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Groundwater Sampling Report (September 2017 Sampling Event) ServAll Laundry Site Site #1-52-077 Work Assignment No. D007626-17.1

Final

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1.0 Introduction

AECOM Technical Services Northeast, Inc. (AECOM) has prepared this Groundwater Monitoring Report for the ServAll Laundry Site (Site) in Bay Shore, New York (Site No. 1-52-077). This work was performed for the New York State Department of Environmental Conservation (NYSDEC) under Work Assignment D007626-17.1. Previous long-term monitoring was performed under Work Assignment D004445-14. As part of the long-term monitoring plan for the Site, groundwater samples are collected from selected monitoring wells once every five quarters. This groundwater monitoring report provides the results of the groundwater sampling data collected in September 2017.

To date, ten sampling events have been conducted under AECOM's long-term monitoring work assignments:

- The first round of samples (Round 1) was collected in June 2006.
- An abbreviated round of groundwater sampling (Round 1A) was conducted in April 2007 to confirm the concentration of tetrachloroethene (PCE) detected in monitoring well MW-6A; samples were collected from monitoring wells MW-4, MW-5, MW-6A and MW-6B.
- The second full round of samples (Round 2) was collected in August 2007.
- The third full round of samples (Round 3) was collected in November 2008.
- The fourth round of samples (Round 4) was collected in February 2010.
- The fifth round of samples (Round 5) was collected in May 2011.
- The sixth round of samples (Round 6) was collected in August 2012.
- The seventh round of samples (Round 7) was collected in November 2013.
- The eighth round of samples (Round 8) was collected in March 2015.
- The ninth round of samples (Round 9) was collected in May 2016.
- The tenth round of samples (Round 10) was collected in September 2017.

2.0 Background Information

2.1 Site Description

The Site is located at 8 Drayton Avenue in Bay Shore, Suffolk County, New York (Figure 1) in a mixed use industrial/residential area. The ServAll Laundry facility was located on a 20,000 square foot property. The ServAll Uniform Rental, Inc. operated as a commercial laundry from 1969 to 1972, and as dry cleaner/laundry from 1972 to 1984. During this time, unknown quantities of wash water overflow containing PCE and heavy metals were pumped to, and occasionally overflowed from, on-Site cesspools.

2.2 Site History

In 1978, the Suffolk County Department of Health Services (SCDHS) conducted an on-Site sampling of cesspools and storm drains. Results from some of the samples showed detections of tetrachloroethene (PCE), trichloroethene (TCE), vinyl chloride, chloroform, methylbenzenes, and a number of Target Analyte List (TAL) metals. ServAll Uniform cleaned the on-Site storm drains and an unknown number of cesspools in 1981 removing sludge and contaminated water.

In 1983, SCDHS performed a groundwater investigation and identified a volatile organics plume southeast of the Site. The plume was found to extend 0.3 miles upgradient from the Suffolk County Water Authority (SCWA) Thomas Avenue Wellfield (located 1 mile south of the Site). The Thomas Avenue Wellfield is located off Thomas Avenue, near the Bay Shore Middle School and northwest of MW-11 (see Figure 2).

A State-funded remedial investigation/feasibility study (RI/FS) was completed at the Site, in which field work was completed from November 1990 through December 1991. The results of the investigation were documented in the final report dated January 1992 (E.C. Jordon Co.). The RI/ FS confirmed the presence of volatile organic compounds (VOCs) in groundwater, delineated the groundwater plume, and quantified on-Site contamination.

The plume is located in the Upper Glacial Aquifer, which consists of coarsely stratified, fine to medium sand with trace amounts of gravel, cobbles, coarse sand, and silt. The aquifer ranges in thickness from 120 feet at the Site to 86 feet 1.5 miles downgradient of the Site. Groundwater flows to the southeast towards Penataquit Creek at about 910 feet per year (ft/year). The RI concluded that the plume appeared to be moving at approximately 443 to 484 ft/year from 1974 to 1988, and 355 ft/year since 1988 (E.C. Jordan, October 1991).

A Record of Decision (ROD) was issued by the NYSDEC for the Site on March 31, 1992. The remedy presented in the ROD was in-situ source soil treatment/source area groundwater extraction. The

ROD stated that treatment of the entire plume emanating from the Site was not found to be practical, and therefore, the selected remedy would not satisfy the statutory preference for complete treatment as a principal element. Determination of the ultimate fate of the untreated portion of the plume was determined by the ROD directed discharge study (ABB Environmental Services, December 1995), which was conducted on the leading edge (hydraulically downgradient) of the plume.

The ROD specified source removal work consisting of a soil vapor extraction (SVE) system. The SVE system was in operation from the Spring of 1996 to the Spring of 1998. The groundwater pump and treat remedial system operated from March 1998 through November 2001. The operation of the remedial system was terminated in November 2001 when NYSDEC determined further operations were not necessary as stated in a letter dated October 18, 2001 from NYSDEC to Earth Tech.

2.3 Deviations from the Site Management Plan

There were no deviations from the Site Management Plan (SMP, AECOM, 2015) during this round of sampling. The field crew was unable to locate MW-2; the area appears to have been paved over (Appendix A). MW-5 could not be sampled as there was insufficient water in the well for the pump to operate properly. MW-12 could not be located; the area appears to have disturbed. A field duplicate was not collected during the Round 10 sampling event.

At the request of NYSDEC, all the monitoring wells were sampled for 1,4-dioxane and perfluorinated compounds during this sampling event. Sampling for perfluorinated compounds required some modifications to the sampling procedures as discussed in Section 3.2.

3.0 Field Activities

The tenth sampling event occurred September 18 through 22, 2017. Several bottles were broken during transport back to the lab. The field crew returned to the Site on September 28, 2017 to resample MW-3A (perfluorinated compounds) and MW-13 (VOCs). Sampling was conducted in accordance with the SMP prepared by AECOM, dated July 2015 (revision 1). In addition to the sampling required in the SMP, samples for perfluorinated compounds and 1,4-dioxane were also collected. All field work was performed in Level D personnel protection. Sampling activities were conducted by Yu & Associates, a subconsultant of AECOM.

3.1 Water Level Survey

Prior to the start of the September 2017 groundwater sampling event, water table measurements were collected from the 13 monitoring wells included in the sampling event. A summary of well data is included on Table 1. Water level measurements were recorded on the NYSDEC Monitoring Well Field Inspection Forms in Appendix A. A summary of groundwater elevations in selected monitoring wells is presented in Table 2. A groundwater contour map was prepared using data from the September 2017 sampling event and is presented in Figure 3. As shown on the map, groundwater flow is to the south-southeast. A groundwater hydrograph is shown on Figure 4. The gradient was calculated for the Site. North of the Southern State Parkway (near the Site), the gradient is approximately 0.0022. At the southern end of the study area (near the Sunrise Highway), the gradient increases to approximately 0.0036. The gradient across the entire study area is 0.00029. These numbers represent fairly shallow gradients.

E.C Jordan (RI/FS Report, 1992) calculated the flow rate at the Site at 2.5 ft/day or 910 ft/year using the following equation:

$$flow\ rate = \frac{\mathrm{K\ (hydaulic\ gradient)}}{n}$$

Where K is the hydraulic conductivity (9.0 x 10^{-2} cm/sec or 255 ft/day and *n* = porosity, 0.30). E.C. Jordan measured the hydraulic gradient at 0.003, yielding a flow rate of 2.5 ft/day or 910 ft/year.

Using the same values for K and *n*, the estimated flow rate for the Site in September 2017 was:

Hydraulic gradient of 0.0022 (northern area) = 1.87 ft/day or 683 ft/year

Hydraulic gradient of 0.0036 (southern) = 3.06 ft/day or 1,117 ft/year

Hydraulic gradient of 0.0029 (study area) = 2.47 ft/day or 900 ft/year

3.2 September 2017 Groundwater Sampling Event

Fourteen monitoring wells were identified for long-term monitoring at the Site. The selected wells included MW-2, MW-3A, MW-3B, MW-4, MW-5, MW-6A, MW-6B, MW-11, MW-12, MW-13, MW-14, MW-16, MW-23S and MW-23D. Each location was photo-documented and a hand-held GPS unit was used to record the coordinates. MW-2 could not be located in the new landscaping/parking lot. There was insufficient water in MW-5 to purge the well during this round and the well was not sampled. The area around monitoring well MW-12 has been disturbed and the well could not be located. MW-1 was included in this sampling round as MW-2, MW-5 and MW-12 could not be sampled.

At the request of NYSDEC, each monitoring well at the Site was sampled for perfluorinated compounds and 1,4-dioxane in addition to VOCs. To comply with sampling protocols for perfluorinated compounds, the Teflon tubing in each well was removed and three casing volumes of water was purged from the well using a centrifugal pump. Low flow sampling techniques were used to collect groundwater samples. A Geotech bladder pump with poly bladder and HDPE tubing were used instead of the usual Teflon bladders and tubing. The flow rate was typically set between 300 and 500 milliliters per minute. Measurements of pH, specific conductance, temperature, oxidation reduction potential, and turbidity were recorded on the Well Sampling Forms during purging at five minute intervals. Well Sampling Forms are provided in Appendix B. A NYSDEC Monitoring Well Field Inspection Log was also completed for each well sampled and is included in Appendix A. The sample was carefully poured into laboratory supplied containers and placed in an ice-filled cooler. At the end of sampling, the HDPE tubing was removed from the well and the Teflon tubing was placed back in the well for the next sampling event. The samples were then transported to Hampton-Clarke Veritech via their courier. Proper chain-of-custody procedures and requirements were maintained throughout the sampling event in accordance with the SMP.

3.3 Site Inspection

In accordance with the SMP, the Site was inspected the week of September 18, 2017 as part of the 5-quarterly sampling event. The Site inspection form is included in Appendix C. The Site is in general disrepair. There is evidence of unauthorized entry into the Site building. The padlock on the side door of the building is missing. The rollup door on the front of the building appears secure. The tenants next door reported observing people entering the ServAll building. Vegetation growth in the back of the building is overgrown and the fence along the back property line is damaged.

4.0 Sampling Results

Groundwater samples were analyzed by Hampton-Clarke Veritech of Fairfield, New Jersey. Samples were analyzed for VOCs using SW-846 Method 8260C and 1,4-dioxane using SW-846 Method 8270D. Perfluorinated compounds analysis was subcontracted to SGS North America; samples were analyzed using modified EPA Method 537. Data packages consisted of a New York State Analytical Services Protocol (NYS ASP) Category A deliverable. As this is a long-term monitoring project, the data were not validated. An AECOM chemist provided a limited review of the data packages for completeness and readily apparent anomalies (see Section 4.4, below). The laboratory Data Summary Packages are in Appendix D.

