND	UJ	ND	UJ

Sample Location		LFS3		TB	
Sample Name		LFS3-GW-5-15-20151021		TRIP BLANK-20151021	
Sample Date		10/21/2015		10/21/2015	
Constituent	Criteria				
TOLUENE	5	ND	UJ	ND	UJ
TRANS-1,2-DICHLOROETHENE	5	ND	UJ	ND	UJ
TRANS-1,3-DICHLOROPROPENE	NS	ND	UJ	ND	UJ
TRICHLOROETHYLENE (TCE)	5	ND	UJ	ND	UJ
TRICHLOROFLUOROMETHANE	5	ND	UJ	ND	UJ
VINYL CHLORIDE	2	ND	UJ	ND	UJ
XYLEMES, TOTAL	NS	ND	UJ	ND	UJ

Constituent	Criteria	LFS2		LFS3	
		Sample Name	LFS2-GW-5-15-20151021	Sample Date	LFS3-GW-5-15-20151021
			10/21/2015		10/21/2015
2,4,5-TRICHLOROPHENOL	NS	ND	U	ND	U
2,4,6-TRICHLOROPHENOL	NS	ND	U	ND	U
2,4-DICHLOROPHENOL	NS	ND	U	ND	U
2,4-DIMETHYLPHENOL	NS	ND	U	ND	U
2,4-DINITROPHENOL	NS	ND	U	ND	U
2,4-DINITROTOLUENE	5	ND	U	ND	U
2,6-DINITROTOLUENE	5	ND	U	ND	U
2-CHLORONAPHTHALENE	NS	ND	U	ND	U
2-CHLOROPHENOL	NS	ND	U	ND	U
2-METHYLNAPHTHALENE	NS	ND	U	ND	U
2-METHYLPHENOL (O-CRESOL)	NS	ND	U	ND	U
2-NITROANILINE	5	ND	UT	ND	U
2-NITROPHENOL	NS	ND	U	ND	U
3,3'-DICHLOROBENZIDINE	5	ND	U	ND	U
3-NITROANILINE	5	ND	UT	ND	U
4,6-DINITRO-2-METHYLPHENOL	NS	ND	U	ND	U
4-BROMOPHENYL PHENYL ETHER	NS	ND	U	ND	U
4-CHLORO-3-METHYLPHENOL	NS	ND	U	ND	U
4-CHLOROANILINE	5	ND	U	ND	U
4-CHLOROPHENYL PHENYL ETHER	NS	ND	U	ND	U
4-METHYLPHENOL (P-CRESOL)	NS	ND	U	ND	U
4-NITROANILINE	5	ND	U	ND	U
4-NITROPHENOL	NS	ND	U	ND	U
ACENAPHTHENE	NS	ND	U	ND	U
ACENAPHTHYLENE	NS	ND	U	ND	U
ACETOPHENONE	NS	ND	U	ND	U
ANTHRACENE	NS	ND	U	ND	U
ATRAZINE	NS	ND	U	ND	U
BENZALDEHYDE	NS	ND	UJ	ND	U
BENZO(A)ANTHRACENE	NS	ND	U	ND	U
BENZO(A)PYRENE	NS	ND	U	ND	U
BENZO(B)FLUORANTHENE	NS	ND	U	ND	U
BENZO(G,H,I)PERYLENE	NS	ND	U	ND	U
BENZO(K)FLUORANTHENE	NS	ND	U	ND	U
BENZYL BUTYL PHTHALATE	NS	ND	U	ND	U
BIPHENYL (DIPHENYL)	NS	ND	U	ND	U
BIS(2-CHLOROETHOXY) METHANE	5	ND	U	ND	U
BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	5	ND	U	ND	U
BIS(2-CHLOROISOPROPYL) ETHER	5	ND	U	ND	U
BIS(2-ETHYLHEXYL) PHTHALATE	5	ND	U	ND	U
CAPROLACTAM	NS	ND	U	ND	U
CARBAZOLE	NS	ND	U	ND	U
CHRYSENE	NS	ND	U	ND	U
DIBENZ(A,H)ANTHRACENE	NS	ND	U	ND	U
DIBENZOFURAN	NS	ND	U	ND	U
DIETHYL PHTHALATE	NS	ND	U	ND	U
DIMETHYL PHTHALATE	NS	ND	U	ND	U
DI-N-BUTYL PHTHALATE	50	ND	U	ND	U
DI-N-OCTYL PHTHALATE	NS	ND	U	ND	U
FLUORANTHENE	NS	ND	U	ND	U
FLUORENE	NS	ND	U	ND	U
HEXA-CHLOROBENZENE	0.04	ND	U	ND	U
HEXA-CHLOROBUTADIENE	NS	ND	U	ND	U
HEXA-CHLOROCYCLOPENTADIENE	5	ND	U	ND	U
HEXA-CHLOROETHANE	5	ND	U	ND	U
INDENO(1,2,3-C,D)PYRENE	NS	ND	U	ND	U
ISOPHORONE	NS	ND	U	ND	U
NAPHTHALENE	NS	ND	U	ND	U
NITROBENZENE	0.4	ND	U	ND	U
N-NITROSODI-N-PROPYLAMINE	NS	ND	U	ND	U
N-NITROSODIPHENYLAMINE	NS	ND	U	ND	U
PENTACHLOROPHENOL	1	ND	U	ND	U
PHENANTHRENE	NS	ND	U	ND	U
PHENOL	1	ND	U	ND	U
PYRENE	NS	ND	U	ND	U

Sample Location		LFS2		LFS3	
Sample Name		LFS2-GW-5-15-20151021		LFS3-GW-5-15-20151021	
Sample Date		10/21/2015		10/21/2015	
Constituent	Criteria				
ALUMINUM	NS	NA		ND	UJ
ANTIMONY	0.003	NA		ND	UJ
ARSENIC	0.025	NA		ND	UJ
BARIUM	1	NA		0.11	J-
BERYLLIUM	0.003	NA		ND	UJ
CADMIUM	0.005	NA		ND	UJ
CALCIUM	NS	NA		113	J-
CHROMIUM, TOTAL	0.05	NA		ND	UJ
COBALT	NS	NA		0.0095	J-
COPPER	0.2	NA		0.0064	J-
IRON	0.3	NA		ND	UJ
LEAD	0.025	NA		0.0032	J-
MAGNESIUM	35	NA		<b>68.4</b>	J-
MANGANESE	0.3	NA		<b>1.4</b>	J-
NICKEL	0.1	NA		0.025	J-
POTASSIUM	NS	NA		7.5	J-
SELENIUM	0.01	NA		ND	UJ
SILVER	0.05	NA		ND	UJ
SODIUM	20	NA		<b>32.1</b>	J-
THALLIUM	0.0005	NA		ND	UJ
VANADIUM	NS	NA		ND	UJ
ZINC	2	NA		0.0076	J-
MERCURY	NS	NA		ND	UJ
CYANIDE	NS	ND	U	NA	
ALUMINUM	NS	347	J	126	
ANTIMONY	0.003	ND	UJ	ND	U
ARSENIC	0.025	<b>0.30</b>	J	<b>0.097</b>	
BARIUM	1	<b>3.0</b>	J-	<b>1.5</b>	
BERYLLIUM	0.003	<b>0.017</b>	J-	<b>0.0062</b>	
CADMIUM	0.005	0.0028	J	0.0013	J
CALCIUM	NS	1950	J	721	B
CHROMIUM, TOTAL	0.05	<b>0.54</b>	J	<b>0.24</b>	
COBALT	NS	0.43	T	0.17	
COPPER	0.2	<b>0.82</b>	J-	<b>0.40</b>	
IRON	0.3	<b>710</b>	J	<b>287</b>	
LEAD	0.025	<b>0.30</b>	J	<b>0.14</b>	
MAGNESIUM	35	<b>389</b>	J-	<b>228</b>	
MANGANESE	0.3	<b>13.8</b>	J-	<b>8.4</b>	B
NICKEL	0.1	<b>0.91</b>	J	<b>0.35</b>	
POTASSIUM	NS	73.4	J-	29.2	
SELENIUM	0.01	ND	UJ	ND	U
SILVER	0.05	<b>0.051</b>	J	0.0047	J
SODIUM	20	<b>35.1</b>	J-	<b>30.8</b>	
THALLIUM	0.0005	ND	U	ND	U
VANADIUM	NS	0.63	J	0.35	
ZINC	2	1.1	J-	0.62	B
MERCURY	NS	0.00070		0.00023	

Sample Location		LFS2		LFS3	
Sample Name		LFS2-GW-5-15-20151021		LFS3-GW-5-15-20151021	
Sample Date		10/21/2015		10/21/2015	
Constituent	Criteria				
PCB-1016 (AROCLOR 1016)	0.09	ND	U	ND	U
PCB-1221 (AROCLOR 1221)	0.09	ND	U	ND	U
PCB-1232 (AROCLOR 1232)	0.09	ND	U	ND	U
PCB-1242 (AROCLOR 1242)	0.09	ND	U	ND	U
PCB-1248 (AROCLOR 1248)	0.09	ND	U	ND	U
PCB-1254 (AROCLOR 1254)	0.09	ND	U	ND	U
PCB-1260 (AROCLOR 1260)	0.09	ND	U	ND	U
ALDRIN	NS	ND	UJ	ND	UJ
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	0.01	ND	UJ	ND	UJ
ALPHA CHLORDANE	NS	ND	UJ	ND	UJ
ALPHA ENDOSULFAN	NS	ND	UJ	ND	UJ
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	0.04	ND	UJ	ND	UJ
BETA ENDOSULFAN	NS	ND	UJ	ND	UJ
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	0.04	ND	UJ	ND	UJ
DIELDRIN	0.004	ND	UJ	ND	UJ
ENDOSULFAN SULFATE	NS	ND	UJ	ND	UJ
ENDRIN	NS	ND	UJ	ND	UJ
ENDRIN ALDEHYDE	5	ND	UJ	ND	UJ
ENDRIN KETONE	5	ND	UJ	ND	UJ
GAMMA BHC (LINDANE)	0.05	ND	UJ	ND	UJ
HEPTACHLOR	0.04	ND	UJ	ND	UJ
HEPTACHLOR EPOXIDE	0.03	ND	UJ	ND	UJ
METHOXYCHLOR	35	ND	UJ	ND	UJ
P,P'-DDD	0.3	ND	UJ	ND	UJ
P,P'-DDE	0.2	ND	UJ	ND	UJ
P,P'-DDT	0.2	ND	UJ	ND	UJ
TOXAPHENE	0.06	ND	UJ	ND	UJ
trans-Chlordane	NS	ND	UJ	ND	UJ

**VOCs**

Units -  $\mu\text{g/l}$       **Bold/highlighted cell** – exceedance of criteria

Qualifiers - NA - Not Analyzed

NS - Criteria not specified

R - rejected

B – also detected in associated method blank

J – estimated value

J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low

J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high

ND – not detected

NDJ – not detected, estimated reporting limit

NJ – positive identification of tentatively identified compound, estimated value

P – greater than 40% difference between primary and confirmation analyses

Criteria – NYSDEC GWQS - New York State Department of Environmental Conservation Groundwater Quality

Standards Part 703 (Class GA) & Technical & Operational Guidance Series 1.1.1

**SVOCs**

Units -  $\mu\text{g/l}$       **Bold/highlighted cell** – exceedance of criteria

Qualifiers - NA - Not Analyzed

NS - Criteria not specified

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ND – not detected

NDJ – not detected, estimated reporting limit

NJ – positive identification of tentatively identified compound, estimated value

P – greater than 40% difference between primary and confirmation analyses

**Metals**

Units -  $\text{mg/l}$

**Bold/highlighted cell** – exceedance of criteria

Qualifiers - NA - Not Analyzed

NS - Criteria not specified

R - rejected

B – also detected in associated method blank

J – estimated value

J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low

J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high

ND – not detected

NDJ – not detected, estimated reporting limit

NJ – positive identification of tentatively identified compound, estimated value

P – greater than 40% difference between primary and confirmation analyses

Criteria – NYSDEC GWQS - New York State Department of Environmental Conservation Groundwater Quality Standards

Part 703 (Class GA) & Technical & Operational Guidance Series 1.1.1

\* This table is designed to be printed in color. If printed in B&W please note that the Constituents above Cyanide are Dissolved and those below are Total.