A summary of the VOC and 1,4-dioxane detections and criteria exceedances is presented in Table 3. A summary of the VOC exceedances is presented on Figure 5. A summary of the perfluorinated compound detections is presented in Table 4. The sampling results are described below in Sections 4.1 and 4.2.

4.1 Volatile Organic Compounds

VOC data for the ten long-term sampling events are summarized in Table 3. VOCs exceedances are shown on Figure 5. During the ten sampling events conducted to date, 17 target compound list VOCs have been detected in the long-term monitoring wells. Of these 17 compounds, only nine have exceeded their Class GA criterion (vinyl chloride, acetone, benzene, methyl tert-butyl ether, cis-1,2-dichloroethene [DCE], 1,1,1-trichloroethane, TCE, PCE, and toluene). Of these nine compounds, only three, cis-1,2- DCE, TCE and PCE, have been detected three or more times in any one monitoring well. These three compounds (as well as 1,1-DCE, 1,1-dichloroethane [DCA] and vinyl chloride) are listed as compounds of concern (COCs) in the ROD (NYSDEC, 1992). Summaries of detections for these three compounds are presented in Figure 6 (PCE), Figure 7 (TCE) and Figure 8 (cis-1,2-DCE). On each of these three figures, monitoring wells were selected based on the presence of the COC at or above its criterion. As shown on Figure 6, PCE has been detected in eight monitoring wells at or above the 5 microgram per liter (µg/L) criterion. TCE concentrations have only exceeded the 5 µg/L criterion in four monitoring wells as shown on Figure 7. Cis-1,2-DCE concentrations have only exceeded the 5 µg/L criterion in six monitoring wells as shown on Figure 8. 1,1-DCE and 1,1-DCA have not been detected above the criterion in any monitoring well during the long-term sampling (2006 through 2017). Vinyl chloride was detected above its criterion (2 µg/L) twice during the ten rounds of sampling, in Round 6 at MW-16 at an estimated concentration of 2.1 µg/L, and in Round 10 at MW-11 at a concentration of 2.5 µg/L.

4.1.1 Upgradient Monitoring Wells

Three monitoring wells, MW-2, MW-3A and MW-3B, are located upgradient of the Site along Drayton Avenue as shown on Figure 2.

Monitoring well MW-2 was not located until the November 2008 sampling event. Benzene was detected above the Class GA criterion of 1 µg/L in monitoring well MW-2 at an estimated concentration of 1.7 µg/L during the November 2008 sampling event. Toluene was also detected at an estimated concentration of 1.4 µg/L (below the Class GA criterion of 5 µg/L). No VOCs were detected during the February 2010 sampling event. PCE was detected at an estimate concentration of 2.1 µg/L during the May 2011 sampling event. No VOCs were detected during the August 2012 or November 2013 sampling events. PCE was detected below the criterion during the March 2015 sampling event. An obstruction in the well prevented the field team from collecting a sample during the May 2016 sampling event. As noted above in Section 3, MW-2 could not be located as the area around the well location had been disturbed which prevented the field team from collecting a sample during this sampling event.

VOCs were not detected in monitoring well MW-3A during any of the first nine long-term monitoring events with one exception. During the August 2012 sampling event, chloroform was detected at an estimated concentration of 0.53 µg/L (Class GA criterion of 7 µg/L). During this sampling event, TCE and PCE were detected at concentrations below the Class GA criterion of 5 µg/L.

MW-3B was not located until the November 2008 Round 3 sampling event. VOCs were not detected in monitoring wells MW-3B during any of the eight long-term monitoring sampling events conducted at the ServAll Site between 2008 and 2017.

4.1.2 Source Area Monitoring Wells

Five monitoring wells are located in and around the ServAll Laundry building. Monitoring well MW-1 is located on the ServAll property. Four monitoring wells, MW-4, MW-5, MW-6A and MW-6B, are located immediately south of the Site along Frederick Avenue. Well locations are shown on Figure 2.

Monitoring Well MW-1 was located during the fourth sampling event and was included in this sampling round. No VOCs were detected during this sampling event. MW-1 was not sampled during May 2011 sampling event. Historically, PCE has been detected above the criterion in each of the five previous sampling events conducted at this location with concentrations ranging from 5.6 µg/L to 50 µg/L. TCE, cis-1,2-DCE, and total xylenes have also been detected at this location but at concentrations below their respective Class GA criteria.

No VOCs have been detected in MW-4 during sampling rounds 1 through 10. The well was not sampled during Round 8 as the field crew mistakenly identified PZ-4 as MW-4. PZ-4 has a damaged well lid and is filled with soil.

MW-5 could not be sampled during Round 10 as there was insufficient water in the well for the pump to operate properly; similar to the situation in Rounds 7 and 9. Estimated concentrations of cis-1,2-DCE (3 µg/L and 2 µg/L) were detected during the June 2006 and April 2007 sampling events (Round 1 and 1A) but have not been detected since. PCE was detected at an estimated concentration of 2 µg/L only during the August 2007 sampling event (less than the Class GA criterion of 5 µg/L). Acetone was detected at a concentration of 170 µg/L (exceeding the Class GA criterion of 50 µg/L) only during the November 2008 sampling event. 2-Butanone was detected only during the November 2008 sampling event at an estimated concentration of 38 µg/L (less than the Class GA criterion of 50 µg/L). During the Round 3 event in November 2008, toluene was detected at a concentration of 1,200 µg/L and was detected again during the February 2010 sampling event at a concentration of 230 µg/L (Class GA criterion of 5 µg/L) but was not detected in May 2011, August 2012 or March 2015.

TCE and PCE were detected during this sampling event at concentrations above their Class GA criteria in monitoring well MW-6A. TCE was detected at a concentration of 22 µg/L (Class GA Criterion of 5 µg/L). The only other detection of TCE was in May 2016 at a concentration of 1.1 µg/L. PCE was detected at a concentration of 11 µg/L (Class GA criterion of 5 µg/L). The only previous detection of PCE occurred during the February 2010 sampling event at an estimated concentration of 1.2 µg/L. During the November 2013, March 2015, and May 2016 sampling events, chloroform was detected at concentrations of 5.7 µg/L, 2.8 µg/L, and 1.8 µg/L, respectively (Class GA criterion of 7 µg/L).

Three VOCs were detected in monitoring well MW-6B above the Class GA criteria. Cis-1,2-DCE was detected above the Class GA criterion of 5 µg/L during nine of ten sampling events (plus the April 2007 confirmation round) at concentrations ranging from 44 µg/L to 210 µg/L. TCE was detected above the Class GA criterion of 5 µg/L during nine of ten sampling events (plus the April 2007 confirmation round) at concentrations ranging from 7.3 µg/L to 85 µg/L. PCE was detected above the Class GA criterion of 5 µg/L during all ten sampling events (plus the April 2007 confirmation round) at concentrations ranging from 23 µg/L to 2,000 µg/L.

4.1.3 Downgradient Monitoring Wells

Five monitoring wells are located downgradient of the Site. Wells MW-12, MW-13 and MW-14 are located along the Southern State Parkway, approximately 3,000 ft south of the Site. Monitoring well MW-11 is located in the Bay Shore Middle School athletic fields. Monitoring well MW-16 is located on Abrew Street, south of the Middle School. Well locations are shown on Figure 2.

MW-12 could not be located during this sampling event. Historically, three VOCs have been detected above the Class GA criterion in monitoring well MW-12. PCE was detected during the previous nine sampling events and six samples exceeded the criterion; concentrations ranged from an estimated 0.8 µg/L to 60 µg/L. 1,2-Dichlorobenzene was detected at a concentration of 9 µg/L (Class GA criterion of 4.7 µg/L) during the June 2006 sampling event only. cis-1,2-DCE was detected in four of nine sampling events but only exceed the Class GA criterion of 5 µg/L during Round 6. Several

compounds including methyl-tert-butyl-ether (MTBE), TCE and chlorobenzene, have been sporadically detected in MW-12 at concentrations below their respective Class GA criteria.

There were no exceedances noted at MW-13 during the Round 10 sampling event. However, PCE was detected at a concentration of 1.3 µg/L (Class GA criterion of 5 µg/L). Historically, the only VOC exceedance at this location was during Round 1 (June 2006) where PCE was detected at a concentration of 5 µg/L during the June 2006 sampling event and at an estimated 1 µg/L during the November 2008 and August 2012 sampling events (Class GA criterion of 5 µg/L). Several compounds, including acetone, MTBE, chloroform, and TCE, have been sporadically detected in MW-13 at concentrations below their respective Class GA criteria.

No VOCs were detected above the Class GA criteria in MW-14 during any of the ten sampling events. PCE was detected at an estimated concentration of 2 µg/L during the August 2007 sampling event. MTBE was detected during the previous six sampling events at concentrations ranging from an estimated 0.81 µg/L to 8 µg/L (Class GA criterion of 10 µg/L).

Monitoring well MW-11 was included in the first sampling event (June 2006). It could not be sampled during the second event (August 2008) due to an obstruction in the well that prevented the pump from being lowered into the water column. The obstruction was cleared from the well during Round 3 (November 2008) which allowed for the collection of a sample. The well was vandalized sometime after the Round 3 event and was not sampled during the next five sampling events (February 2010 through March 2015). The well was properly abandoned in August 2015 and a replacement well was installed. Sampling resumed at MW-11 during Round 9 (May 2016). Five VOCs were detected in MW-11 during the Round 10 sampling event, three of which exceeded the criteria (vinyl chloride, cis-1,2-DCE and PCE). PCE has been detected above the 5µg/L criterion during all four sampling events at MW-11 at concentrations ranging from 18 µg./L to 60 µg/L. cis-1,2-DCE has been detected above the 5 µg/L criterion in three of four sampling events at concentrations ranging from 3 µg/L to 13 µg/L. Vinyl chloride exceeded the 2 µg/L criterion during Round 10 at a concentration of 2.5µg/L; vinyl chloride was only detected once during the three previous sampling events. Historically, toluene exceeded the 5 µg/L criterion during the Round 3 sampling event at a concentration of 63 µg/L; it has not been detected in any other sampling event. MTBE and TCE have been detected in three of four sampling events but the concentrations were all were below their respective criteria. Chlorobenzene was detected during one sampling event at a concentration below its criterion.

Five VOCs were detected at MW-16 during the Round 10 sampling event, three of which exceeded the criteria (MTBE, cis-1,2-DCE and PCE). PCE was detected during nine of ten sampling events at concentrations ranging from an estimate 2 µg/L to 100 µg/L, seven of which exceeded the Class GA criterion of 5 µg/L. cis-1,2-DCE was detected in eight of ten rounds at concentrations ranging from 1.1 µg/L to 20 µg/L, six of which exceeded the criterion. MTBE exceeded the criterion during Rounds 9 and 10 at concentrations of 13 µg/L and 11 µg/L (Class GA criterion is 10 µg/L). MTBE was also detected in three other rounds but at concentrations below the criterion. Vinyl chloride was detected

during this sampling event at a concentration of 1.2 µg/L (Class GA Criterion of 2 µg/L). Vinyl chloride was previously detected in two sampling events at estimated concentrations of 1.2 µg/L and 2.1 µg/L, one of which exceeded the Class GA criterion of 2 µg/L. TCE was detected in seven of ten sampling events at concentrations ranging from an estimated 1.1 µg/L to 16 µg/L, four of which exceeded the Class GA criterion of 5 µg/L. 1,1,1-Trichloroethane (1,1,1-TCA) was detected in three of ten sampling events at concentrations ranging from an estimated 1.7 µg/L to 5 µg/L, with one sample equaling the Class GA criterion of 5 µg/L. Two other VOCs, 1,1-dichloroethene and acetone, have been sporadically detected in samples from MW-16 but at concentrations below their Class GA criteria.

4.1.4 Sentinel Monitoring Wells

Two monitoring wells, MW-23S and MW-23D, are located south of the Sunrise Highway on Perkel Street, approximately 7,600 ft south of the Site.

Three VOCs were detected in monitoring well MW-23S above the Class GA criteria during Round 10. PCE was detected above the Class GA criterion of 5 µg/L during all ten sampling events at concentrations ranging from 390 µg/L to 5,200 µg/L. cis-1,2-DCE has been detected above the Class GA criterion of 5 µg/L during eight of ten sampling events at concentrations ranging from 12 µg/L to 360 µg/L. TCE was detected above the Class GA criterion of 5 µg/L during eight of ten sampling events at concentrations ranging from 5.4 µg/L to 220 µg/L. MTBE has been detected in six previous sampling events but at concentrations equal to, or below, the criterion. Five other VOCs, including 1,1-DCE, trans-1,2-DEC, 1,1-dichloroethane, and 1,1,1-TCA, have been sporadically detected in samples from MW-23S at concentrations below their respective Class GA criterion.

Three VOCs were detected above the Class GA criteria during Round 10 at MW-23D. PCE has been detected during all ten sampling events at concentrations ranging from an estimated 4 µg/L to 280 µg/L, nine of which exceeded the 5 µg/L criterion. Cis-1,2-DCE was detected during the last six sampling events at concentrations ranging from an estimated 3 µg/L to 10 µg/L, five of which exceeded the 5 µg/L criterion. TCE was detected during the last six sampling events at concentrations ranging from an estimated 1.2 µg/L to 9.8 µg/L, four of which were at or above the 5 µg/L criterion. MTBE was detected in MW-23D at concentrations below the Class GA criteria during the last five rounds.

4.2 1,4-Dioxane and Perfluorinated Compounds

At the request of NYSDEC, all 12 monitoring wells sampled during Round 10 were analyzed for 1,4-dioxane and perfluorinated compounds.

1,4-Dioxane was detected in four monitoring wells: MW-14 at a concentration of 1,700 nanograms per liter (ng/L), MW-11 at a concentration of 1,600 ng/L, MW-16 at a concentration of 2,000 ng/L and MW-23D at a concentration of 990 ng/L. All four concentrations exceed the EPA Health Advisory limit of 350 ng/L.

Groundwater samples from all 12 monitoring wells were analyzed for 20 perfluorinated compounds, of which 19 were detected in at least one monitoring well. Perfluorinated compounds were detected in all 12 monitoring wells. MW-6B was the only location where individual concentrations of PFOA (83.1 ng/L) and PFOS (150 ng/L) exceeded the EPA Health Advisory value of 70 ng/L. A summary of the detections is shown in Table 4.

4.3 Round 10 (September 2017) Data Quality Review

In accordance with the project plans, data generated for this investigation were not subject to formal validation. However, AECOM's quality assurance officer (QAO) reviewed the data for reasonableness and the presence of any anomalies, including issues identified by the laboratory in the case narrative, and other items noted in review of shipping and handling documentation, inconsistencies with previous data, and review of the laboratory quality assurance (QA) forms.

Volatiles (EPA Method 8260C)

Samples from 12 monitoring wells were prepared by SW-846 method 5030C and analyzed for target compound list (TCL) VOCs by SW-846 method 8260C and reported in three sample delivery groups (SDG) , 7092010, 7092222, 7092933. SDG 7092933 included two sample collected to correct missing analyses from the initial samples (PFAs for MW-3A, and VOCs for MW-13). One trip blank was collected and submitted for VOC analysis. One field rinsate blank sample was collected. Sample MW-6B was designated as the quality control (QC) sample (matrix spike and matrix spike duplicate [MS/MSD] analysis) for the Round 10 sampling event. No field duplicate sample was collected for Round 10.

Samples were collected on September 19, 22, and 28, 2017. Samples were received in good condition at the lab on September 20, 22, and 29, 2017. Samples were properly preserved (pH ≤ 2) and properly cooled (temperature between 0° and 6° C).

The laboratory did not flag any of the analytical results. Laboratory QC limits for the organic analysis were met for initial and continuing calibrations, and method blanks. No target or non-target compounds were detected in the trip blank or equipment blank.

In SDG 7092010 (which included two batches), recoveries were outside of criteria for the MW-6B MS/MSD (for four and seven compounds, and for 28 and 15 compounds respectively) and the laboratory control sample (LCS) (for seven and three compounds). The relative percent difference (RPD) for the MS/MSD results exceeded criteria in one case for chloroethane.

In SDG 7092222 (which included two batches) recoveries were outside of criteria for the MW-6B MS/MSD, (for 9 and 12 compounds, and 11 and 5 compounds respectively) and the LCS (for 9 compounds and 14 compounds). The RPD for the MS/MSD results exceeded criteria in 7 and 23 cases.

In SDG 7092933 recoveries were outside of criteria for the MW-6B MS/MSD for 4 and 6 compounds; (duplicate for MW-6B), and the LCS (for three compounds. The RPD for the MS/MSD results exceeded criteria in eight cases.

Due to high concentrations (exceeding the calibration range) of one target compound (PCE), one sample (MW-23S) required dilution at a dilution factor of 5.

Method 8270 modified for 1,4 dioxane.

Samples from 12 monitoring wells were analyzed for 1,4-dioxane using modified Method 8270. The laboratory did not flag any of the analytical results. Laboratory QC limits for 1,4-dioxane were met for initial and continuing calibrations, and blanks. No 1,4-dioxane was detected in the equipment rinsate blank. The MS/MSD and LCS recoveries for 1,4-dioxane were within limits.

In SDG 7092010 and 7092222, the RPDs for the MSD slightly exceeded the criterion of 20% with a RPD of 21%.

Method 537 v. 1.1 for Perfluorinated Alkyl Acids (PFAs)

Samples from 12 monitoring wells were analyzed for Perfluorinated Alkyl Acids (PFAs) using Method 537 v. 1.1. This method reports twenty compounds, all classified as PFAs. Each analysis includes three surrogates.

In SDG 7092010, between one to five results in each sample were flagged “J” for estimated for results between the detection limit and the reporting limit. The narrative states that “Surrogate standard d5-NEtFOSAA shows poor extraction efficiency in all samples and associated QC samples. Associated analyte results may be estimated.” In addition, four compounds exceeded recovery criteria in the LCS, while five compounds exceeded recovery criteria in the MS/MSD. RPDs in the MSD were all within criteria. The method blank contained 0.203 ng/L of PFOA.

In SDG 7092222, between 1 to 11 results in each sample were flagged “J” for estimated for results between the detection limit and the reporting limit. The narrative states that “Surrogate standard d5-NEtFOSAA shows poor extraction efficiency in all samples and associated QC samples. Associated analyte results may be estimated.” In addition, two compounds exceeded recovery criteria in the LCS, the method blank contained 0.203 ng/L of PFOA.

In SDG 7092933, six results in each sample were flagged “J” for estimated for results between the detection limit and the reporting limit.

The method blank contained no detectable PFAs.

5.0 Summary and Recommendations for Future Site Remediation Activities

5.1 Summary of VOCs

Three monitoring wells are located upgradient of the Site: MW-2, MW-3A and MW-3B (Figure 2). Monitoring well MW-2 was sampled for the first time during November 2008 and a slight exceedance of benzene was noted; there were no further exceedances noted in the next five sampling events. MW-2 was not sampled during Round 9 due to an obstruction in the well and could not be located during this round. No VOCs exceedances have been reported at MW-3A; PCE and TCE were detected during Round 10 at concentrations below the Class GA criteria. Chloroform was detected during Round 6 at a concentration below the Class GA criterion. No VOCs have been detected in MW-3B during any of the eight sampling rounds (MW-3B was first sampled during the November 2008 Round 3 sampling event).

Monitoring well MW-1 is the only on-Site well. It has been sampled six times during the nine long-term sampling events. PCE has exceeded the Class GA criterion of 5 µg/L in five of the six events at concentrations ranging from 5.6 µg/L to 50 µg/L. Concentrations of cis-1,2-dichloroethene, TCE and total xylenes have been noted but at concentrations below their respective Class GA criteria.

Four monitoring wells are located immediately downgradient of the Site: MW-4, MW-5, MW-6A and MW-6B. No VOCs have been noted in MW-4. No exceedances (other than toluene and acetone which were attributed to laboratory artifacts) have been noted in MW-5 during eight rounds of sampling (MW-5 was not sampled during rounds 7, 9 and 10 as there was insufficient water to operate the pump). Prior to Round 10, there were no exceedances of VOCs in MW-6A (deep monitoring well). During Round 10 both PCE and TCE were detected at concentrations above the Class GA criteria.