Dissolved
N/A
Total

**PCBs & Pesticide**

Units -  $\mu\text{g/l}$

**Bold/highlighted cell** – exceedance of criteria

Qualifiers - NA - Not Analyzed

NS - Criteria not specified

R - rejected

B – also detected in associated method blank

J – estimated value

J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low

J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high

ND – not detected

NDJ – not detected, estimated reporting limit

NJ – positive identification of tentatively identified compound, estimated value

P – greater than 40% difference between primary and confirmation analyses

Criteria – NYSDEC GWQS - New York State Department of Environmental Conservation Groundwater Quality

Standards Part 703 (Class GA) & Technical & Operational Guidance Series 1.1.1

Sample Location			OF-TCLP-COMP	LFS-TCLP-COMP	
Sample Name			OF-TCLP-COMP-20151028	LFS-TCLP-COMP-20151027	
Sample Date			10/28/2015	10/27/2015	
Constituent	Criteria	Units			
FLASH POINT	<140	deg f	>176	>176	
ARSENIC	5	mg/l	0.0093	J	ND
BARIUM	100	mg/l	0.93	J	0.93
CADMIUM	1	mg/l	0.0023		0.0034
CHROMIUM, TOTAL	5	mg/l	ND	U	ND
LEAD	5	mg/l	0.026		0.011
SELENIUM	1	mg/l	ND	U	ND
SILVER	5	mg/l	ND	U	ND
MERCURY	0.2	mg/l	ND	U	ND
CHLORDANE	0.03	mg/l	ND	U	ND
ENDRIN	0.02	mg/l	ND	U	ND
GAMMA BHC (LINDANE)	0.4	mg/l	ND	U	ND
HEPTACHLOR	0.008	mg/l	ND	U	ND
HEPTACHLOR EPOXIDE	0.008	mg/l	ND	U	ND
METHOXYCHLOR	10	mg/l	ND	U	0.000057
TOXAPHENE	0.5	mg/l	ND	U	ND
2,4-D (DICHLOROPHOXYACETIC ACID)	10	mg/l	ND	U	ND
SILVEX (2,4,5-TP)	1	mg/l	ND	U	ND
1,4-DICHLOROBENZENE	7.5	mg/l	ND	U	ND
2,4,5-TRICHLOROPHENOL	400	mg/l	ND	U	ND
2,4,6-TRICHLOROPHENOL	2	mg/l	ND	U	ND
2,4-DINITROTOLUENE	0.13	mg/l	ND	U	ND
2-METHYLPHENOL (O-CRESOL)	200	mg/l	ND	U	ND
3-METHYLPHENOL	200	mg/l	ND	U	ND
4-METHYLPHENOL (P-CRESOL)	200	mg/l	ND	U	ND
HEXACHLOROBENZENE	0.13	mg/l	ND	U	ND
HEXACHLOROBUTADIENE	0.5	mg/l	ND	U	ND
HEXACHLOROETHANE	3	mg/l	ND	U	ND
NITROBENZENE	2	mg/l	ND	U	ND
PENTACHLOROPHENOL	100	mg/l	ND	U	ND
PYRIDINE	5	mg/l	ND	U	0.0018
REACTIVE CYANIDE	NS	mg/kg	ND	U	ND
SULFIDE REACTIVE	NS	mg/kg	ND	U	ND
PH	NS	pH units	8.18		8.17

**Full TCLP****Bold/highlighted cell** – exceedance of one or more criteria

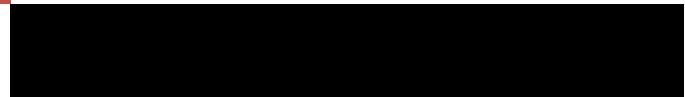
Qualifiers -      NA - Not Analyzed  
                         NS - Criteria not specified  
                         R - rejected  
                         B - also detected in associated method blank  
                         J - estimated value  
                         J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low  
                         J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high  
                         ND - not detected  
                         NDJ - not detected, estimated reporting limit  
                         NJ - positive identification of tentatively identified compound, estimated value  
                         P - greater than 40% difference between primary and confirmation analyses  
Criteria - Title 40 CFR Protection of Environment: Part 261- Identification and Listing of Hazardous Waste

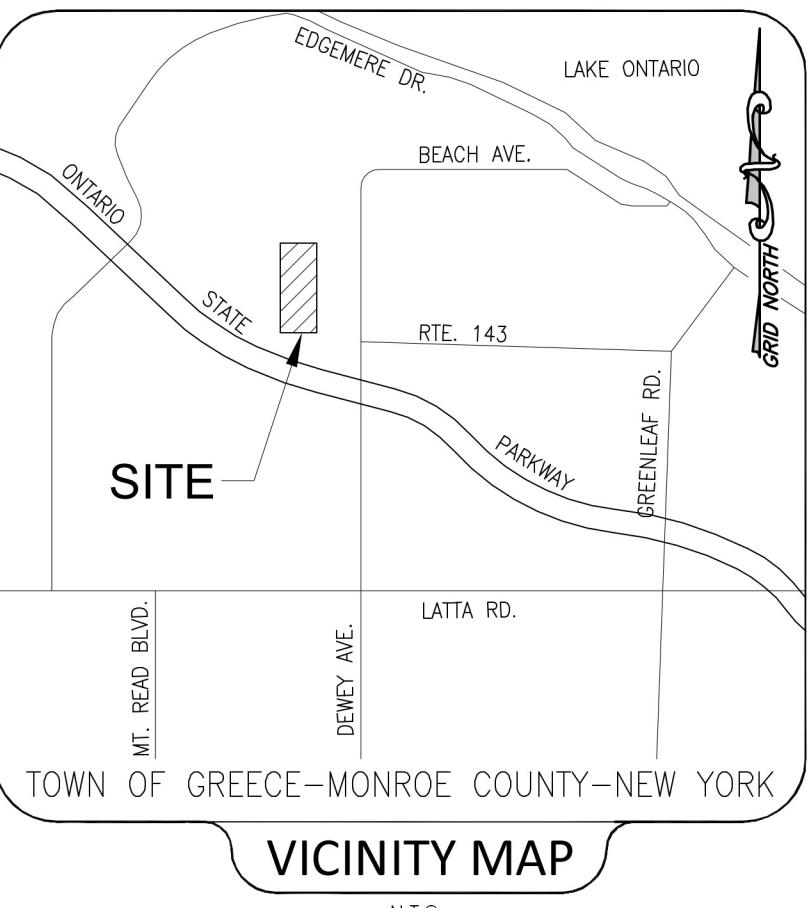


## **Appendix A:**

### **Site Survey**

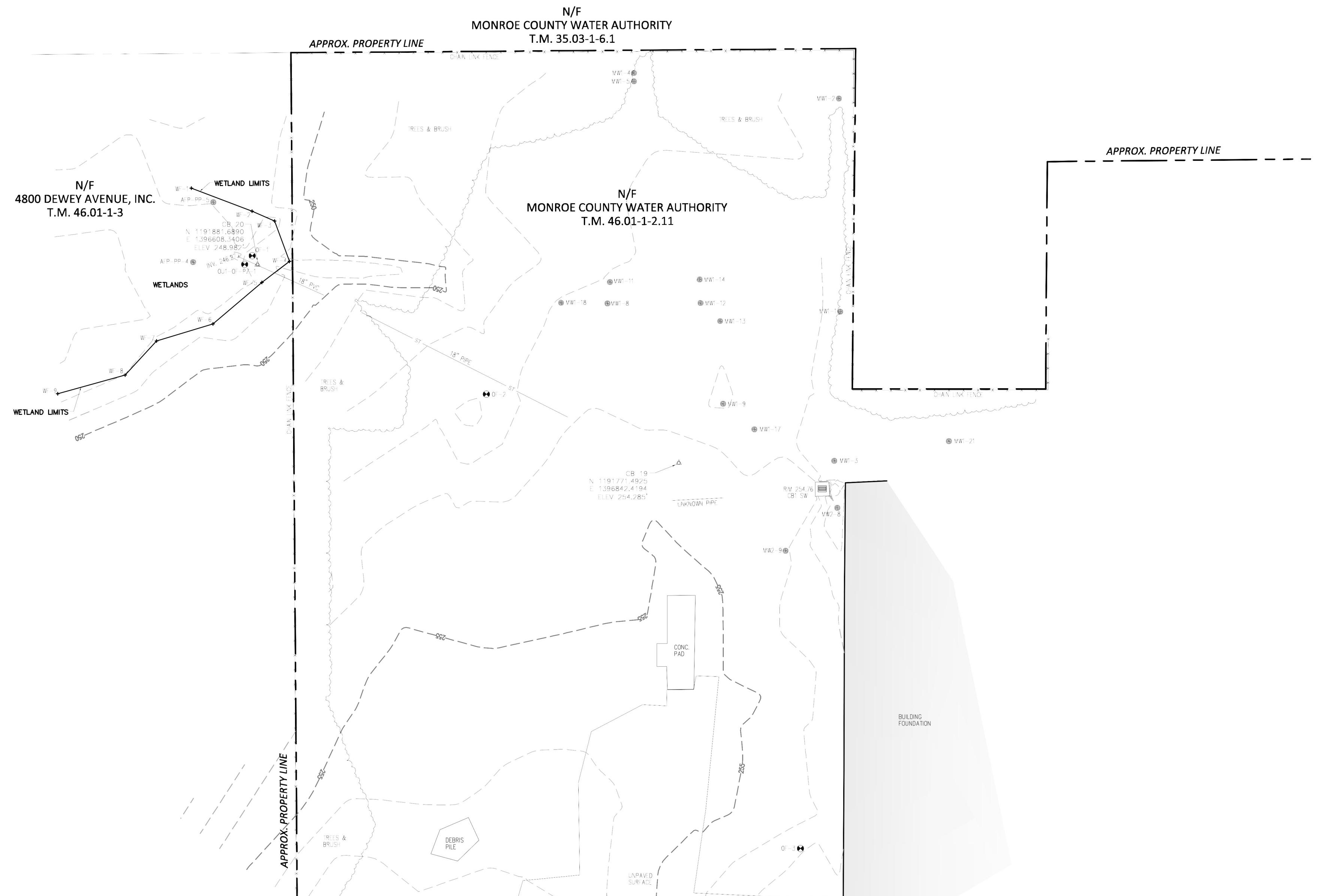
### **Popli Design Group**





#### OUTFALL I.R.M. AREA SAMPLE TABLE

POINT ID	NORTHING	EASTING	GROUND ELEV.
AFP-PP-04	1191883.1	1396572.5	247.2
AFP-PP-05	1191916.4	1396583.8	248.0
MW1-1	1191855.6	1396932.2	252.5
MW1-2	1191974.0	1396931.4	253.0
MW1-3	1191772.7	1396928.8	252.4
MW1-4	1191988.2	1396817.5	252.6
MW1-5	1191983.6	1396817.5	252.9
MW1-6	1191860.2	1396802.8	253.1
MW1-7	1191804.4	1396867.1	254.1
MW1-11	1191872.0	1396804.2	253.1
MW1-12	1191860.4	1396854.5	253.2
MW1-13	1191850.4	1396865.4	253.9
MW1-14	1191873.4	1396854.1	253.5
MW1-17	1191790.2	1396884.4	253.6
MW1-18	1191860.5	1396777.0	253.1
MW1-21	1191783.6	1396992.5	253.2
MW2-8	1191746.5	1396930.5	251.0
MW2-9	1191722.7	1396901.8	254.2
OU1-OF-P2-1	1191881.9	1396601.2	248.0
OF-1	1191886.7	1396605.4	248.2
OF-2	1191809.7	1396735.5	252.5
OF-3	1191557.3	1396910.1	253.2
WF-1	1191924.2	1396571.6	248.7
WF-2	1191911.4	1396605.3	248.4
WF-3	1191905.9	1396617.9	247.7
WF-4	1191883.5	1396626.1	248.2
WF-5	1191871.8	1396610.8	248.1
WF-6	1191848.8	1396583.6	248.3
WF-7	1191839.3	1396552.3	248.2
WF-8	1191820.4	1396534.8	248.0
WF-9	1191810.0	1396497.4	247.5



#### LEGEND

- CATCH BASIN MANHOLE
- MONITORING WELL
- SANITARY MANHOLE
- UTILITY POLE
- HYDRANT
- TEST LOCATION
- SURVEY CONTROL POINT
- WETLAND FLAG LOCATION

#### BOUNDARY REFERENCES

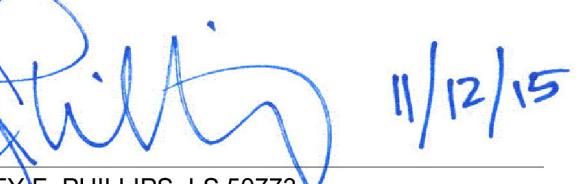
1. LIBER 10562 OF DEEDS, PAGE 7.

#### SURVEY NOTES

- HORIZONTAL DATUM IS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (2011) - NEW YORK STATE PLANE COORDINATE SYSTEM, WEST ZONE.
- VERTICAL DATUM IS REFERENCED TO THE NAVD88.
- MAPPING UNITS ARE U.S. SURVEY FEET.
- THE CONTOUR INTERVAL IS 1 FOOT.
- UTILITIES SHOWN HEREON WERE PLOTTED FROM SURFACE FEATURES ONLY. UNDERGROUND UTILITIES MAY EXIST WHICH ARE NOT SHOWN HEREON.
- PROPERTY LINES SHOWN HEREON ARE BASED UPON A DEED PLOT AND TAX MAP INFORMATION ONLY.

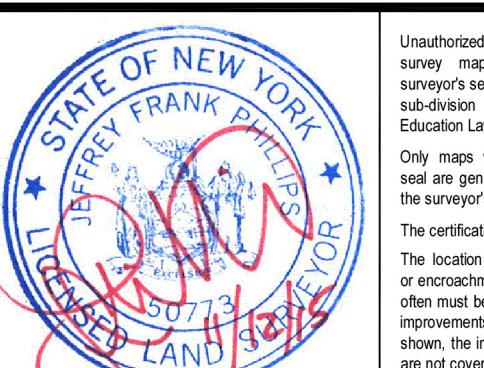
#### SURVEYOR'S CERTIFICATION

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE PREPARED FROM AN INSTRUMENT SURVEY UNDER THE DIRECTION OF A LICENSED LAND SURVEYOR, COMPLETED NOVEMBER 4, 2015. PROPERTY LINES ARE BASED ON TAX MAP INFORMATION ONLY. THIS SURVEY IS SUBJECT TO ANY EASEMENT OR ENCUMBRANCE AN UP TO DATE ABSTRACT OF TITLE MAY REVEAL.

  
JEFFREY F. PHILLIPS, LS 50773  
FOR: POPLI DESIGN GROUP  
555 Penbrooke Drive  
Penfield, NY 14526  
Phone: 585-388-2060

TOPOGRAPHIC SURVEY FOR  
FORMER AIR FORCE PLANT 51  
OUTFALL I.R.M. AREA  
N.Y.S.D.E.C. SITE No. 828156  
SITUATE IN TOWN OF GREECE  
MONROE COUNTY STATE OF NEW YORK

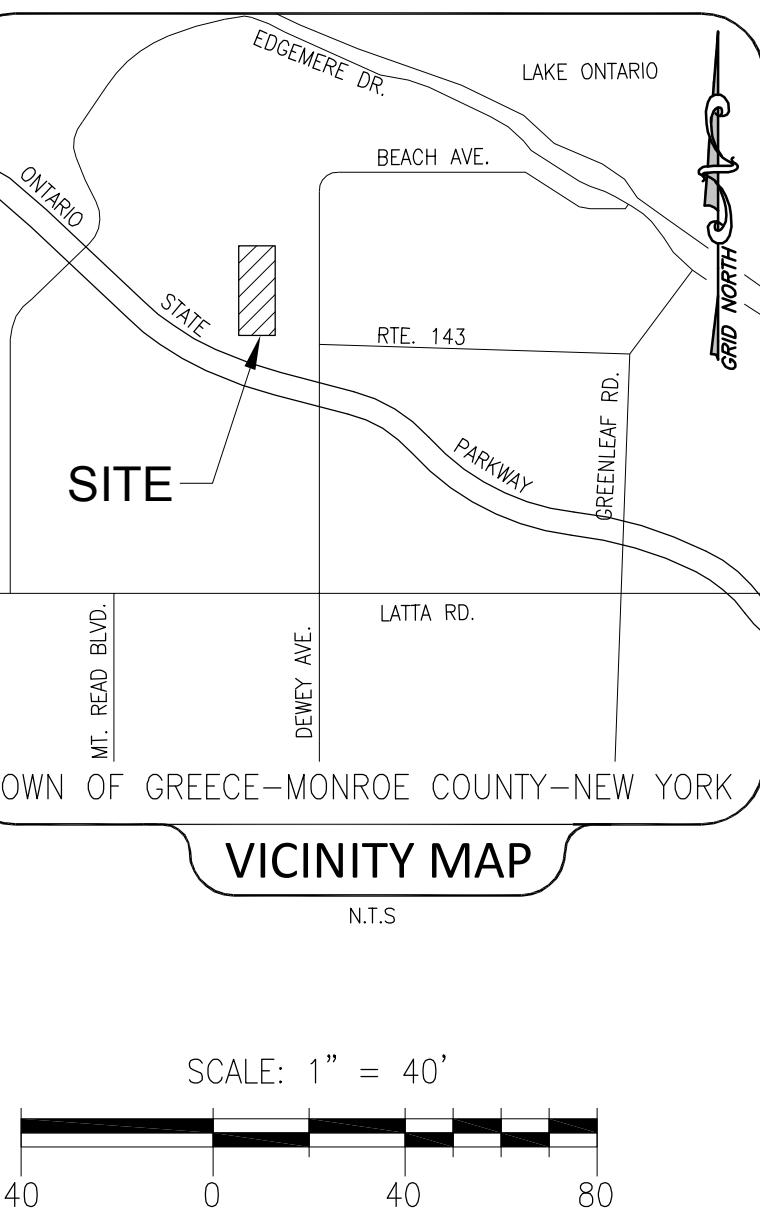
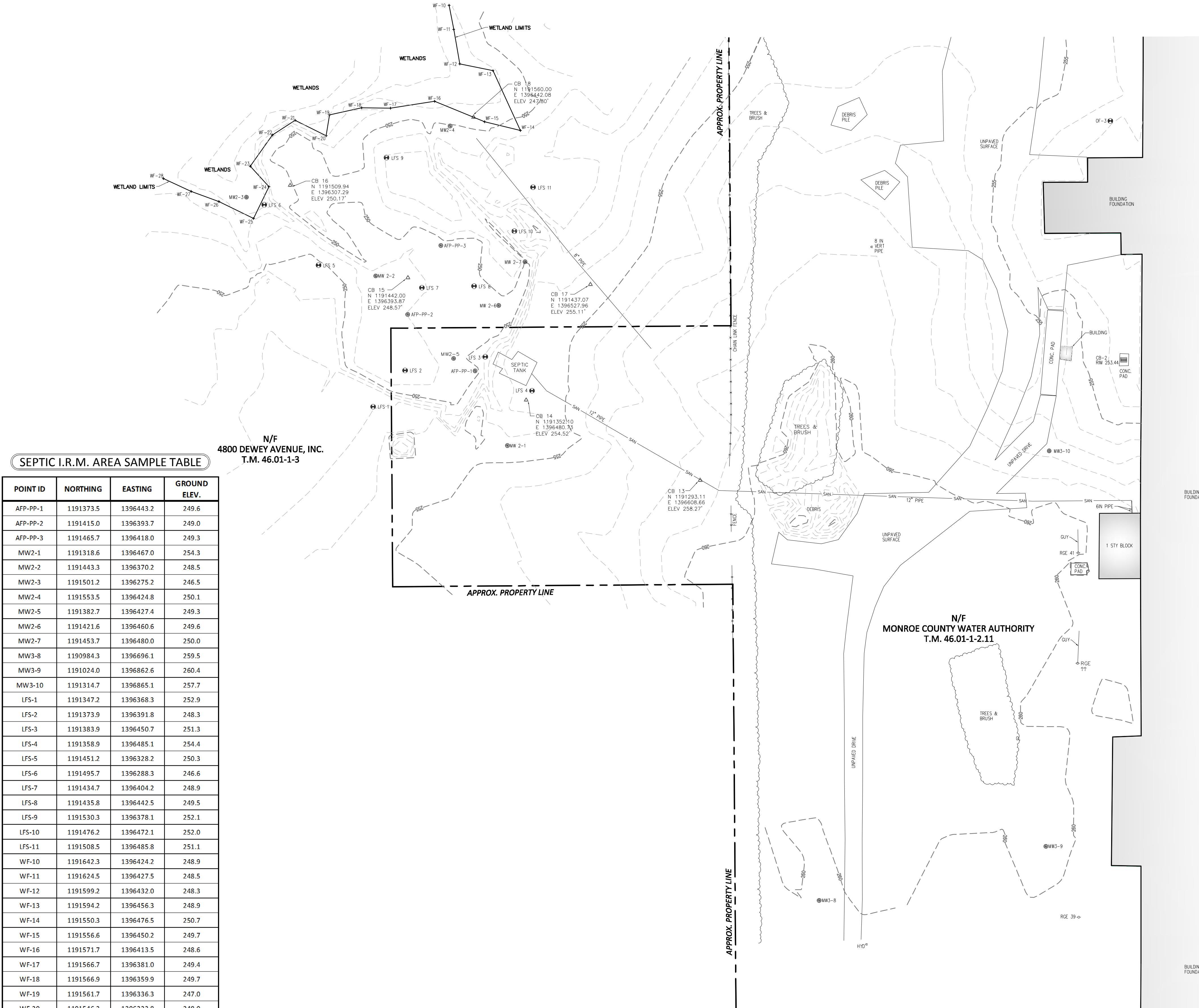
REVISIONS	
12/7/15	REVISED SHEET LAYOUT
12/7/15	ADDED SAMPLE TABLE, AND REVISED WELL ID'S



Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's name is a violation of section 230, sub-division 2, of the New York State Education Law.  
Only maps with the surveyor's embossed seal or signature are valid. Any map without the surveyor's original work and option.  
The location of underground improvements or encroachments are not always known and may not be shown on the survey map. If underground improvements or encroachments exist or are shown, the improvements or encroachments are not covered by this certificate.

**PDG**  
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DRAFTER: PAR SCALE: 1" = 40' DATE: 11/12/15 DRAWING NO.: "OUTFALL"



## SEPTIC I.R.M. AREA SAMPLE TABLE

POINT ID	NORTHING	EASTING	GROUND ELEV.
AFP-PP-1	1191373.5	1396443.2	249.6
AFP-PP-2	1191415.0	1396393.7	249.0
AFP-PP-3	1191465.7	1396418.0	249.3
MW2-1	1191318.6	1396467.0	254.3
MW2-2	1191443.3	1396370.2	248.5
MW2-3	1191501.2	1396275.2	246.5
MW2-4	1191553.5	1396424.8	250.1
MW2-5	1191382.7	1396427.4	249.3
MW2-6	1191421.6	1396460.6	249.6
MW2-7	1191453.7	1396480.0	250.0
MW3-8	1190984.3	1396696.1	259.5
MW3-9	1191024.0	1396862.6	260.4
MW3-10	1191314.7	1396865.1	257.7
LFS-1	1191347.2	1396368.3	252.9
LFS-2	1191373.9	1396391.8	248.3
LFS-3	1191383.9	1396450.7	251.3
LFS-4	1191358.9	1396485.1	254.4
LFS-5	1191451.2	1396328.2	250.3
LFS-6	1191495.7	1396288.3	246.6
LFS-7	1191434.7	1396404.2	248.9
LFS-8	1191435.8	1396442.5	249.5
LFS-9	1191530.3	1396378.1	252.1
LFS-10	1191476.2	1396472.1	252.0
LFS-11	1191508.5	1396485.8	251.1
WF-10	1191642.3	1396424.2	248.9
WF-11	1191624.5	1396427.5	248.5
WF-12	1191599.2	1396432.0	248.3
WF-13	1191594.2	1396456.3	248.9
WF-14	1191550.3	1396476.5	250.7
WF-15	1191556.6	1396450.2	249.7
WF-16	1191571.7	1396413.5	248.6
WF-17	1191566.7	1396381.0	249.4
WF-18	1191566.9	1396359.9	249.7
WF-19	1191561.7	1396336.3	247.0
WF-20	1191546.3	1396333.8	248.0
WF-21	1191557.7	1396310.9	246.8
WF-22	1191546.9	1396294.3	248.6
WF-23	1191523.9	1396278.0	246.2
WF-24	1191508.9	1396291.8	248.0
WF-25	1191485.5	1396280.5	247.8
WF-26	1191498.0	1396255.0	247.6
WF-27	1191505.4	1396234.6	247.7
WF-28	1191514.9	1396214.2	247.5

## LEGEND

- CATCH BASIN MANHOLE
- MONITORING WELL
- SANITARY MANHOLE
- UTILITY POLE
- HYDRANT
- TEST LOCATION
- SURVEY CONTROL POINT
- WETLAND FLAG LOCATION

## BOUNDARY REFERENCES

LIBER 10562 OF DEEDS, PAGE 7.