Exceedances of PCE, TCE and cis-1,2-dichloroethene have been noted at shallow monitoring well MW-6B during the ten rounds of long-term monitoring (plus the confirmation round in April 2007). A summary of historic PCE concentration data for selected monitoring wells is shown on Table 6. The data presented on this table is a compilation of data available for review during the preparation of this report. A graph of the historic PCE concentrations is also illustrated on Figure 9. Prior to the implementation of remedial measures, the PCE concentration at MW-6B was as high as 14,000 µg/L. As noted in Section 2, the groundwater pump and treat system began operation in 1998 and by July 2000, the PCE concentration had decreased to 160 µg/L. The treatment system was shut down in 2001. PCE concentrations rebounded during the June 2006 event (1,100 µg/L), then decreased by more than half for 2007 and 2008. The concentration then rebounded to 2,000 µg/L in February 2010, then dropped back to 23 µg/L by August 2012 and spiked to 1,500 µg/L in the November 2013 event

and was at 1,200 µg/L in the March 2015 sampling event. The concentration had decreased significantly during Round 9 to 330 µg/L and remained fairly constant at 340 µg/L during Round 10.

Three of the monitoring wells sampled as part of the long-term monitoring program are located approximately halfway between the Site and the Bay Shore Middle School (MW-12, MW-13 and MW-14) along the Southern State Parkway. PCE was detected above the criterion in MW-12 in each event between 2006 and 2010 at concentrations ranging from 10 µg/L to 60 µg/L, but was detected below the criterion (at 1.6 µg/L, 0.80 µg/L and 2.4 µg/L) in the May 2011, August 2012 and November 2013 sampling events. The concentrations in the March 2015 event (10 µg/L) and May 2016 event (13 µg/L) both exceeded the criterion, extending the plume to the south as shown in Figures 10F and 10G; MW-12 could not be located during the September 2017 sampling event. PCE was detected at the criterion in MW-13 during the June 2006 sampling event; it has been below the criterion or not detected during the last nine sampling rounds. PCE has not been detected above the criterion in monitoring wells MW-14 during the previous ten sampling events.

Of the two monitoring wells near the Bay Shore Middle School, the PCE concentrations at MW-11 were 56 µg/L and 60 µg/L for the June 2006 and November 2008 sampling events (an obstruction prevented the collection of a sample in August 2007 through March 2015) and 28 µg/L and 18 µg/L during the May 2016 and September 2017 sampling events. At MW-16, the other well near the school, the concentrations of VOCs have all decreased significantly since the August 2012 sampling event. The concentrations of vinyl chloride, cis-1,2-DCE, TCE and PCE all exceeded the criterion in August 2012; however, the concentrations of these four VOCs all dropped to below their respective criteria in November 2013 and were not detected in March 2015. The concentrations of PCE and cis-1,2-DCE rose during the May 2016 event and both now exceed the criterion. A bar chart of the PCE concentrations at MW-11 and MW-16 for the nine long-term sampling events is shown on Figure 6.

The two most downgradient monitoring wells, MW-23S and MW-23D, are located south of the Sunrise Highway (Figure 2). As shown on Figure 9, PCE concentrations in MW-23S spiked in June 2006 (5,200 µg/L), then decreased by an order of magnitude by November 2008 (500 µg/L). PCE concentrations increased over the next four sampling rounds peaking at 2,500 µg/L in November 2013. The concentration decreased to 390 µg/L during the March 2015 event then rose significantly to 2,300 µg/L during the most recent event. PCE concentrations in MW-23D have been increasing since 2004 (0.6 µg/L) through November 2013 (130 µg/L) decreased slightly during the March 2015 event (110 µg/L) and continued to rise during the May 2016 event (170 µg/L).

Isoconcentration maps were prepared for PCE and are shown on Figure 10A (June 2006 data), Figure 10B (November 2008 data), Figure 10C (May 2011 data), Figure 10D (August 2012 data), Figure 10E (November 2013 data), Figure 10F (March 2015), Figure 10G (May 2016) and Figure 10H (September 2017). As shown on these maps, the PCE plume appears to have separated into two non-contiguous plumes starting with the May 2011 sampling event and continuing through the March 2015 sampling event: one near the Site and a second centered near MW-23S (immediately south of

the Sunrise Highway). PCE concentrations in wells near the Site appear to be increasing at MW-6B as is the PCE concentration in MW-12 (adjacent to the Southern State Parkway). Further downgradient, near the Bay Shore High School, the PCE concentrations appear to be increasing during the latest sampling event at MW-16 and MW-23D.

TCE has been detected above the Class GA criterion of 5 µg/L in four monitoring wells: MW-6B, MW-16, MW-23S and MW-23D. A graph of the TCE concentrations for these four wells is shown on Figure 7.

Cis-1,2-DCE has been detected above the Class GA criterion of 5 µg/L in six monitoring wells, MW-6B, MW-12, MW-16, MW-23S and MW-23D. As shown on Figure 8, there does not appear to be any discernible trend in concentration.

Perfluorinated compounds were detected in all 12 wells included in the Round 10. Only one location, MW-6B, had concentrations of individual compounds (PFOA and PFOS) that exceeded the 70 ng/L criterion.

1,4-Dioxane was not detected in the two upgradient monitoring wells or the four source area monitoring wells included in this sampling event. However, concentrations did exceed the 350 ng/L criterion in three downgradient monitoring wells and one sentinel monitoring well.

5.2 Future Recommendations

Future recommendations for the ServAll Laundry Site are continued monitoring of selected monitoring wells for VOCs.

Monitoring well MW-5 could not be sampled during this round as there was insufficient water to operate the pump. This was also the case during the January 2013 and May 2016 sampling events. MW-2 could not be located during this sampling event. An obstruction prevented sampling during the May 2016 sampling round. An effort will be made to locate this well and remove the obstruction before the next sampling event. MW-12 could not be located. The area appears to have been disturbed since the last sampling round. An effort will be made to locate this well before the next sampling event.

Shallow monitoring well MW-6B was the only location with exceedances of PFOA and PFOS. Perfluorinated compounds do not appear to be an issue at the Site.

1,4-Dioxane does not appear to be Site related as it was not detected in source area monitoring wells. The nearest monitoring wells to the Site with exceedances are along the Southern State Parkway.

Monitoring well MW-1 should be included in future long-term sampling events.

The next round of groundwater sampling is scheduled for November 2018.

Tables

TABLE 1
SERVALL LAUNDRY SITE (1-52-077)
MONITORING WELL DATA

Well ID	NY State Plane Coordinates[1]		Well Screen Depth (ft bgs)	Top of Riser Elevation[1]	Comments
	Northing	Easting			
MW-1	193,973.43	2,204,502.95	76.5 - 86.5	64.79	Behind Servall Building
MW-2	194,178.63	2,204,535.21	71.8 - 81.8	64.47	Well could not be located prior to the November 2008 event
MW-3A	194,188.77	2,204,423.40	110.0 - 120.0	64.37	Well could not be located prior to the November 2008 event
MW-3B	198,189.80	2,204,411.51	78.0 - 88.0	64.54	West of the building on the north side of Drayton Avenue
MW-4	193,713.55	2,204,672.09	74.0 - 84.0	63.11	On north side of Frederick Avenue
MW-5	193,738.12	2,204,418.09	74.0 - 84.0	64.06	On north side of Frederick Avenue
MW-6A	193,723.62	2,204,573.71	53.0 - 63.0	63.87	On north side of Frederick Avenue
MW-6B	193,722.77	2,204,566.29	25.0 - 35.0	63.83	On north side of Frederick Avenue
MW-7	193,247.00	2,204,841.62	102.0 - 112.0	60.79	Well appears to be missing
MW-8	192,291.45	2,205,304.27	94.0 - 104.0	54.6	Well appears to be missing
MW-9	189,214.07	2,206,683.24	78.0 - 88.0	40.91	Well appears to have been paved over or removed
MW-10	188,924.35	2,207,905.95	78.7 - 88.7	40.22	Well appears to be missing
MW-11	188,889.82	2,207,272.76	80.0 - 90.0	37.07	In grass on field at Bay Shore Middle School
MW-12	191,051.70	2,205,475.34	78.8 - 88.8	50.61	In woods along Southern State Parkway near light pole
MW-13	190,990.06	2,205,989.11	88.0 - 98.0	50.33	In woods along Southern State Parkway near light pole
MW-14	191,009.26	2,206,506.46	83.3 - 93.3	49.98	In woods along Southern State Parkway near light pole
MW-15	190,264.25	2,206,372.05	87.0 - 97.0	48.78	Well appears to be missing
MW-16	188,111.44	2,207,779.29	84.0 - 94.0	36.50	South side of Abrew Street in roadway
MW-23S	187,099.54	2,208,295.49	66.0 - 69.0	24.38	In roadway on Cul-de-sac on Perkel Street
MW-23D	187,101.72	2,208,276.17	83.0 - 88.0	24.45	In roadway on Cul-de-sac on Perkel Street

Bolded monitoring wells are severely damaged and require repairs to the road box

1 - Coordinates and elevations taken from E.C. Jordan RI/FS Report, January 1992 and ABB Plume Discharge Study, December 1995.

TABLE 2
SERVALL LAUNDRY SITE (SITE 1-52-077)
GROUNDWATER ELEVATIONS

Well #	Reference Elevation	Date	Depth To Water	Water Table Elevation	Comments
MW-1	64.79	2/1/10	22.87	41.92	February 2010 sampling event
		5/9/11			not collected
		8/20/12	24.65	40.14	August 2012 sampling event
		11/11/13	26.42	38.37	November 2013 sampling event
		3/23/15	23.14	41.65	March 2015 sampling event
		5/9/16	25.31	39.48	May 2016 sampling event
		9/18/17	25.41	39.38	September 2017 sampling event
MW-2	64.47	6/6/06	--	--	could not locate
		8/20/07	--	--	could not locate
		11/11/08	23.82	40.65	November 2008 sampling event
		2/1/10	22.27	42.20	February 2010 sampling event
		5/9/11	23.19	41.28	May 2011 sampling event
		8/20/12	24.00	40.47	August 2012 sampling event
		11/11/13	25.72	38.75	November 2013 sampling event
		3/23/15	23.14	41.33	March 2015 sampling event
		5/9/16	24.76	39.71	May 2016 sampling event
		9/18/17			could not locate the well
MW-3A	64.37	6/6/06	20.68	43.69	June 2006 sampling event
		8/20/07	22.00	42.37	August 2007 sampling event
		11/11/08	23.61	40.76	November 2008 sampling event
		2/1/10	22.07	42.30	February 2010 sampling event
		5/9/11	23.02	41.35	May 2011 sampling event
		8/20/12	23.81	40.56	August 2012 sampling event
		11/11/13	25.60	38.77	November 2013 sampling event
		3/23/15	22.75	41.62	March 2015 sampling event
		5/9/16	24.57	39.80	May 2016 sampling event
		9/21/17	25.96	38.41	September 2017 sampling event
MW-3B	64.54	6/6/06	--	--	could not locate
		8/20/07	--	--	could not locate
		11/11/08	23.81	40.73	November 2008 sampling event
		2/1/10	22.29	42.25	February 2010 sampling event
		5/9/11	23.20	41.34	May 2011 sampling event
		8/20/12	24.02	40.52	August 2012 sampling event
		11/11/13	25.80	38.74	Nov 2013 sampling event, <0.5 ft of water
		3/23/15	22.90	41.64	March 2015 sampling event
		5/9/16	24.78	39.76	May 2016 sampling event
		9/21/17	26.02	38.52	September 2017 sampling event

TABLE 2
SERVALL LAUNDRY SITE (SITE 1-52-077)
GROUNDWATER ELEVATIONS

Well #	Reference Elevation	Date	Depth To Water	Water Table Elevation	Comments
MW-4	63.11	6/16/06	20.34	42.77	June 2006 sampling event
		8/20/07	21.50	41.61	August 2007 sampling event
		11/11/08	23.35	39.76	November 2008 sampling event
		2/1/10	21.77	41.34	February 2010 sampling event
		5/9/11	22.57	40.54	May 2011 sampling event
		8/20/12	24.13	38.98	August 2012 sampling event
		11/11/13	25.21	37.90	November 2013 sampling event
		3/23/15	NA		well cap is missing
		5/9/16	24.16	38.95	May 2016 sampling event
		9/19/17	24.53	38.58	September 2017 sampling event
MW-5	64.06	6/15/06	20.98	43.08	June 2006 sampling event
		8/20/07	22.20	41.86	August 2007 sampling event
		11/11/08	23.99	40.07	November 2008 sampling event
		2/1/10	22.42	41.64	February 2010 sampling event
		5/9/11	23.29	40.77	May 2011 sampling event
		8/20/12	23.47	40.59	August 2012 sampling event
		11/11/13	25.94	38.12	November 2013 sampling event
		3/23/15	22.92	41.14	March 2015 sampling event
		5/9/16	24.03	40.03	May 2016 sampling event
		9/19/17	25.64	38.42	September 2017 sampling event
MW-6A	63.87	6/15/06	20.93	42.94	June 2006 sampling event
		8/20/07	22.41	41.46	August 2007 sampling event
		11/11/08	24.01	39.86	November 2008 sampling event
		2/1/10	22.49	41.38	February 2010 sampling event
		5/9/11	23.28	40.59	May 2011 sampling event
		8/20/12	24.15	39.72	August 2012 sampling event
		11/11/13	25.87	38.00	November 2013 sampling event
		3/23/15	22.89	40.98	March 2015 sampling event
		5/9/16	24.78	39.09	May 2016 sampling event
		9/18/17	25.26	38.61	September 2017 sampling event
MW-6B	63.83	6/15/06	20.89	42.94	June 2006 sampling event
		4/20/07	20.50	43.33	April 2007 confirmation sampling event
		8/20/07	22.16	41.67	August 2007 sampling event
		11/11/08	23.95	39.88	November 2008 sampling event
		2/1/10	22.36	41.47	February 2010 sampling event
		5/9/11	23.62	40.21	May 2011 sampling event
		8/20/12	24.17	39.66	August 2012 sampling event
		11/11/13	25.89	37.94	November 2013 sampling event
		3/23/15	22.82	41.01	March 2015 sampling event
		5/9/16	24.84	38.99	May 2016 sampling event
		9/18/17	25.05	38.78	September 2017 sampling event

TABLE 2
SERVALL LAUNDRY SITE (SITE 1-52-077)
GROUNDWATER ELEVATIONS

Well #	Reference Elevation	Date	Depth To Water	Water Table Elevation	Comments
MW-11	37.07	6/8/06	8.80	28.27	June 2006 sampling event
		8/20/07	6.57	30.50	August 2007 sampling event
		11/11/08	10.13	26.94	November 2008 sampling event
		2/1/10	9.13	27.94	February 2010 sampling event
		5/9/11	NA		vandalized, filled with debris
		8/20/12	NA		vandalized, filled with debris
		11/11/13	NA		vandalized, filled with debris
		3/23/15	NA		vandalized, filled with debris
		5/9/16	10.16	26.91	May 2016 sampling event
		9/21/17	11.02	26.05	September 2017 sampling event
MW-12	50.61	6/15/06	14.15	36.46	June 2006 sampling event
		8/20/07	15.42	35.19	August 2007 sampling event
		11/11/08	16.74	33.87	November 2008 sampling event
		2/1/10	15.14	35.47	February 2010 sampling event
		5/9/11	15.60	35.01	May 2011 sampling event
		8/20/12	16.62	33.99	August 2012 sampling event
		11/11/13	18.41	32.20	November 2013 sampling event
		3/23/15	14.91	35.70	March 2015 sampling event
		5/9/16	17.02	33.59	May 2016 sampling event
		9/18/17			could not locate the well
MW-13	50.33	6/15/06	18.51	31.82	June 2006 sampling event
		8/20/07	15.87	34.46	August 2007 sampling event
		11/11/08	17.10	33.23	November 2008 sampling event
		2/1/10	15.54	34.79	February 2010 sampling event
		5/9/11	15.97	34.36	May 2011 sampling event
		8/20/12	16.93	33.40	August 2012 sampling event
		11/11/13	18.71	31.62	November 2013 sampling event
		3/23/15	15.20	35.13	March 2015 sampling event
		5/9/16	17.31	33.02	May 2016 sampling event
		9/20/17	17.56	32.77	September 2017 sampling event
MW-14	49.98	6/15/06	15.01	34.97	June 2006 sampling event
		8/20/07	16.26	33.72	August 2007 sampling event
		11/11/08	17.29	32.69	November 2008 sampling event
		2/1/10	15.84	34.14	February 2010 sampling event
		5/9/11	16.25	33.73	May 2011 sampling event
		8/20/12	17.14	32.84	August 2012 sampling event
		11/11/13	18.99	30.99	November 2013 sampling event
		3/23/15	15.41	34.57	March 2015 sampling event
		5/9/16	17.53	32.45	May 2016 sampling event
		9/20/17	18.26	31.72	September 2017 sampling event

TABLE 2
SERVALL LAUNDRY SITE (SITE 1-52-077)
GROUNDWATER ELEVATIONS

Well #	Reference Elevation	Date	Depth To Water	Water Table Elevation	Comments
MW-16	36.50	6/15/06	10.52	25.98	June 2006 sampling event
		8/20/07	12.76	23.74	August 2007 sampling event
		11/11/08	12.35	24.15	November 2008 sampling event
		2/1/10	11.52	24.98	February 2010 sampling event
		5/9/11	11.68	24.82	May 2011 sampling event
		8/20/12	11.82	24.68	August 2012 sampling event
		11/11/13	13.35	23.15	November 2013 sampling event
		3/23/15	10.89	25.61	March 2015 sampling event
		5/9/16	12.24	24.26	May 2016 sampling event
		9/20/17	13.05	23.45	September 2017 sampling event
MW-23S	24.38	6/8/06	5.25	19.13	June 2006 sampling event
		8/20/07	6.22	18.16	August 2007 sampling event
		11/11/08	6.09	18.29	November 2008 sampling event
		2/1/10	5.78	18.60	February 2010 sampling event
		5/9/11	5.62	18.76	May 2011 sampling event
		8/20/12	5.61	18.77	August 2012 sampling event
		11/11/13	6.60	17.78	November 2013 sampling event
		3/23/15	5.25	19.13	March 2015 sampling event
		5/9/16	5.85	18.53	May 2016 sampling event
		9/19/17	6.72	17.66	September 2017 sampling event
MW-23D	24.45	6/8/06	5.15	19.30	June 2006 sampling event
		8/20/07	6.14	18.31	August 2007 sampling event
		11/11/08	6.00	18.45	November 2008 sampling event
		2/1/10	5.62	18.83	February 2010 sampling event
		5/9/11	5.67	18.78	May 2011 sampling event
		8/20/12	5.56	18.89	August 2012 sampling event
		11/11/13	6.52	17.93	November 2013 sampling event
		3/23/15	5.36	19.09	March 2015 sampling event
		5/9/16	5.78	18.67	May 2016 sampling event
		9/19/17	6.62	17.83	September 2017 sampling event

All measurements and elevations are in feet, MSL.
All measurements were taken from the top of PVC casing.

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
Sample ID	Class GA	Can't	Can't	SL-MW-2	SL-MW-2	SL-MW-2	SL-MW-2	SL-MW-2	SL-MW-2	SL-MW-2	SL-MW-2
Laboratory ID	Ground	Locate	Locate	G2115-14	J0196-06	K0834-09	L1786-11	AC75681-003	AC83904-009		
Sample Date	Water	6/6/06	8/21/07	11/14/08	2/4/10	5/11/11	08/22/12	11/12/13	3/23/15	5/11/16	9/22/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	NA	NA	ND	ND	ND	ND	ND	ND	an	the well
1,1-Dichloroethene	5	NA	NA	ND	ND	ND	ND	ND	ND	obstruction	could not
Acetone	50	NA	NA	ND	ND	ND	ND	ND	ND	in the well	be located,
Benzene	1	NA	NA	***1.7 J***	ND	ND	ND	ND	ND	prevented	the area was
2-Butanone	50	NA	NA	ND	ND	ND	ND	ND	ND	sampling	recently
trans-1,2-Dichloroethene	5	NA	NA	ND	ND	ND	ND	ND	ND		repaved
Methyl tert-butyl ether	10	NA	NA	ND	ND	ND	ND	ND	ND		
1,1-Dichloroethane	5	NA	NA	ND	ND	ND	ND	ND	ND		
cis-1,2-Dichloroethene	5	NA	NA	ND	ND	ND	ND	ND	ND		
Chloroform	7	NA	NA	ND	ND	ND	ND	ND	ND		
1,1,1-Trichloroethane	5	NA	NA	ND	ND	ND	ND	ND	ND		
Trichloroethene	5	NA	NA	ND	ND	ND	ND	ND	ND		
Tetrachloroethene	5	NA	NA	ND	ND	2.1 J	ND	ND	1.1		
Xylenes (Total)	5	NA	NA	ND	ND	ND	ND	ND	ND		
Toluene	5	NA	NA	1.4 J	ND	ND	ND	ND	ND		
Chlorobenzene	5	NA	NA	ND	ND	ND	ND	ND	ND		
1,2-Dichlorobenzene	4.7	NA	NA	ND	ND	ND	ND	ND	ND		
Number of VOC TICs				1							
Total VOC TIC conc.				38 J				ND	ND		