## JRVEY NOTES

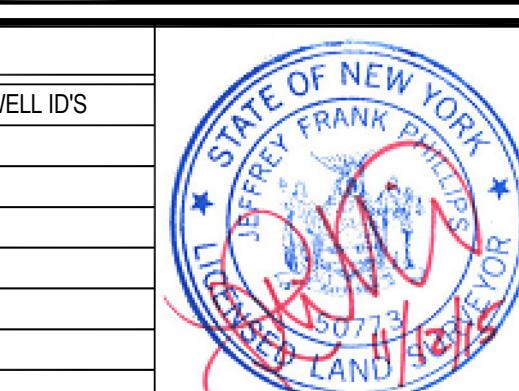
1. HORIZONTAL DATUM IS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (2011) - NEW YORK STATE PLANE COORDINATE SYSTEM, WEST ZONE.
2. VERTICAL DATUM IS REFERENCED TO THE NAVD88.
3. MAPPING UNITS ARE U.S. SURVEY FEET.
4. THE CONTOUR INTERVAL IS 1 FOOT.
5. UTILITIES SHOWN HEREON WERE PLOTTED FROM SURFACE FEATURES ONLY. UNDERGROUND UTILITIES MAY EXIST WHICH ARE NOT SHOWN HEREON.
6. PROPERTY LINES SHOWN HEREON ARE BASED UPON A DEED PLOT AND TAX MAP INFORMATION ONLY.

## **SURVEYOR'S CERTIFICATION**

S TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS  
D WERE PREPARED FROM AN INSTRUMENT SURVEY UNDER THE  
CTION OF A LICENSED LAND SURVEYOR, COMPLETED NOVEMBER 4, 2015.  
ERTY LINES ARE BASED ON TAX MAP INFORMATION ONLY. THIS SURVEY  
BJECT TO ANY EASEMENT OR ENCUMBRANCE AN UP TO DATE  
TRACT OF TITLE MAY REVEAL

JEFFREY F. PHILLIPS, LS 50773  
FOR: POPLI DESIGN GROUP  
555 Penbrooke Drive  
P.O. Box 5111, NY 11429

15 FEB 1995 PHILLIPS, L.C. 507772



TOPOGRAPHIC SURVEY FOR  
FORMER AIR FORCE PLANT 51  
FORMER SEPTIC SYSTEM/LEACHFIELD I.R.M. AREA  
N.Y.S.D.E.C. SITE No. 828156  
SITUATE IN TOWN OF GREECE  
MONROE COUNTY STATE OF NEW YORK

DRAFTER: PAR SCALE: 1" 40' DATE: 11/12/15 DRAWING NO.: "G-00010"



## **Appendix B:**

## **Soil Boring Logs**



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

LFS1-20151021

SURFACE ELEV

\_\_\_\_\_

DATUM

SHEET 1 OF 1

SITE LOCATION

Greece, NY

DATE

21-Oct-2015

DRILLER NAME / COMPANY

Empire

MONITORING INSTRUMENTATION

Multi-RAE

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Geoprobe Sample				Sample Description	Remarks
	Sample No.	Sample Depth (ft)	Recov. (ft.)	PID (ppm)		
0	1	0 - 4	4	0	0' - 1' Brown Silty Soil, organic debris 1' - 3.5' Medium Brown Clayey Silt 3.5' - 4.0' - Brown silty clay	No Odors, No PID Dry
4	2	4 - 8	4	0	4-5' Brown silty clay 5' - 8' Moist brown silty clay. Varying levels of hardness	No Odors, No PID Moist @ 5'
8	3	8 - 12	4	0	8' - 9.1' Brown silty clay 9.1' Layer to dark organics 9.1' - 11.1' Reddish silty clay- compacted 11.1' - 12' Sandy with pebble inclusions- compacted	No Odors, No PID Wet
12	4	12 - 16	4	0	12' - 12.7' Brown clay (possible infill) 12.7' - 13.5' Reddish sandy silt 13.5' - 13.6' Black organic layer 13.6' - 14.0' - Wet brown clay with pebble inclusions 14.0' - 16.0' Sandy clay with pebbles	No Odors, No PID Wet
16					EOB	

## NOTES:

WOR - Weight of Rods	Proportions	Blows per 1' Compaction	Pocket Pen. (Clays only)	Strata Descriptions	Strata Descriptions (con't)
WOH - Weight of Hammer	And - Equal	0 - 10 - Loose	< 0.5 - Soft	F - Fill	V
BOH - Bottom of Hole	Sandy - 31 - 49%	11 - 29 - Med. Compact	0.5 - 1.0 - Medium	O - Organic Deposits	T
NS - No Split Spoon Sample	Some - 13 - 30%	30 - 50 - Compact	1.0 - 4.0 - Stiff	S - Predominantly Sand	D
S - Split Spoon Sample	Trace - 1 - 12%	> 50 - V. Compact	> 4.0 - Hard	M - Predominantly Silt	R
U - Undisturbed Sample		50/6" - Refusal		C - Predominantly Clay	



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

LFS2-20151021

SURFACE ELEV

\_\_\_\_\_

DATUM

\_\_\_\_\_

SHEET

1 OF 1

SITE LOCATION

Greece, NY

DATE

21-Oct-2015

DRILLER NAME / COMPANY

Empire

MONITORING INSTRUMENTATION

Multi-RAE

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Sample No.	Sample Depth (ft)	Geoprobe Sample		Sample Description	Remarks
0						
	1	0 - 4	4	0	0' - 0.2' Black Silty Soil, organic debris 0.2' - 1.8' Grade to Medium Brown Clayey Silt 1.8' - 3.6' Brown silty clay- varying hardness 3.6' - 4.0' Reddish clayey sand with pebbles	No Odors, No PID Moist
4						
	2	4 - 8	4	0	4' - 4.4' Brown silty clay (possible infill) 4.4' - 4.6' Black organic layer 4.6' - 8.0' Red sandy clay with pebbles. 7-8' noticeable hardness and drier	No Odors, No PID Wet
8						
	3	8 - 12	4	0	8' - 8.6' Red sandy clay 8.6' - 8.8- noticeable wetter, sandy clay 0.8' - 9.0' Black sediment- organic? 9.1 - 10.7 - hard silty clay, becoming wet at 9.5' 10.7' - 12' Medium-Coarse clayey sands with pebbles	No Odors, No PID Wet
12						
	4	12 - 16	4	0	12' - 12.8' clayey sands 12.8' - 16.0' Wet medium sands, graded to medium-coarse and becoming more compact ~ 14'	No Odors, No PID Wet
16					EOB	

## NOTES:

WOR - Weight of Rods

Proportions

Blows per 1' Compaction

Pocket Pen. (Clays only)

Strata Descriptions

Strata Descriptions (con't)

WOH - Weight of Hammer

And - Equal

0 - 10 - Loose

&lt; 0.5 - Soft

F - Fill

V

BOH - Bottom of Hole

Sandy - 31 - 49%

11 - 29 - Med. Compact

0.5 - 1.0 - Medium

O - Organic Deposits

T

NS - No Split Spoon Sample

Some - 13 - 30%

30 - 50 - Compact

1.0 - 4.0 - Stiff

S - Predominantly Sand

D

S - Split Spoon Sample

Trace - 1 - 12%

&gt; 50 - V. Compact

&gt; 4.0 - Hard

M - Predominantly Silt

R

U - Undisturbed Sample

50/6" - Refusal

C - Predominantly Clay



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

LFS3-20151021

SURFACE ELEV

\_\_\_\_\_

DATUM

\_\_\_\_\_

SHEET

1 OF 1

SITE LOCATION

Greece, NY

DATE

21-Oct-2015

DRILLER NAME / COMPANY

Empire

MONITORING INSTRUMENTATION

Multi-RAE

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Sample No.	Sample Depth (ft)	Geoprobe Sample	Recov. (ft.)	PID (ppm)	Sample Description	Remarks
0	1	0 - 4		3.6	0	0' - 0.5' Black Silty Soil, organic debris 0.5' - 2.2' Brown Clayey Silt/sand with pebbles- poorly sorted 2.2' - 2.4' Dark organic layer 2.4' - 3.6' Brown Clayey Silt/sand with pebbles- poorly sorted	No Odors, No PID Dry
4	2	4 - 8		4	0	4' - 5.5' Mottled grey clay. Wet at 5' 5.5' - 8.0' Reddish sandy silt/clay with pebbles- varying grain sizes	No Odors, No PID Wet
8	3	8 - 12		4	0	8' - 11.5' Red sandy silty/clay with pebbles- varying grain sizes 11.5' - 12' Red, compacted sands	No Odors, No PID Wet
12	4	12 - 16		?	0	Core sample lost cohesion. Captured into bag. Mix of sands/clay.	No Odors, No PID Wet
16						EOB	

## NOTES:

WOR - Weight of Rods

Proportions

Blows per 1' Compaction

Pocket Pen. (Clays only)

Strata Descriptions

Strata Descriptions (con't)

WOH - Weight of Hammer

And - Equal

0 - 10 - Loose

&lt; 0.5 - Soft

F - Fill

V

BOH - Bottom of Hole

Sandy - 31 - 49%

11 - 29 - Med. Compact

0.5 - 1.0 - Medium

O - Organic Deposits

T

NS - No Split Spoon Sample

Some - 13 - 30%

30 - 50 - Compact

1.0 - 4.0 - Stiff

S - Predominantly Sand

D

S - Split Spoon Sample

Trace - 1 - 12%

&gt; 50 - V. Compact

&gt; 4.0 - Hard

M - Predominantly Silt

R

U - Undisturbed Sample

50/6" - Refusal

50/6" - Refusal

C - Predominantly Clay



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

LFS4-20151021

SURFACE ELEV

\_\_\_\_\_

DATUM

\_\_\_\_\_

SHEET

1 OF 1

SITE LOCATION

Greece, NY

DATE

21-Oct-2015

DRILLER NAME / COMPANY

Empire

MONITORING INSTRUMENTATION

Multi-RAE

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Sample No.	Sample Depth (ft)	Geoprobe Sample		Sample Description	Remarks
0						
	1	0 - 4			0' - 0.5' Black Silty Soil, organic debris 0.5' - 1.7' Brown Silty Clay- Mottled 1.7' - 2.1' Dark organic layer 2.1' - 4.0' Brown Clayey Silt/sand with pebbles- poorly sorted	No Odors, No PID Dry
4	2	4 - 8			4' - 4.3' Silty-reddish brown clay 4.3' - 4.5' Slight color change to tan 4.5' - 6.0' Silty-reddish brown clay 6.0' - 8.0' - Fine silty clays grading to coarse grain sands. Noted white discoloration of clay at 7' - 7.4'.	No Odors, No PID Wet
8	3	8 - 12			8' - 10' Reddish silty clay with pebbly inclusions 10' - 10.5' Coarser reddish sands with pebble 10.5' - 12' Packed, sandy clays. Very wet.	No Odors, No PID Wet
12	4	12 - 16			12' - 12.1' compacted silty clay 12.1' - 12.7 silty to medium grained sands 12.7 - 16.0' - medium clayey sands with pebbles. Very wet	No Odors, No PID Wet
16					EOB	

## NOTES:

WOR - Weight of Rods

Proportions

Blows per 1' Compaction

Pocket Pen. (Clays only)

Strata Descriptions

Strata Descriptions (con't)

WOH - Weight of Hammer

And - Equal

0 - 10 - Loose

&lt; 0.5 - Soft

F - Fill

V

BOH - Bottom of Hole

Sandy - 31 - 49%

11 - 29 - Med. Compact

0.5 - 1.0 - Medium

O - Organic Deposits

T

NS - No Split Spoon Sample

Some - 13 - 30%

30 - 50 - Compact

1.0 - 4.0 - Stiff

S - Predominantly Sand

D

S - Split Spoon Sample

Trace - 1 - 12%

&gt; 50 - V. Compact

&gt; 4.0 - Hard

M - Predominantly Silt

R

U - Undisturbed Sample

50/6" - Refusal

50/6" - Refusal

C - Predominantly Clay



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

LFS5-20151021

SURFACE ELEV

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DATUM

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SHEET

1 OF 1

SITE LOCATION

Greece, NY

DATE

21-Oct-2015

DRILLER NAME / COMPANY

Empire

MONITORING INSTRUMENTATION

Multi-RAE

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Geoprobe Sample				Sample Description	Remarks
	Sample No.	Sample Depth (ft)	Recov. (ft.)	PID (ppm)		
0	1	0 - 4	3.9	0	0' - 1' Black Silty Soil, organic debris 1' - 3' Lighter brown Silty Clay- Mottled 3' - 3.5' Darker brown silty clays 3.5' - 3.9' Lighter brown silty clay- Mottled	No Odors, No PID Dry
4	2	4 - 8	4	0	4' - 7' Brown mottled (with red) silty clay. Bits of charcoal 7' - 8' Slight color change to tan with darker seams	No Odors, No PID Moist
8	3	8 - 12	3.5	0	8' - 8.4' Poorly sorted sand/gravel (possible infill) 8.4' - 11.0' tannish, mottled (red) silty clay 11' - 11.5' Red sandy clays	No Odors, No PID Wet
12	4	12 - 16	4	0	12' - 14' Tan silty clays- very wet 14' - 16' Mixture of sand/silty clay with pebble inclusions. Red. Very wet.	No Odors, No PID Wet
16					EOB	

## NOTES:

WOR - Weight of Rods

Proportions

Blows per 1' Compaction

Pocket Pen. (Clays only)

Strata Descriptions

Strata Descriptions (con't)

WOH - Weight of Hammer

And - Equal

0 - 10 - Loose

&lt; 0.5 - Soft

F - Fill

V

BOH - Bottom of Hole

Sandy - 31 - 49%

11 - 29 - Med. Compact

0.5 - 1.0 - Medium

O - Organic Deposits

T

NS - No Split Spoon Sample

Some - 13 - 30%

30 - 50 - Compact

1.0 - 4.0 - Stiff

S - Predominantly Sand

D

S - Split Spoon Sample

Trace - 1 - 12%

&gt; 50 - V. Compact

&gt; 4.0 - Hard

M - Predominantly Silt

R

U - Undisturbed Sample

50/6" - Refusal

50/6" - Refusal

C - Predominantly Clay



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

LFS6-20151021

SURFACE ELEV

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DATUM

SHEET 1 OF 1

SITE LOCATION

Greece, NY

DATE

21-Oct-2015

DRILLER NAME / COMPANY

Empire

MONITORING INSTRUMENTATION

Multi-RAE

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Geoprobe Sample				Sample Description	Remarks
	Sample No.	Sample Depth (ft)	Recov. (ft.)	PID (ppm)		
0					0' - 1.8' Black Silty Soil, organic debris 1.8' - 2.3' Compacted tan, mottled clays	No Odors, No PID Dry
4	1	0 - 4	2.3	0	4' - 7' Wet mottled silty clay. 7' - 8' Sandy/Silty clay mix. Last 2" red sandy silt.	No Odors, No PID Moist
8	2	4 - 8	4	0	EOB	

## NOTES:

WOR - Weight of Rods

Proportions

Blows per 1' Compaction

Pocket Pen. (Clays only)

Strata Descriptions

Strata Descriptions (con't)

WOH - Weight of Hammer

And - Equal

0 - 10 - Loose

&lt; 0.5 - Soft

F - Fill

V

BOH - Bottom of Hole

Sandy - 31 - 49%

11 - 29 - Med. Compact

0.5 - 1.0 - Medium

O - Organic Deposit

T

NS - No Split Spoon Sample

Some - 13 - 30%

30 - 50 - Compact

1.0 - 4.0 - Stiff

S - Predominantly Sand

D

S - Split Spoon Sample

Trace - 1 - 12%

&gt; 50 - V. Compact

&gt; 4.0 - Hard

M - Predominantly Silt

R

U - Undisturbed Sample

50/6" - Refusal

C - Predominantly Clay



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

LFS7-20151022

SURFACE ELEV

\_\_\_\_\_

DATUM

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SHEET

1 OF 1

SITE LOCATION

Greece, NY

DATE

22-Oct-2015

DRILLER NAME / COMPANY

Empire

MONITORING INSTRUMENTATION

Multi-RAE

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Sample No.	Sample Depth (ft)	Geoprobe Sample		Sample Description	Remarks
0						
	1	0 - 4			0' - 0.5' Black Silty Soil, organic debris 0.5' - 4' Lighter brown Silty Clay- Mottled- Varying hardness	
4						
	2	4 - 8			4' - 5' Brown mottled (with red) silty clay. 5' - 5.1' Dark organic rich horizon 5.1' - 8' Mottled (red) brownish-tan silty clay	
8						
	3	8 - 12			8' - 9.2' Hard, silty/sandy clay- Red 9.2' - 9.9' Hard, red sandy silty clay with pebbles 9.9' - 10.6' Tannish silty clays 10.6' - 12' Mottled (red) tan clays. At 3', there is a 2" organic layer- black	
12						
	4	12 - 16			Upper 2' - very wet- fine sandy/silt- lost cohesion 2-3.5' - Wet, less water, sandy silt with pebbles 3.5' - 4' - Very compact silty clay	
16					EOB	

## NOTES:

WOR - Weight of Rods

Proportions

Blows per 1' Compaction

Pocket Pen. (Clays only)

Strata Descriptions

Strata Descriptions (con't)

WOH - Weight of Hammer

And - Equal

0 - 10 - Loose

&lt; 0.5 - Soft

F - Fill

V

BOH - Bottom of Hole

Sandy - 31 - 49%

11 - 29 - Med. Compact

0.5 - 1.0 - Medium

O - Organic Deposits

T

NS - No Split Spoon Sample

Some - 13 - 30%

30 - 50 - Compact

1.0 - 4.0 - Stiff

S - Predominantly Sand

D

S - Split Spoon Sample

Trace - 1 - 12%

&gt; 50 - V. Compact

&gt; 4.0 - Hard

M - Predominantly Silt

R

U - Undisturbed Sample

50/6" - Refusal

50/6" - Refusal

C - Predominantly Clay



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

LFS8-20151022

SURFACE ELEV

\_\_\_\_\_

DATUM

\_\_\_\_\_

SHEET

1 OF 1

SITE LOCATION

Greece, NY

DATE

22-Oct-2015

DRILLER NAME / COMPANY

Empire

MONITORING INSTRUMENTATION

Multi-RAE

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Geoprobe Sample				Sample Description	Remarks
	Sample No.	Sample Depth (ft)	Recov. (ft.)	PID (ppm)		
0	1	0 - 4	4	0	0' - 0.5' Black Silty Soil, organic debris 0.5' - 1.9' Lighter brown/tan Silty Clay- Mottled- Varying hardness 1.9' - 2.3' Sandy/Silty clay, hard, with pebbles 2.3' - 4.0' Silty reddish clay with sand lens at 3.1' - 3.3', and 3.9' - 4.0'	No Odors, No PID Moist
4	2	4 - 8	4	0	4' - 4.2' Reddish silty clay 4.2' - 4.4' Dark organic layer 4.4' - 7.8' Mottled (tan-reddish brown) silty clay 7.8' - 8.0' Reddish silty-sandy clay	No Odors, No PID Moist
8	3	8 - 12	2	0	Upper section is 0.2" silty/sandy clay Next 0.2" piece is silty/sandy clay- reddish- wet Bottom 1.5' is hard, poorly sorted silty clays with pebbles 10.6' - 12' Mottled (red) tan clays. At 3', there is a 2" organic layer- black	Liner shredded No Odors, No PID Moist
12	4	12 - 16	3.5	0	12' - 14.5' Wet sandy silt, hard 14.5' - 16' Silty sandy clay 3.5' - 4' - Very compact silty clay	Liner shredded No Odors, No PID Wet
16					EOB	

## NOTES:

WOR - Weight of Rods	Proportions	Blows per 1' Compaction	Pocket Pen. (Clays only)	Strata Descriptions	Strata Descriptions (con't)
WOH - Weight of Hammer	And - Equal	0 - 10 - Loose	< 0.5 - Soft	F - Fill	V
BOH - Bottom of Hole	Sandy - 31 - 49%	11 - 29 - Med. Compact	0.5 - 1.0 - Medium	O - Organic Deposits	T
NS - No Split Spoon Sample	Some - 13 - 30%	30 - 50 - Compact	1.0 - 4.0 - Stiff	S - Predominantly Sand	D
S - Split Spoon Sample	Trace - 1 - 12%	> 50 - V. Compact	> 4.0 - Hard	M - Predominantly Silt	R
U - Undisturbed Sample		50/6" - Refusal		C - Predominantly Clay	



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

LFS9-20151022

SURFACE ELEV

\_\_\_\_\_

DATUM

\_\_\_\_\_

SHEET

1 OF 1

SITE LOCATION

Greece, NY

DATE

22-Oct-2015

DRILLER NAME / COMPANY

Empire

MONITORING INSTRUMENTATION

Multi-RAE

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Geoprobe Sample				Sample Description	Remarks
	Sample No.	Sample Depth (ft)	Recov. (ft.)	PID (ppm)		
0	1	0 - 4	4	0	0' - 0.5' Black Silty Soil, organic debris 0.5' - 4.0' Silty brownish clay- crumbles easily	No Odors, No PID dry
4	2	4 - 8	4	0	4' - 5.4' Silty brownish clay- crumbles easily 5.4' - 6.8' Silty brownish mottled (tan) clay 6.8' - 8' Silty brown mottled (reddish) clay	No Odors, No PID dry
8	3	8 - 12	4	0	8' - 8.7' Mottled, reddish brown clay 8.7' - 8.9' Dark organic layer 8.9' - 9.3' Mottled, reddish brown clay 9.3' - 10.4' Tan, silty clay 10.4' - 12.0' Grey, mottled (red) clay	No Odors, No PID dry
12	4	12 - 16	3.5	0	12; - 12.5' Reddish clay 12.5' - 13.9' Mottled (red) tan silty clay with siltier layers 13.9' - 14.8' Silty clay with finer sands 14.8' - 16' Silty/sandy reddish clays	Liner shredded
16					EOB	No Odors, No PID Moist

## NOTES:

WOR - Weight of Rods

Proportions

Blows per 1' Compaction

Pocket Pen. (Clays only)

Strata Descriptions

Strata Descriptions (con't)

WOH - Weight of Hammer

And - Equal

0 - 10 - Loose

&lt; 0.5 - Soft

F - Fill

V

BOH - Bottom of Hole

Sandy - 31 - 49%

11 - 29 - Med. Compact

0.5 - 1.0 - Medium

O - Organic Deposits

T

NS - No Split Spoon Sample

Some - 13 - 30%

30 - 50 - Compact

1.0 - 4.0 - Stiff

S - Predominantly Sand

D

S - Split Spoon Sample

Trace - 1 - 12%

&gt; 50 - V. Compact

&gt; 4.0 - Hard

M - Predominantly Silt

R

U - Undisturbed Sample

50/6" - Refusal

50/6" - Refusal

C - Predominantly Clay



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

LFS10-20151022

SURFACE ELEV

\_\_\_\_\_

DATUM

\_\_\_\_\_

SHEET

1 OF 1

SITE LOCATION

Greece, NY

DATE

22-Oct-2015

DRILLER NAME / COMPANY

Multi-RAE

Empire

MONITORING INSTRUMENTATION

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Geoprobe Sample				Sample Description	Remarks
	Sample No.	Sample Depth (ft)	Recov. (ft.)	PID (ppm)		
0	1	0 - 4	4	0	0' - 0.7' Black Silty Soil, organic debris 0.7' - 4.0' Silty brownish clay- crumbles easily	No Odors, No PID dry
4	2	4 - 8	4	0	4' - 6.6' Silty brownish clay- crumbles easily 6.6' - 7.6' Silty brown mottled (reddish) clay 7.6' - 8.0' Silty red clay	No Odors, No PID dry
8	3	8 - 12	4	0	8' - 8.9' Mottled, reddish brown silty clay 8.9' - 11' Red sandy/silty clay with pebbles. Very hard. Some sand lenses 11' - 12' Silty brown clays	No Odors, No PID Moist
12	4	12 - 16	3.5	0	12' - 12.8' Silty brown/reddish clay 12.9' - 14' silty reddish brown clay 14' - 15.5' silty to fine sandy clay with small pebbles. Reddish-Brown. 15.5' - 16' Clayey reddish. Very compact.	Liner shredded No Odors, No PID Moist
16					EOB	

## NOTES:

WOR - Weight of Rods	Proportions	Blows per 1' Compaction	Pocket Pen. (Clays only)	Strata Descriptions	Strata Descriptions (con't)
WOH - Weight of Hammer	And - Equal	0 - 10 - Loose	< 0.5 - Soft	F - Fill	V
BOH - Bottom of Hole	Sandy - 31 - 49%	11 - 29 - Med. Compact	0.5 - 1.0 - Medium	O - Organic Deposits	T
NS - No Split Spoon Sample	Some - 13 - 30%	30 - 50 - Compact	1.0 - 4.0 - Stiff	S - Predominantly Sand	D
S - Split Spoon Sample	Trace - 1 - 12%	> 50 - V. Compact	> 4.0 - Hard	M - Predominantly Silt	R
U - Undisturbed Sample		50/6" - Refusal		C - Predominantly Clay	



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

LFS11-20151022

SURFACE ELEV

\_\_\_\_\_

DATUM

\_\_\_\_\_

SHEET

1 OF 1

SITE LOCATION

Greece, NY

DATE

22-Oct-2015

DRILLER NAME / COMPANY

Empire

MONITORING INSTRUMENTATION

Multi-RAE

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Geoprobe Sample				Sample Description	Remarks
	Sample No.	Sample Depth (ft)	Recov. (ft.)	PID (ppm)		
0	1	0 - 4	4	0	0' - 0.5' Black Silty Soil, organic debris 0.5' - 4.0' Silty brownish/tan clay- crumbles easily	No Odors, No PID dry
4	2	4 - 8	4	0	4.0' - 6.0' Silty brownish/tan clay- crumbles easily 6' - 6.2' Clay rich layer 6.2' - 8' Sander clay with pebble inclusions. Reddish.	No Odors, No PID dry
8					EOB	