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-3A	MW-3A	MW-3A	MW-3A	MW-3A	MW-3A	MW-3A	MW-3A	MW-3A	MW-3A
Sample ID	Class GA	SMW-3A	SMW-3A	SL-MW-3A	SL-MW-3A	SL-MW-3A	SL-MW-3A	SL-MW-3A	SL-MW-3A	SL-MW-3A	SL-MW-3A
Laboratory ID	Ground	E0773-18	F1174-02C	G2115-16	J0196-02	K0834-10	L1820-01	AC75711-005	AC83904-011	AC91322-010	AD00205-001
Sample Date	Water	6/6/06	8/21/07	11/14/08	2/3/10	5/11/11	08/27/12	11/12/13	3/23/15	5/11/16	9/22/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND	0.53 J	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.6
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2
Xylenes (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	4.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Number of VOC TICs		0	0	1							
Total VOC TIC conc.		ND	ND	19 J				ND	ND		

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-3B	MW-3B	MW-3B	MW-3B	MW-3B	MW-3B	MW-3B	MW-3B	MW-3B	MW-3B
Sample ID	Class GA	Can't	Can't	SL-MW-3B	SL-MW-3B	SL-MW-3B	SL-MW-3B	SL-MW-3B	SL-MW-3B	SL-MW-3B	SL-MW-3B
Laboratory ID	Ground	Locate	Locate	G2115-17	J0196-07	K0834-11	L1820-02	AC75711-001	AC83904-013	AC91322-009	AD00205-002
Sample Date	Water	6/6/06	8/21/07	11/14/08	2/4/10	5/11/11	08/27/12	11/12/13	3/23/15	5/10/16	9/22/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	50	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	10	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	4.7	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Number of VOC TICs				1							
Total VOC TIC conc.				19 J				ND	ND		

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
Sample ID	Class GA				SL-MW-1		SL-MW-1	SL-MW-1	SL-MW-1	SL-MW-1	SL-MW-1
Laboratory ID	Ground				J0196-01		L1786-10	AC75681-001	AC83904-001	AC91322-008	AD00205-003
Sample Date	Water	6/6/06	8/21/07	11/14/08	2/3/10	5/11/11	08/22/12	11/12/13	3/23/15	5/10/16	9/21/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
Acetone	50	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
Benzene	1	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
2-Butanone	50	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
Methyl tert-butyl ether	10	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	NA	NA	NA	2.3 J	NA	1.2 J	ND	ND	ND	ND
Chloroform	7	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
Trichloroethene	5	NA	NA	NA	1.8 J	NA	0.81 J	ND	ND	ND	ND
Tetrachloroethene	5	NA	NA	NA	***50***	NA	***18.0***	***5.6***	***14.0***	***15.0***	ND
Xylenes (Total)	5	NA	NA	NA	1.1 J	NA	ND	ND	ND	ND	ND
Toluene	5	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
Chlorobenzene	5	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	4.7	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND
Number of VOC TICs											
Total VOC TIC conc.								ND	ND		

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
Sample ID	Class GA	SMW-4	SMW-4	SMW-4	SL-MW-4	SL-MW-4	SL-MW-4	SL-MW-4	SL-MW-4	SL-MW-4	SL-MW-4	SL-MW-4
Laboratory ID	Ground	E0832-10	F0495-02B	F1174-03C	G2115-09	J0196-08	K0834-12	L1820-07	AC75711-014		AC91322-016	AD00135-00
Sample Date	Water	6/16/06	4/20/07	8/21/07	11/13/08	2/4/10	5/12/11	08/29/12	11/13/13	3/23/15	5/12/16	9/19/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	well cap	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	is missing	ND	ND
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	and the	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	well is	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	filled with	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	soil	ND	ND
Methyl tert-butyl ether	10	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
Xylenes (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
1,2-Dichlorobenzene	4.7	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
Number of VOC TICs		0	0	0	1							
Total VOC TIC conc.		ND	ND	ND	28 J				ND			ND

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5
Sample ID	Class GA	SMW-5	SMW-5	SMW-5	SL-MW-5	SL-MW-5	SL-MW-5	SL-MW-5	SL-MW-5	SL-MW-5	SL-MW-5	SL-MW-5
Laboratory ID	Ground	E0832-05	F0495-04B	F1174-13B	G2115-13	J0196-09	K0834-15	L1820-06		AC83924-001		
Sample Date	Water	6/15/06	4/20/07	8/27/07	11/13/08	2/4/10	5/12/11	08/29/12	1/13/13	3/24/15	5/10/16	9/19/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	ND	Could not	ND	Could not	Could not
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	sample,	ND	sample,	sample,
Acetone	50	ND	ND	ND	***170***	ND	ND	ND	less than	ND	less than	less than
Benzene	1	ND	ND	ND	ND	ND	ND	ND	1 ft of	ND	1.7 ft of	0.4 ft of
2-Butanone	50	ND	ND	ND	38 J	ND	ND	ND	water in	ND	water in	water in
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	the well.	ND	the well.	the well.
Methyl tert-butyl ether	10	ND	ND	ND	ND	ND	ND	ND		ND		
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND		ND		
cis-1,2-Dichloroethene	5	3.0 J	2.0 J	ND	ND	ND	ND	ND		ND		
Chloroform	7	ND	ND	ND	ND	ND	ND	ND		ND		
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND		ND		
Trichloroethene	5	ND	ND	ND	ND	ND	1.5 J	ND		ND		
Tetrachloroethene	5	ND	ND	2.0 J	ND	ND	ND	ND		ND		
Xylenes (Total)	5	ND	ND	ND	ND	ND	ND	ND		ND		
Toluene	5	ND	ND	ND	***1,200***	***230 D***	ND	ND		ND		
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND		ND		
1,2-Dichlorobenzene	4.7	ND	ND	ND	ND	ND	ND	ND		ND		
Number of VOC TICs		0	0	0	1							
Total VOC TIC conc.		ND	ND	ND	330 J					ND		

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A
Sample ID	Class GA	SMW-6A	SMW-6A	SMW-6A	SMW-6A	SMW-6A	SMW-6A	SL-MW-6A	SL-MW-6A	SL-MW-6A	SL-MW-6A	SL-MW-6A
Laboratory ID	Ground	E0832-06	F0495-01B	F1174-04C	G2115-10	J0196-10	K0834-13	L1820-03	AC75711-012	AC83904-020	AC91322-006	AD00135-003
Sample Date	Water	6/15/06	4/20/07	8/21/07	11/13/08	2/4/10	5/12/11	08/27/12	11/13/13	3/24/15	5/10/16	9/19/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	5.7	2.8	1.8	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	***22.0***
Tetrachloroethene	5	ND	ND	ND	ND	1.2 J	ND	ND	ND	ND	ND	***11.0***
Xylenes (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	4.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Number of VOC TICs		0	0	0	1							
Total VOC TIC conc.		ND	ND	ND	28 J				ND	ND		

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-6B	MW-6B	MW-6B	MW-6B	MW-6B	MW-6B	MW-6B	MW-6B	MW-6B	MW-6B	MW-6B
Sample ID	Class GA	SMW-6B	SMW-6B	SMW-6B	SMW-6B	SMW-6B	SMW-6B	SL-MW-6B	SL-MW-6B	SL-MW-6B	SL-MW-6B	SL-MW-6B
Laboratory ID	Ground	E0832-07	F0495-03B	F1174-05C	G2115-12	J0196-11	K0834-14	L1820-04	AC75711-010	AC83904-018	AC91322-002	AD00135-002
Sample Date	Water	6/15/06	4/20/07	8/21/07	11/13/08	2/4/10	5/12/11	08/27/12	11/13/13	3/24/15	5/10/16	9/19/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND	ND	ND	3.7 J	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	***210 D***	***120***	***130***	***140***	***190***	***44.0***	0.50 J	***140***	***100***	***44.0***	***51.0***
Chloroform	7	ND	ND	ND	2.0 J	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	***85.0***	***27.0***	***26.0***	***30.0***	***40.0***	***7.3***	ND	***30.0***	***31.0***	***12.0***	***8.1***
Tetrachloroethene	5	***1,100 D***	***650***	***480 D***	***470 D***	***2,000 D***	***150***	***23.0***	***1,500***	***1,200***	***330***	***340***
Xylenes (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	4.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Number of VOC TICs		0	0	0	1							
Total VOC TIC conc.		ND	ND	ND	28 J				ND	ND		

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	
Sample ID	Class GA	SMW-12	SMW-12	SL-MW-12	SL-MW-12	SL-MW-12	SL-MW-12	SL-MW-12	SL-MW-12	SL-MW-12	SL-MW-12	
Laboratory ID	Ground	E0832-01	F1174-08C	G2115-06	J0189-01	K0834-01	L1786-07	AC75711-027	AC83904-016	AC91322-011		
Sample Date	Water	6/15/06	8/22/07	11/12/08	2/2/10	5/10/11	08/22/12	11/14/13	3/24/15	5/11/16	9/21/17	
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND		well could
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		not be
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND		located, the
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND		area has
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND		recently been
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		landscaped
Methyl tert-butyl ether	10	ND	ND	ND	ND	1.7 J	0.68 J	ND	ND	ND		
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		
cis-1,2-Dichloroethene	5	ND	2.0 J	3.1 J	ND	1.8 J	***5.6***	ND	ND	ND		
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Trichloroethene	5	ND	1.0 J	ND	ND	ND	1.1 J	ND	ND	ND		
Tetrachloroethene	5	***17***	***17***	***60***	***10***	1.6 J	0.80 J	2.4	***10.0***	***13.0***		
Xylenes (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Chlorobenzene	5	4.0 J	ND	ND	ND	ND	ND	ND	ND	ND		
1,2-Dichlorobenzene	4.7	***9.0***	ND	ND	ND	ND	ND	ND	ND	ND		
Number of VOC TICs		0	0	1								
Total VOC TIC conc.		ND	ND	26				ND	ND			