## NOTES:

WOR - Weight of Rods

## Proportions

## Blows per 1' Compaction

## Pocket Pen. (Clays only)

## Strata Descriptions

## Strata Descriptions (con't)

WOH - Weight of Hammer

And - Equal

0 - 10 - Loose

&lt; 0.5 - Soft

F - Fill

V

BOH - Bottom of Hole

Sandy - 31 - 49%

11 - 29 - Med. Compact

0.5 - 1.0 - Medium

O - Organic Deposit

T

NS - No Split Spoon Sample

Some - 13 - 30%

30 - 50 - Compact

1.0 - 4.0 - Stiff

S - Predominantly Sand

D

S - Split Spoon Sample

Trace - 1 - 12%

&gt; 50 - V. Compact

&gt; 4.0 - Hard

M - Predominantly Silt

R

U - Undisturbed Sample

50/6" - Refusal

C - Predominantly Clay



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

OF1-20151028

SURFACE ELEV

DATUM

SHEET

1 OF 1

SITE LOCATION

Greece, NY

DATE

28-Oct-2015

DRILLER NAME / COMPANY

Multi-RAE

Empire

MONITORING INSTRUMENTATION

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Geoprobe Sample				Sample Description	Remarks
	Sample No.	Sample Depth (ft)	Recov. (ft.)	PID (ppm)		
0	1	0 - 4	3.2	0	0' - 2' Black Silty Soil, organic debris 2.0' - 3.2' Brown clays	No Odors Wet
4	2	4 - 8	4	0	4' - 8' Brown mottled silty clays	No Odors Wet
8	3	8 - 12	4	0	8' - 9.8' Mottled, brown silty clay 9.8' - 12' Red sandy/silty clay with pebbles. Very hard.	No Odors Wet
12	4	12 - 16	3.8	0	14' - 16' Very wet silty sands- loss of cohesion 16' - 18' silty reddish brown clay- very hard	No Odors Wet
16					EOB	

## NOTES:

WOR - Weight of Rods

Proportions

Blows per 1' Compaction

Pocket Pen. (Clays only)

Strata Descriptions

Strata Descriptions (con't)

WOH - Weight of Hammer

And - Equal

0 - 10 - Loose

&lt; 0.5 - Soft

F - Fill

V

BOH - Bottom of Hole

Sandy - 31 - 49%

11 - 29 - Med. Compact

0.5 - 1.0 - Medium

O - Organic Deposits

T

NS - No Split Spoon Sample

Some - 13 - 30%

30 - 50 - Compact

1.0 - 4.0 - Stiff

S - Predominantly Sand

D

S - Split Spoon Sample

Trace - 1 - 12%

&gt; 50 - V. Compact

&gt; 4.0 - Hard

M - Predominantly Silt

R

U - Undisturbed Sample

50/6" - Refusal

C - Predominantly Clay



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring

OF2-20151028

SURFACE ELEV

\_\_\_\_\_

DATUM

\_\_\_\_\_

SHEET

1 OF 1

SITE LOCATION

Greece, NY

DATE

28-Oct-2015

DRILLER NAME / COMPANY

Empire

MONITORING INSTRUMENTATION

Multi-RAE

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Geoprobe Sample				Sample Description	Remarks
	Sample No.	Sample Depth (ft)	Recov. (ft.)	PID (ppm)		
0	1	0 - 4	3	0	0' - 0.7' Black Silty Soil, organic debris 0.7' - 3' Silty, brown mottled clay	No Odors Moist
4	2	4 - 8	4	0	4' - 8' Brown-grey mottled silty clays	No Odors Moist
8	3	8 - 12	3.8	0	8' - 9.8' Mottled, brown silty clay 9.8' - 10.6' Drier, grey silty clay 10.6' - 12.0' Red silty/sandy clay with pebbles. Very hard.	No Odors Moist
12	4	12 - 16	2'	0	Last 2' Reddish sandy/silty clay - very hard	Liner shredded No Odors Wet
16					EOB	

## NOTES:

WOR - Weight of Rods

Proportions

Blows per 1' Compaction

Pocket Pen. (Clays only)

Strata Descriptions

Strata Descriptions (con't)

WOH - Weight of Hammer

And - Equal

0 - 10 - Loose

&lt; 0.5 - Soft

F - Fill

V

BOH - Bottom of Hole

Sandy - 31 - 49%

11 - 29 - Med. Compact

0.5 - 1.0 - Medium

O - Organic Deposits

T

NS - No Split Spoon Sample

Some - 13 - 30%

30 - 50 - Compact

1.0 - 4.0 - Stiff

S - Predominantly Sand

D

S - Split Spoon Sample

Trace - 1 - 12%

&gt; 50 - V. Compact

&gt; 4.0 - Hard

M - Predominantly Silt

R

U - Undisturbed Sample

50/6" - Refusal

50/6" - Refusal

C - Predominantly Clay



## ENGINEERS FIELD BORING LOG

PROJECT NAME

NYSDEC AFP51

Boring  
SURFACE ELEV

OF3-20151028

DATUM

SHEET 1 OF 1

SITE LOCATION

Greece, NY

DATE

28-Oct-2015

DRILLER NAME / COMPANY

Empire

MONITORING INSTRUMENTATION

Multi-RAE

HDR FIELD INSPECTOR

JCS

Depth (ft.)	Sample No.	Sample Depth (ft)	Geoprobe Sample		Sample Description	Remarks
0	1	0 - 4			0' - 1.4' Poorly sorted clays with fill/debris- Rusty (?) 1.4' - 3.5' Silty brown clay, mottled, varying sand/gravel lenses	No Odors Moist
4	2	4 - 8			0' - 0.7' Brown-grey mottled silty clays 0.7' - 2.4' Poorly sorted, black stain silty/sandy/clay with pebbles. 2.4' - 4.0' Brown silty/sandy clay with pebbles.	Grease Odors Moist
8	3	8 - 12			8' - 10.3' Silty/sandy/clayey layer with pebbles. Very hard. 10.3' - 11' Silty, grey clay- very wet	No Odors Wet
12	4	12 - 16			12' - 14.3' Fine sandy/silt- reddish- very hard 14.3' - 16' Sandy/silty clay- very wet - brownish	No Odors Wet
16					EOB	

## NOTES:

WOR - Weight of Rods

Proportions

Blows per 1' Compaction

Pocket Pen. (Clays only)

Strata Descriptions

Strata Descriptions (con't)

WOH - Weight of Hammer

And - Equal

0 - 10 - Loose

&lt; 0.5 - Soft

F - Fill

V

BOH - Bottom of Hole

Sandy - 31 - 49%

11 - 29 - Med. Compact

0.5 - 1.0 - Medium

O - Organic Deposits

T

NS - No Split Spoon Sample

Some - 13 - 30%

30 - 50 - Compact

1.0 - 4.0 - Stiff

S - Predominantly Sand

D

S - Split Spoon Sample

Trace - 1 - 12%

&gt; 50 - V. Compact

&gt; 4.0 - Hard

M - Predominantly Silt

R

U - Undisturbed Sample

50/6" - Refusal

50/6" - Refusal

C - Predominantly Clay



## **Appendix C:**

## **Test Pit Logs**





# Test Pit Log



# Test Pit Log



## Test Pit Log

						Crew: JCS
						Sheet 1 of 1
Project Name: NYSDEC AFP51			Project No.: 147 258214			
Client: NYSDEC			Date: Start 10/26/2015			
Excavator Type: Cat 308E2 Excavator			Finish 10/26/2015			
Operator: Randy			Final Depth 11'			
Test Pit Location Location: LFS-TP4			Depth to Water: -			
Coordinates:			Surf. Elevation			
Logged By: JCS			Hole Diameter:			
Monitoring Instrument: Mutli-RAE						
PhotoGraph Disk #		Photo #(s)				
Depth (Ft)	Instrument(s) Reading					Description
	PID	O2	H2S	CO	% LEL	
0 - 1	-	-	-	-	-	Soil/organic debris
1 - 3	-	-	-	-	-	Silty-sandy, reddish clay with roots
3 - 5	-	-	-	-	-	Reddish silty clay- Mottled
5 - 7						Reddish silty clay with large cobbles/ small boulders. Sandier at base.
7 - 11						Silty grey, mottled clay
<b>Additional Notes:</b> No infrastructure. No foreign materials or product. Max depth @ 11'. No water inflows noted.						<p>Test Pit Plan</p> <p>20</p> <p>~4</p>



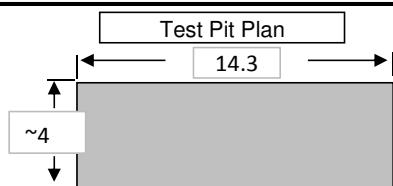
# Test Pit Log

<b>Project Name:</b> NYSDEC AFP51	<b>Project No.:</b> 147	258214
<b>Client:</b> NYSDEC	<b>Date:</b> Start	10/26/2015
<b>Excavator Type:</b> Cat 308E2 Excavator	Finish	10/26/2015
<b>Operator:</b> Randy	<b>Final Depth</b>	11'
<b>Test Pit Location Location:</b> LFS-TP5	<b>Depth to Water:</b>	11'
<b>Coordinates:</b>	<b>Surf. Elevation</b>	
<b>Logged By:</b> JCS	<b>Hole Diameter:</b>	

**Monitoring Instrument: Mutli-RAE**

## Additional Notes:

No infrastructure. No foreign materials or product. Max depth @ 11'. Slow trickle of water inflow noted at base of pit. Empire noted that this was easy digging- little to no compacted sediment/boulders.





## Test Pit Log



# Test Pit Log



## Test Pit Log

						Crew: JCS																		
						Sheet 1 of 1																		
						Project No.: 147 258214																		
						Date: Start 10/27/2015																		
						Finish 10/27/2015																		
						4.5' from top of slab																		
						Final Depth																		
						Depth to Water: -																		
						Surf. Elevation																		
						Hole Diameter:																		
						Monitoring Instrument: Mutli-RAE																		
<table border="1"> <tr> <th>PhotoGraph Disk #</th> <th colspan="5">Photo #(s)</th> </tr> <tr> <th rowspan="2">Depth (Ft)</th> <th colspan="5">Instrument(s) Reading</th> <th rowspan="2">Description</th> </tr> <tr> <th>PID</th> <th>O2</th> <th>H2S</th> <th>CO</th> <th>% LEL</th> </tr> </table>						PhotoGraph Disk #	Photo #(s)					Depth (Ft)	Instrument(s) Reading					Description	PID	O2	H2S	CO	% LEL	
PhotoGraph Disk #	Photo #(s)																							
Depth (Ft)	Instrument(s) Reading					Description																		
	PID	O2	H2S	CO	% LEL																			
0 - 1.5	-	-	-	-	-	Gravel/Asphalt Debris- side of CB-3 exposed.																		
1.5 - 2.5	-	-	-	-	-	Red sands. Rounded pebbles. Fill Material. - Side of CB-3 exposed																		
2.5 - 4.5	-	-	-	-	-	Mottled grey silty clay. Cast Iron and clay tile pipes. - Side of CB-3 exposed.																		
<b>Additional Notes:</b> Testpit next to Building 1 slab. Concrete foundation extends a few feet outwards. Located CB-3 box, next to the foundation and 8' N of Building 8. Box had a metal cover with 1.5' x 2' dimensions. Box has depth of ~3'. Located inside is 12' septic pipe going into building and outwards LF. Also, 6" drain enters box from the south (possible floor drain from Building 8?). Trench outside perpendicular to building. Found smaller clay tile pipe and cast iron pipe trending parallel to building 1, spaced 4' outwards from slab. Debris noted. No PID hits.						<div style="border: 1px solid black; padding: 5px; display: inline-block;">           Test Pit Plan            ~10            5         </div>																		



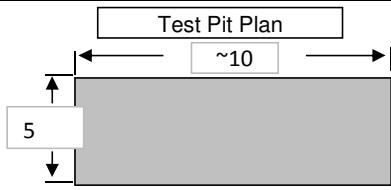
## Test Pit Log



## Test Pit Log

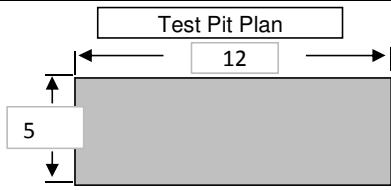


## Test Pit Log

						Crew: JCS
						Sheet 1 of 1
						Project No.: 147 258214
						Date: Start 10/27/2015
						Finish 10/27/2015
						Final Depth 3.5'
						Depth to Water: -
						Surf. Elevation
						Hole Diameter:
						Monitoring Instrument: Mutli-RAE
						PhotoGragh Disk # Photo #(s)
Depth (Ft)	Instrument(s) Reading					Descriptipn
	PID	O2	H2S	CO	% LEL	
0 - 3.5	0.2	-	-	-	-	Red sandy/clayey with roots, concrete pads, 18" stormwater pipe. Alongside of CB-1 South
<b>Additional Notes:</b> Located 18" concrete stormwater pipe entering CB1 infrastructure @ 3.5' below grade, 5' from top of CB1. Concrete pads located above piping, between the pipe and the building. Old poured portions.						