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13
Sample ID	Class GA	SMW-13	SMW-13	SL-MW-13	SL-MW-13	SL-MW-13	SL-MW-13	SL-MW-13	SL-MW-13	SL-MW-13	SL-MW-13
Laboratory ID	Ground	E0832-02	F1174-07C	G2115-07	J0189-02	K0834-02	L1786-04	AC75711-029	AC83924-007	AC91322-012	AD00342-002
Sample Date	Water	6/15/06	8/22/07	11/12/08	2/2/10	5/10/11	8/21/12	11/14/13	3/24/15	5/11/16	9/28/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	4.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	10	ND	ND	ND	ND	ND	6.7	1.2	1.4	0.57	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	6.0	2.7 J	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	3.0 J	ND	ND	ND	ND	0.71 J	ND	ND	ND	ND
Tetrachloroethene	5	***5.0***	ND	1.0 J	ND	ND	1.0 J	ND	ND	ND	1.3
Xylenes (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	4.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Number of VOC TICs		0	0	1							
Total VOC TIC conc.		ND	ND	26 J				ND	ND		

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14
Sample ID	Class GA	SMW-14	SMW-14	SL-MW-14	SL-MW-14	SL-MW-14	SL-MW-14	SL-MW-14	SL-MW-14	SL-MW-14	SL-MW-14
Laboratory ID	Ground		F1174-06C	G2115-18	J0189-04	K0834-05	L1786-08	AC75711-031	AC83924-003	AC91322-013	AD00205-005
Sample Date	Water	6/15/06	8/22/07	11/14/08	2/2/10	5/10/11	08/22/12	11/14/13	3/25/15	5/11/16	9/21/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	10	ND	ND	ND	1.1 J	8.0	4.6 J	6.8	0.81	0.67	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	2.0 J	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	4.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Number of VOC TICs		0	0	1							
Total VOC TIC conc.		ND	ND	20 J			ND	12.0 J	4.8 J		

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11
Sample ID	Class GA	SMW-11	SMW-11	SL-MW-11	SL-MW-11	SL-MW-11	SL-MW-11	SL-MW-11	SL-MW-11	SL-MW-11	SL-MW-11
Laboratory ID	Ground	E0773-19		G2115-01						AC91322-001	AD00205-006
Sample Date	Water	6/8/06	8/20/07	11/11/08	2/1/10	5/10/11	08/22/12	11/12/13	3/25/15	5/9/16	9/21/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	ND	NA	ND	NA	NA	NA	NA	NA	1.8	***2.5***
1,1-Dichloroethene	5	ND	NA	ND	NA	NA	NA	NA	NA	ND	ND
Acetone	50	ND	NA	ND	NA	NA	NA	NA	NA	ND	ND
Benzene	1	ND	NA	ND	NA	NA	NA	NA	NA	ND	ND
2-Butanone	50	ND	NA	ND	NA	NA	NA	NA	NA	ND	ND
trans-1,2-Dichloroethene	5	ND	NA	ND	NA	NA	NA	NA	NA	ND	ND
Methyl tert-butyl ether	10	ND	NA	1.8 J	NA	NA	NA	NA	NA	6.9	5.1
1,1-Dichloroethane	5	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND
cis-1,2-Dichloroethene	5	3.0 J	NA	***13***	NA	NA	NA	NA	NA	***5.9***	***6.1***
Chloroform	7	ND	NA	ND	NA	NA	NA	NA	NA	ND	ND
1,1,1-Trichloroethane	5	ND	NA	ND	NA	NA	NA	NA	NA	ND	ND
Trichloroethene	5	4.0 J	NA	ND	NA	NA	NA	NA	NA	2.4	1.9
Tetrachloroethene	5	***56***	NA	***60***	NA	NA	NA	NA	NA	***28.0***	***18.0***
Xylenes (Total)	5	ND	NA	ND	NA	NA	NA	NA	NA	ND	ND
Toluene	5	ND	NA	***63***	NA	NA	NA	NA	NA	ND	ND
Chlorobenzene	5	ND	NA	4.8 J	NA	NA	NA	NA	NA	ND	ND
1,2-Dichlorobenzene	4.7	ND	NA	ND	NA	NA	NA	NA	NA	ND	ND
Number of VOC TICs		1		1							
Total VOC TIC conc.		6 J	NA	22 J							

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16
Sample ID	Class GA	SMW-16	SMW-16	SL-MW-16	SL-MW-16	SL-MW-16	SL-MW-16	SL-MW-16	SL-MW-16	SL-MW-16	SL-MW-16
Laboratory ID	Ground	E0832-04	F1174-12B	G2115-05	J0189-05	K0834-08	L1786-09	AC75711-007	AC83924-005	AC91322-014	AD00205-007
Sample Date	Water	6/15/06	8/27/07	11/12/08	2/2/10	5/11/11	08/22/12	11/12/13	3/24/15	5/11/16	9/20/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	ND	ND	ND	1.2 J	ND	***2.1 J***	ND	ND	ND	1.2
1,1-Dichloroethene	5	4.0 J	ND	ND	2.4 J	ND	1.1 J	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND	ND	ND	13.0	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	10	2.0 J	ND	ND	ND	ND	1.4 J	0.7	ND	***13.0***	***11.0***
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	***15.0***	ND	2.1 J	***16.0***	***8.0***	***20.0***	1.1	ND	***6.8***	***7.4***
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	***5.0***	ND	ND	2.8 J	ND	1.7 J	ND	ND	ND	ND
Trichloroethene	5	***16.0***	ND	1.1 J	***11.0***	***7.5***	***9.5***	ND	ND	3.0	3.6
Tetrachloroethene	5	***25.0***	2.0 J	***6.9***	***48.0***	***95.0***	***100***	3.7	ND	***22.0***	***23.0***
Xylenes (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	4.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Number of VOC TICs		0	0	1							
Total VOC TIC conc.		ND	ND	23 J				ND	ND		

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-23S	MW-23S	MW-23S	MW-23S	MW-23S	MW-23S	MW-23S	MW-23S	MW-23S	MW-23S
Sample ID	Class GA	SMW-23S	SMW-23S	SL-MW-23S	SL-MW-23S	SL-MW-23S	SL-MW-23S	SL-MW-23S	SL-MW-23S	SL-MW-23S	SL-MW-23S
Laboratory ID	Ground	E0773-20	F1174-11B	G2115-03	J0196-03	K0834-06	L1786-03	AC75711-020	AC83924-009	AC91322-018	AD00135-006
Sample Date	Water	6/8/06	8/27/07	11/12/08	2/3/10	5/11/11	8/21/12	11/13/13	3/25/15	5/12/16	9/19/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	2.5 J	2.2 J	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	1.0 J	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	10	ND	1.0 J	ND	5.4	3.9 J	9.5	ND	2.4	***10.0***	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	1.6 J	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	***360 D***	***180 D***	***45.0***	***38.0***	***83.0***	***47.0***	ND	***12.0***	ND	***15.0***
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	1.6 J	1.3 J	3.8 J	3.5 J	ND	ND	ND	ND
Trichloroethene	5	***220 D***	***99.0***	***18.0***	***15.0***	***46.0***	***28.0***	ND	***5.4***	ND	***8.3***
Tetrachloroethene	5	***5,200 D***	***1,700 D***	***500 D***	***590 D***	***1,500 D***	***1,800 D***	***2,500***	***390***	***2,300***	***1,000***
Xylenes (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	4.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Number of VOC TICs		2	0	1							
Total VOC TIC conc.		1,250 JD	ND	21 J				ND	ND		

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 3
SERVALL LAUNDRY SITE (SITE 1-52-077)
PERIODIC SAMPLING - 2006 THROUGH 2017 SAMPLING EVENTS
SUMMARY OF VOCs IN GROUNDWATER

Sample Location	NYSDEC	MW-23D	MW-23D	MW-23D	MW-23D	MW-23D	MW-23D	MW-23D	MW-23D	MW-23D	MW-23D
Sample ID	Class GA	SMW-23D	SMW-23D	SL-MW-23D	SL-MW-23D	SL-MW-23D	SL-MW-23D	SL-MW-23D	SL-MW-23D	SL-MW-23D	SL-MW-23D
Laboratory ID	Ground	E0773-21	F1174-09B	G2115-04	J0196-04	K0834-07	L1786-01	AC75711-024	AC83924-011	AC91322-017	AD00135-007
Sample Date	Water	6/8/06	8/27/07	11/12/08	2/3/10	5/11/11	8/21/12	11/13/13	3/25/15	5/12/16	9/19/17
	Criteria	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	10	ND	ND	ND	ND	ND	0.97 J	1.8	1.5	1.1	1.6
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	3.0 J	***5.5***	***10.0***	***9.3***	***9.3***	***14.0***
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND
Trichloroethene	5	ND	ND	ND	ND	1.2 J	2.8 J	***5.2***	***6.2***	***5.0***	***9.8***
Tetrachloroethene	5	4.0 J	***6.0***	***7.7***	***8.3***	***25.0***	***57.0***	***130***	***110***	***170***	***280***
Xylenes (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	4.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Number of VOC TICs		1	0	1							
Total VOC TIC conc.		6 J	ND	25 J				ND	ND		

Notes:
All values are in micrograms per liter (µg/L)
ND - Not detected
D - Dilution
J - Estimated value, VOCs
NA - Not analyzed
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells
Compounds of Concern

TABLE 4
SERVALL LAUNDRY SITE (SITE 1-52-077)
SEPTEMBER 2017 SAMPLING EVENT
SUMMARY OF PERFLUORINATED COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

Sample Location	EPA	MW-2	MW-3A	MW-3B	MW-1	MW-4	MW-5	MW-6A	MW-6B
Sample ID	Health	SL-MW-2	MW-3A	SL-MW-3B	SL-MW-1	SL-MW-4	SL-MW-5	SL-MW-6A	SL-MW-6B
Laboratory ID	Advisory		AD00342-001	AD00205-002	AD00205-003	AD00135-001		AD00135-003	AD00135-002
Sample Date	Limit	9/22/17	9/28/17	9/22/17	9/22/17	9/19/17	9/19/17	9/19/17	9/19/17
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
6:2 FTS		well	0.576 J	2.72	1.19 J	ND	Could not	0.704	3.9
8:2 FTS		could not	ND	ND	0.34 J	ND	sample,	ND	ND
NetFOSAA		be located	ND	0.778 J	1.78 J	ND	less than	ND	ND
NMeFOSAA			ND	ND	0.98 J	ND	1.7 ft of	ND	16.7
PFBA			6.34	9.77	5.0	7.09	water in	5.71	3.94
PFBS			1.58 J	1.55 J	1.36 J	1.8 J	the well.	1.2	8.55
PFDA			0.939 J	0.669 J	0.87 J	0.81 J		0.816	2.23
PFDoA			ND	ND	0.247 J	ND		ND	ND
PFDS			ND	ND	0.353 J	ND		ND	ND
PFHpA			5.29	6.45	4.32	7.5		3.93	21.6
PFHpS			0.248 J	0.28 J	0.269 J	0.265 J		0.314	5.12
PFHxA			15.7	22.7	7.26	16.8		10.3	13.0
PFHxS			6.79	4.88	4.66	3.55		2.48	20.3
PFNA			2.17	2.16	1.51 J	4.76		1.77	8.96
PFOA	70		10.7	13.5	13.1	11.4		10.1	***83.1***
PFOS	70		10.1	12.4	7.75	10.4		11.1	***150***
PFPeA			18.3	23.3	6.86	17.9		14.6	7.57
PFTreA			0.219 J	ND	ND	ND		ND	ND
PFTriA			ND	ND	ND	ND		ND	ND
PFuNA			0.228 J	0.351 J	0.874 J	ND		ND	0.369 J
Total PFOA & PFOS	70		20.8	25.9	20.85	21.8		21.2	***233.1***
1,4-Dioxane	350		ND	ND	ND	ND		ND	ND