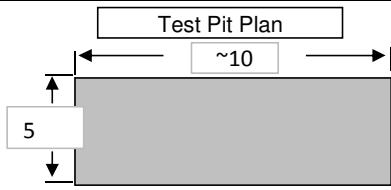


## Test Pit Log

						Crew: JCS
						Sheet 1 of 1
Project Name: NYSDEC AFP51						Project No.: 147 258214
Client: NYSDEC						Date: Start 10/27/2015
Excavator Type: Cat 308E2 Excavator						Finish 10/27/2015
						Final Depth 4.5'
Operator: Randy						Depth to Water: -
Test Pit Location Location: CB-1W						Coordinates: Surf. Elevation
Logged By: JCS						Hole Diameter:
Monitoring Instrument: Mutli-RAE						
PhotoGraph Disk #		Photo #(s)				
Depth (Ft)	Instrument(s) Reading					Description
	PID	O2	H2S	CO	% LEL	
0 - 5	80	-	-	-	-	Red sandy/clayey silt with roots, small boulders, 18" pipe. Alongside of CB-1 North. Red/black staining.
<b>Additional Notes:</b> Located 18" concrete piping, capped inside CB-1, heading N. Black and red staining visible.						

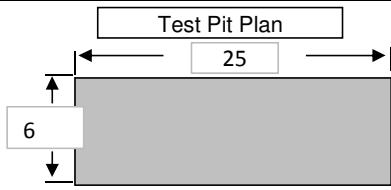


## Test Pit Log

						Crew: JCS
						Sheet 1 of 1
Project Name: NYSDEC AFP51						Project No.: 147 258214
Client: NYSDEC						Date: Start 10/27/2015
Excavator Type: Cat 308E2 Excavator						Finish 10/27/2015
						Final Depth 4.5'
Operator: Randy						Depth to Water: -
Test Pit Location Location: CB-1W						Coordinates: Surf. Elevation
Logged By: JCS						Hole Diameter:
Monitoring Instrument: Mutli-RAE						
PhotoGraph Disk #		Photo #(s)				
Depth (Ft)	Instrument(s) Reading					Description
	PID	O2	H2S	CO	% LEL	
0 - 4.5	62	-	-	-	-	Red sandy/clayey silt with roots, small boulders, 18" stormwater/outfall pipe. Alongside of CB-1 West. Red
<b>Additional Notes:</b> Located 18" concrete stormwater pipe exiting CB-1 infrastructure at 4' below grade. Black and red staining visible						



## Test Pit Log

Project Name: NYSDEC AFP51						Crew: JCS	
						Sheet 1 of 1	
Client: NYSDEC						Project No.: 147 258214	
Excavator Type: Cat 308E2 Excavator						Date: Start 10/27/2015	
						Finish 10/27/2015	
Operator: Randy						Final Depth 5'	
Test Pit Location Location: OF-TP3						Depth to Water: 4'	
Coordinates:						Surf. Elevation	
Logged By: JCS						Hole Diameter:	
Monitoring Instrument: Mutli-RAE							
PhotoGraph Disk #		Photo #(s)					
Depth (Ft)	Instrument(s) Reading					Description	
	PID	O2	H2S	CO	% LEL		
0 - 0.1	-	-	-	-	-	Soil	
0.1 - 4	-	-	-	-	-	Waste Pile. Spent coal, scrap metal, household waste. Roots.	
4 - 5	-	-	-	-	-	Silty brown clay. Slight water ponding. 18" stormwater/outfall pipe.	
<b>Additional Notes:</b> Located 18" concrete stormwater pipe at 4' below grade, 25' S of swale. Noted industrial/household waste present. Copper/spent coal/broken plates/coke bottles located. Strong odors.							

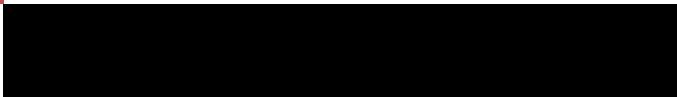


## Test Pit Log

						Crew: JCS
						Sheet 1 of 1
Project Name: NYSDEC AFP51			Project No.: 147 258214			
Client: NYSDEC			Date: Start 10/27/2015			
Excavator Type: Cat 308E2 Excavator			Finish 10/27/2015			
Operator: Randy			Final Depth 5'			
Test Pit Location Location: OF-TP4			Depth to Water: -			
Coordinates:			Surf. Elevation			
Logged By: JCS			Hole Diameter:			
Monitoring Instrument: Mutli-RAE						
PhotoGraph Disk #		Photo #(s)				
Depth (Ft)	Instrument(s) Reading					Description
	PID	O2	H2S	CO	% LEL	
0 - 0.1	-	-	-	-	-	Soil/Roots
0.1 - 5	45.7	-	-	-	-	Silty mottled (red/blue) clay. 18" stormwater/outfall pipe.
<b>Additional Notes:</b> Located 18" concrete stormwater pipe at 5' below grade. 68' S from MW1-8.						<p>Test Pit Plan</p> <p>25</p> <p>6</p>



## **Appendix D: Photo Log**



<b>Client Name/Contract</b> NYSDEC D007625		<b>Site Location:</b> NYSDEC AFP51	<b>Project No.</b> 147-258214
<b>Photo No.</b> 1	<b>Date:</b> 10/27/15	<b>Description</b>  OF-TP2 looking N-NW. 18" stormwater pipe entering below grade retaining wall. Note damaged clay tile pipe entering stormwater pipe at oblique angle.	
			

<b>Photo No.</b> 2	<b>Date:</b> 10/27/15	<b>Description:</b>  OF-TP3 facing W. Scrap metal, spent coal and other miscellaneous debris found in this test pit. 18" stormwater pipe runs perpendicular to N-S trending test pit.	
			

<b>Client Name/Contract</b> NYSDEC D007625		<b>Site Location:</b> NYSDEC AFP51	<b>Project No.</b> 147-258214
<b>Photo No.</b> 3	<b>Date:</b> 10/26/15		
<b>Description:</b> LFS-TP1 facing E. 12" concrete septic line at 4 ft bgs.			

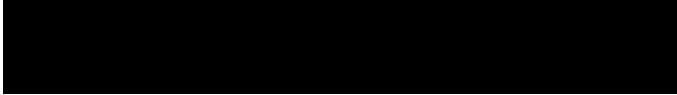
<b>Photo No.</b> 4	<b>Date:</b> 10/27/15		
<b>Description:</b> LFS-TP6 facing SE. Depth of pit is 11 ft. Note wet strata in bottom left corner. Slight inflows noted along SE pit wall and the NE pit end.			



## PHOTOGRAPHIC LOG

<b>Client Name/Contract</b> NYSDEC D007625		<b>Site Location:</b> NYSDEC AFP51	<b>Project No.</b> 147-258214
<b>Photo No.</b> 5	<b>Date:</b> 10/26/15		
<b>Description</b>			
OF-TP1 looking SW. Scrap metal and tarp visible. Metal is coated in an unknown, tar-like substance. Electrical conduits visible in upper left corner of image.			

<b>Client Name/Contract</b> NYSDEC D007625		<b>Site Location:</b> NYSDEC AFP51	<b>Project No.</b> 147-258214
<b>Photo No.</b> 6	<b>Date:</b> 10/26/15		
<b>Description</b>			
LFS-TP5 looking N. Note soil horizons, followed by silty, reddish clay. This transitions to grey clay before reaching a compact, reddish glacial till at the base of the test pit.			



## **Appendix E:**

**Laboratory Data Reports**

**Test America Laboratories Inc.**

**(Provided Separately on CD)**



## **Appendix F:**

### **Data Usability Summary Report (DUSR)**

### **Data Validation Services**

# Data Validation Services

120 Cobble Creek Road P.O. Box 208  
North Creek, NY 12853

Phone 518-251-4429  
[harry@frontiernet.net](mailto:harry@frontiernet.net)

January 15, 2016

Michael Musso  
HDR  
16 Corporate Woods Blvd Suite 204  
Albany, NY 12211

**RE:** Validation of the USAF Plant 51 Site Analytical Data  
NYSDEC Project No. D007625-24  
Data Usability Summary Report (DUSR)  
TAL SDG Nos. 480-89716-1, 480-89717-1, 480-89718-1, 480-90061-1, 480-90062-1, and  
480-90062-2

Dear Mr. Musso:

Review has been completed for the data packages noted above, generated by TestAmerica Laboratories, that pertain to samples collected between 10/21/15 and 10/28/15 at the USAF Plant 51. Five soil samples, one aqueous sample, and an aqueous field duplicate were processed for TCL volatiles, TCL semivolatiles, Aroclor PCBs, TCL pesticides, TAL metals, and total cyanide. The aqueous samples were also processed for dissolved metals. An additional aqueous sample was processed for all of the aforementioned parameters except total cyanide. Ten soil samples and a field duplicate were processed for TCL semivolatiles, TCL PCBs, TAL metals, and total cyanide. Three of these were also processed for TCL pesticides. Two aqueous samples were processed for TCL semivolatiles, TCL PCBs, total and dissolved TAL metals, and total cyanide. One of those was also processed for TCL pesticides, and the other was also processed for TCL volatiles. Two soil samples were processed for TCLP volatiles, TCLP semivolatiles, TCLP pesticides, TCLP herbicides, TCLP metals, flashpoint, reactive cyanide, and reactive sulfide. Sample matrix spikes were processed. The analytical methods that were utilized are those of the USEPA SW846.

The data packages submitted contain full deliverables for validation, but this DUSR is generated from review of the summary form information, with full validation review of sample raw data, and limited review of associated QC raw data. However, the reported summary forms have been reviewed for application of validation qualifiers, using guidance from the USEPA Region 2 validation SOPs, the USEPA National Functional Guidelines for Data Review, the specific laboratory methodologies, and professional judgment. The following items were reviewed:

- \* Laboratory Narrative Discussion
- \* Custody Documentation
- \* Holding Times
- \* Surrogate and Internal Standard Recoveries
- \* Matrix Spike Recoveries/Duplicate Correlations
- \* Field Duplicate Correlations
- \* Equipment, Preparation, and Calibration Blanks
- \* Laboratory Control Samples (LCSs)
- \* Instrumental Tunes
- \* Calibration/Low Level Standards

- \* ICP Serial Dilution
- \* Instrument MDLs
- \* Sample Result Verification

The data review includes evaluation of the specific items noted in The NYS DER-10 Appendix B section 2.0 (c). The items listed above that show deficiencies are discussed within the text of this narrative. The laboratory QC forms illustrating the excursions can be found within the laboratory data packages.

**In summary**, sample processing was primarily conducted in compliance with the analytical protocol requirements. The following concerns are noted:

- Results for 1,4-dioxane are rejected due to low response inherent in the volatile methodology. It is noted that although not required/reported, the samples were processed successfully for that compound in the semivolatile analysis. Those data can be reported at a later date if so desired.
- All dissolved metals data have been qualified as estimated due to delayed preservation (laboratory filtration)
- All aqueous volatile results are qualified as estimated due to outlying holding times resulting from inaccurate laboratory scheduling.
- There is an apparent matrix effect with the metals analyses of some of the samples, most strongly with the aqueous parent sample, resulting in qualification of the affected elements as estimated in the parent sample.

Representativeness, comparability, organic accuracy and precision evaluation, and data completeness are acceptable, with the exception that no volatile matrix accuracy evaluations were performed. Due to the dilutions required by the matrix for some of the analyses, sensitivity is not optimal.

Copies of the validation qualifier definitions and client sample identifications are attached to this text, and should be reviewed in conjunction with this report. Also included with the submission is the client EDD, with validation edits/qualifiers applied in red.

#### **Chain-of-Custody and Sample Receipt**

Almost none of the collection dates on the custody forms included the year of collection. The year was included on most of the relinquish and laboratory receipt dates. It was omitted from the initial relinquish date for samples reported in SDGs 480-89718-1 and 480-90061-1, and the year and time were omitted from the initial relinquish entries for the samples reported in 480-90062-1 and 480-90062-2

Mercury analysis was not requested on the custody form associated with samples reported in SDG 480-98717-1. It was processed and reported.

The edits/strikeovers/scratchouts on the custodies should have been initialed and dated.

Clarifications of analytical requirements and preservation were requested and provided for some of the custody form entries.

#### **Blind Field Duplicates**

Blind field duplicate evaluations were performed on OF-SW-20151028 and LFS-TP6-20151028. Correlations are within guidance limits.

### **TCL and TCLP Volatiles by EPA 82760C**

Although the laboratory case narratives state that the aqueous samples and blanks were collected in certified preserved vials, they were not. The laboratory processed the samples as if they were preserved, and holding times for unpreserved vials were not met. Therefore, the results of those samples have been qualified as estimated in value.

Results for analytes initially reported with the laboratory “E” flag have been derived from the dilution analyses of the samples, thus reflecting responses within the established linear range of the instrument.

The detection of isopropylbenzene in LFS-TP1B-20151026 is qualified as tentative in identification and estimated in value due to poor mass spectral quality.

Due to poor instrument response (RRF) inherent in the methodology, the results for 1,4-dioxane in the samples are rejected and not usable. Other calibrations standards showed acceptable responses, with the exception of that for bromomethane (40%D) in the calibration standard associated with samples reported in 480-89718-1, the results for which are qualified as estimated.

The detections of tetrachloroethene in samples reported in SDG 480-90062-1 are considered external contamination due to presence in the associated blanks, and have been edited to reflect non-detection.

Surrogate and internal standard recoveries are within required ranges. No sample matrix spikes were processed, and the effect of matrix on analyte recovery has therefore not been evaluated.

CB1-SW-20151027 was processed only at dilution due to foaming.

Although Tentatively Identified Compounds (TICs) were noted as a requirement on custody forms, those parameters are not reported for the samples.

### **TCL and TCLP Semivolatiles by EPA 8270C**

The detection of 2,6-dinitrotoluene in CB1-SW-20151027 has been edited to non-detection due to very poor mass spectral quality.

The detections of bis(2-ethylhexyl)phthalate, benzaldehyde, and butylbenzylphthalate in the project samples, and those for pyridine in the TCLP extracts, are considered external contamination due to presence in the associated equipment and/or method blanks, and have been edited to reflect non-detection.

The samples reported in 480-90061-1 were initially extracted with LCSs that both exhibited low recoveries for nine compounds. The samples were reextracted, but beyond the allowable holding time. The initial results are used, but with the following results qualified as estimated: 4-chloro-3-methyl-phenol, acenaphthene, n-nitroso-di-n-propylamine, 2,6-dinitrotoluene, 2-nitroaniline, 4-bromophenyl-phenylether, 4-chlorophenylphenylether, acenaphthylene, and benzaldehyde.

Results for analytes initially reported with the laboratory “E” flag have been derived from the dilution analyses of the samples, thus reflecting responses within the established linear range of the instrument.

Matrix spikes were performed on LFS2-0-4-20151021 and CB1N-20151027. The matrix spike evaluation was reported for only twelve of the target analytes, and shows acceptable recoveries and correlations. Although not one of the twelve, the result for acetophenone in LFS2-0-4-20151021 was flagged by the laboratory as having a recovery below their acceptance range, and that result has therefore been qualified as estimated in that parent sample.

Surrogate and internal standard recoveries are within required range.

The calibration standards show acceptable responses, with the exception of that for benzaldehyde (64%) in the standard associated with samples reported in SDG 480-89718-1. Results for that compound in those samples have been qualified as estimated.

Some of the samples are processed only at dilution due to the target and matrix responses and/or inability to concentrate the extract (due to matrix). This resulted in proportionally elevated reporting limits.

#### **TCL and TCLP Pesticides, TCL PCB Analyses, and TCLP Herbicides by EPA8081, 8082, 8151**

Results for analytes exhibiting elevated dual column quantitative correlations are qualified to reflect the uncertainty in identification and/or quantitation. The values have been either qualified as estimated, qualified as tentative in identification and estimated in value, or edited to reflect non-detection, depending on the degree of variance. Consequently, most of the pesticide detections are edited to non-detection, as suspected matrix interference responses.

Many of the Aroclor detections have been qualified as estimated due to either outlying dual column quantitative correlations or contribution from Aroclor 1268 overlapping congeners to the Aroclor 1260 values.

LFS2-GW-5-15 and LFS3-GW-5-15 show no recovery for surrogate standard DCB in the pesticide analysis. Because the samples were processed at twofold dilution, results are not rejected. However, they are qualified as estimated in value, as some detection of DCB should have been evident.

Both of the TCLP sample herbicide extracts and their associated leaching QC show low surrogate recoveries due to the effect of leachate pH on the herbicide processing. Results for TCLP herbicides in those samples have been qualified as estimated in value.

The matrix spike recoveries and duplicate correlations of Aroclor 1016/1260 in LFS2-0-4-20151021 and LFS2-GW-5-15, and of pesticides in LFS2-GW-5-15 and OF-TP4-20151027 fall within laboratory acceptance ranges.

The following detections are considered external contamination due to presence in the associated blanks, and have been edited to reflect non-detection:

- 4,4'-DDE and endrin aldehyde in OF-SW-20151028
- endrin aldehyde in soil samples reported in SDG 90062-1
- endrin aldehyde and g-chlordane in samples reported in SDG 90062-2

The results for 4,4'-DDT in LFS-TP1B-20151026 and LFS-TP3-20151027 are qualified as estimated due to low responses in the associated calibration standards (23%D and 22%D).

Some of the samples are processed only at dilution, some as high a fifty-fold. This resulted in proportionally elevated reporting limits.

### **TAL and TCLP Metals Analyses by EPA 6010C and 7470/7471**

The filtration of the aqueous samples was performed at the laboratory. All results for dissolved metals are qualified as estimated due to delayed preservation.

The source of the equipment blank was not purified, deionized water, and therefore is not applicable to determine the potential of sample results reflecting external contamination.

The aqueous matrix spikes, performed on LFS2-GW-5-15, show uncharacteristically (atypical of an aqueous medium) numerous outlying recoveries, with only cobalt, thallium, and mercury (of the elements for which the evaluation is applicable) showing acceptable recoveries. The ICP serial dilution evaluation of that sample shows elevated correlations for fifteen of the elements. When combined, the only elements not qualified for matrix effect in that sample are cobalt, thallium, and mercury. All others are qualified as estimated in value, with an unknown direction of bias.

TCLP matrix spikes on LFS-TCLP-COMP-20151027 and OF-TCLP-COMP-20151028 show recoveries and correlations within acceptance ranges/limits.

The other matrix spike/duplicate evaluations show the following recoveries and correlations that fall outside the validation action limits, and results for the listed elements are qualified as estimated in the indicated parent sample:

<u>Parent Sample</u>	<u>Element</u>	<u>Outlying % Recoveries</u>	<u>Outlying % RPD</u>
LFS5-0-4-20151021	Antimony	61 and 60	
	Barium	141 and 157	
	Potassium	190 and 195	
LFS2-0-4-20151021	Antimony	52 and 57	
	Barium	295	51
	Potassium	235 and 188	
	Silver	320 and 565	51
	Zinc	134 and 286	53
	Calcium		88
	Magnesium		49
	Manganese		77
LFS-TP1-20151026	Antimony	60 and 64	
	Barium	263 and 134	
	Magnesium	140 and 133	
	Potassium	261 and 200	
	Manganese		72

The ICP serial dilution evaluations performed on LFS5-0-4-20151021 and LFS2-0-4-20151021 exhibit correlations within the validation action limits. The serial dilution of LFS-TP1-20151026 shows elevated correlations (17%D and 22%D) for aluminum, barium, calcium, chromium, iron, magnesium, manganese, potassium, vanadium, and zinc, results for those elements are qualified as estimated in that parent sample.

Total and dissolved quantitative values correlate well.

Instrument processing was compliant with analytical protocols.

**Wet Chemistry—Total Cyanide by 9012A**

Review was conducted for method compliance, holding times, transcription, calculations, standard and blank acceptability, accuracy and precision, etc., as applicable to each procedure. All were found acceptable for the validated samples, unless noted specifically within this text.

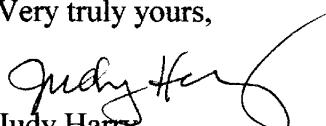
The cyanide analysis of LFS5-0-4-20151021 was performed on day beyond the allowable holding time, and that result has therefore been qualified as estimated.

CB1-SW-20151027 exhibited a detection of cyanide that was about tenfold above the reporting limit. The sample showed no detection in the first analysis, but these runs were not used. The Reanalyses the next day involved edits to the sample IDs. Results for that sample should be used with caution.

Total cyanide matrix spike/duplicates were performed on LFS8-0-2-20151022, LFS2-GW-5-15, LFS2-0-4-20151021, and OF-TP2-20151027. Recoveries and correlations are within action guidelines.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

  
Judy Harry

Att: Validation Qualifier Definitions  
Sample Identifications  
Qualified Client EDD

## VALIDATION DATA QUALIFIER DEFINITIONS

- U** The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
- J** The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
- J-** The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
- J+** The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
- UJ** The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
- NJ** The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.
- R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
- EMPC** The results do not meet all criteria for a confirmed identification. The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.

## **CLIENT and LABORATORY SAMPLE IDs**

## SAMPLE SUMMARY

Client: New York State D.E.C.

Job Number: 480-89716-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-89716-2	LFS8-0-2-20151022	Solid	10/22/2015 0930	10/22/2015 1750
480-89716-4	LFS5-0-4-20151021	Solid	10/21/2015 1600	10/22/2015 1750

## SAMPLE SUMMARY

Client: New York State D.E.C.

Job Number: 480-89717-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-89717-1	LFS1-8-12-20151021	Solid	10/21/2015 1054	10/22/2015 1750
480-89717-2	LFS2-0-4-20151021	Solid	10/21/2015 1128	10/22/2015 1750
480-89717-2MS	LFS2-0-4-20151021	Solid	10/21/2015 1128	10/22/2015 1750
480-89717-2MSD	LFS2-0-4-20151021	Solid	10/21/2015 1128	10/22/2015 1750
480-89717-3	LFS3-0-4-20151021	Solid	10/21/2015 1340	10/22/2015 1750
480-89717-4	LFS3-6-8-20151021	Solid	10/21/2015 1350	10/22/2015 1750
480-89717-5	LFS4-4-8-20151021	Solid	10/21/2015 1500	10/22/2015 1750
480-89717-6	LFS11-0-4-20151022	Solid	10/22/2015 1244	10/22/2015 1750

## SAMPLE SUMMARY

Client: New York State D.E.C.

Job Number: 480-89718-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-89718-1	LFS2-GW-5-15	Water	10/21/2015 1245	10/22/2015 1750
480-89718-1MS	LFS2-GW-5-15	Water	10/21/2015 1245	10/22/2015 1750
480-89718-1MSD	LFS2-GW-5-15	Water	10/21/2015 1245	10/22/2015 1750
480-89718-2	EB-1-20151021	Water	10/21/2015 1655	10/22/2015 1750
480-89718-3	LFS3-GW-5-15	Water	10/21/2015 1430	10/22/2015 1750
480-89718-4	TRIP BLANK	Water	10/21/2015 0000	10/22/2015 1750

## SAMPLE SUMMARY

Client: New York State D.E.C.

Job Number: 480-90061-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-90061-1	CB1-SW-20151027	Water	10/27/2015 1411	10/28/2015 1715
480-90061-2	TB-2	Water	10/28/2015 0000	10/28/2015 1715
480-90061-3	OF-SW-20151028	Water	10/28/2015 1300	10/28/2015 1715
480-90061-4	DUPE 1	Water	10/28/2015 1300	10/28/2015 1715

## SAMPLE SUMMARY

Client: New York State D.E.C.

Job Number: 480-90062-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-90062-1	LFS-TP1A-20151026	Solid	10/26/2015 1200	10/28/2015 1715
480-90062-3	LFS-TP1-20151026	Solid	10/26/2015 1140	10/28/2015 1715
480-90062-5	LFS-TP6-20151028	Solid	10/27/2015 0821	10/28/2015 1715
480-90062-6	DUPE	Solid	10/27/2015 0821	10/28/2015 1715
480-90062-7	LFS-TP8-20151027	Solid	10/27/2015 1147	10/28/2015 1715
480-90062-8	OF-TP2-20151027	Solid	10/27/2015 1357	10/28/2015 1715
480-90062-11	LFS-TCLP-COMP-20151027	Solid	10/27/2015 0000	10/28/2015 1715
480-90062-12	OF-TCLP-COMP-20151028	Solid	10/28/2015 0000	10/28/2015 1715
480-90062-13	OF-TP4-20151027	Solid	10/27/2015 1750	10/28/2015 1715

## SAMPLE SUMMARY

Client: New York State D.E.C.

Job Number: 480-90062-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-90062-1	LFS-TP1A-20151026	Solid	10/26/2015 1200	10/28/2015 1715
480-90062-2	LFS-TP1B-20151026	Solid	10/26/2015 1200	10/28/2015 1715
480-90062-9	CB1N-20151027	Solid	10/27/2015 1600	10/28/2015 1715
480-90062-10	OF-TP3-20151027	Solid	10/27/2015 1626	10/28/2015 1715