Notes:
All values in ng/L
ND - Not Detected
J - Estimated concentration
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells

TABLE 4
SERVALL LAUNDRY SITE (SITE 1-52-077)
SEPTEMBER 2017 SAMPLING EVENT
SUMMARY OF PERFLUORINATED COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

Sample Location	EPA	MW-12	MW-13	MW-14	MW-11	MW-16	MW-23S	MW-23D
Sample ID	Health	SL-MW-12	SL-MW-13	SL-MW-14	SL-MW-11	SL-MW-16	SL-MW-23S	SL-MW-23D
Laboratory ID	Advisory		AD00205-004	AD00205-005	AD00205-006	AD00205-007	AD00135-006	AD00135-007
Sample Date	Limit	9/22/17	9/22/17	9/22/17	9/22/17	9/22/17	9/19/17	9/19/17
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
6:2 FTS		well	1.61 J	7.31	7.15	11.6	ND	ND
8:2 FTS		could not	ND	2.52	3.05	2.79	ND	ND
NetFOSAA		be located	ND	ND	ND	ND	ND	ND
NMeFOSAA			ND	ND	ND	ND	ND	ND
PFBA			4.27	3.2	4.65	4.48	7.94	4.16
PFBS			0.883 J	ND	ND	ND	1.69 J	1.44 J
PFDA			0.322 J	1.23 J	ND	1.08 J	0.441 J	0.852 J
PFDoA			ND	ND	ND	ND	ND	ND
PFDS			ND	ND	ND	ND	ND	ND
PFHpA			5.09	4.39	5.25	4.18	4.55	2.54
PFHpS			0.244 J	0.552 J	0.788 J	0.499 J	1.0 J	0.416 J
PFHxA			7.8	6.48	10.4	9.59	8.29	4.59
PFHxS			3.57	6.25	13.4	10.9	8.79	3.97
PFNA			1.94 J	8.47	4.09	2.38	1.53 J	2.12
PFOA	70		11.9	18.7	20.6	17.2	16.9	9.4
PFOS	70		16.5	39.4	35.2	20.8	32.2	30.0
PFPeA			9.89	ND	3.29	4.18	6.43	4.56
PFTreA			ND	ND	ND	ND	ND	ND
PFTriA			ND	ND	ND	ND	ND	ND
PFuNA			ND	ND	ND	ND	ND	ND
Total PFOA & PFOS	70		28.4	58.1	55.8	38.0	49.1	39.4
1,4-Dioxane	350		ND	***1,700***	***1,600***	***2,000***	ND	***990***

Notes:
All values in ng/L
ND - Not Detected
J - Estimated concentration
BOLD/ITALICS - exceeds criterion

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells

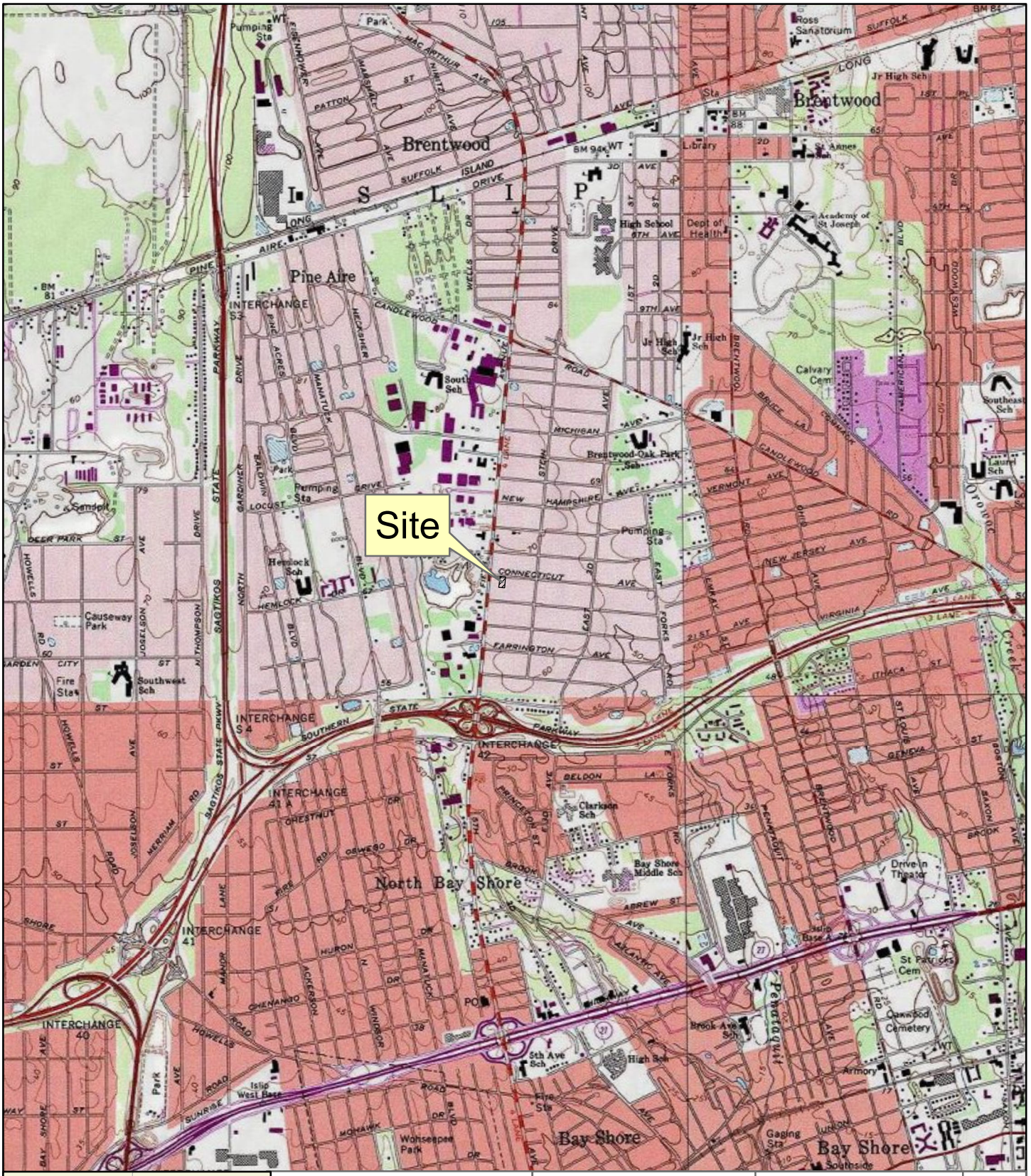
TABLE 5
SUMMARY OF HISTORIC TETRACHLOROETHENE CONCENTRATIONS IN SELECTED MONITORING WELLS
SERVALL LAUNDRY SITE (SITE 1-52-077)

	MW-2	MW-3A	MW-3B	MW-1	MW-4	MW-5	MW-6A	MW-6B	MW-12	MW-13	MW-14	MW-11	MW-16	MW-23S	MW-23D
Sept 2017	NA	1.2	ND	ND	ND	NA	***11***	***340***	NA	1.3	ND	***18***	***23***	***1,000***	***280***
May 2016	NA	ND	ND	***15***	ND	NA	ND	***330***	***13***	ND	ND	***28***	***22***	***2,300***	***170***
Mar 2015	1.1	ND	ND	***14***	NA	ND	ND	***1,200***	***10***	ND	ND	NA	ND	***390***	***110***
Nov 2013	ND	ND	ND	***5.6***	ND	NA	ND	***1,500***	2.4	ND	ND	NA	3.7	***2,500***	***130***
Aug 2012	ND	ND	ND	***18***	ND	ND	ND	***23***	0.80 J	1.0 J	ND	NA	***100***	***1,800 D***	***57***
May 2011	2.1 J	ND	ND	NA	ND	ND	ND	***150***	1.6 J	ND	ND	NA	***95***	***1,500 D***	***25***
Feb 2010	ND	ND	ND	***50***	ND	ND	1.2 J	***2,000 D***	***10***	ND	ND	NA	***48***	***590 D***	***8.3***
Nov 2008	ND	ND	ND	NA	ND	ND	ND	***470 D***	***60***	1.0 J	ND	***60***	***6.9***	***500 D***	***7.7***
Aug 2007	ND	ND	NA	NA	ND	2.0 J	ND	***480 D***	***17***	ND	2 J	NA	2.0 J	***1,700 D***	***6.0***
Apr 2007	NA	NA	NA	NA	ND	ND	ND	***650***	NA	NA	NA	NA	NA	NA	NA
June 2006	NA	ND	NA	NA	ND	ND	ND	***1,100 D***	***17***	***5.0***	ND	***56***	***25***	***5,200 D***	4.0 J
May 2004	NA	NA	NA	NA	NA	NA	NA	NA	***7.0***	0.3 J	ND	NA	***410 E***	4.0	0.6 J
July 2000	NA	ND	ND	NA	NA	ND	ND	***160***	***820 D***	***6.0 J***	ND	***96***	***1,600 D***	***27***	***8.0 J***
Jan 1999	ND	NA	ND	NA	ND	3.0 J	1.0 J	***22 J***	***6.0 J***	4.0 J	ND	***290 J***	NA	***29 J***	3.0 J
Jan 1998	NA	ND	NA	NA	4.0	ND	2.0	***11,000***	2.0	ND	ND	***20***	***450***	NA	ND
Dec 1995	NA	0.34 J	ND	NA	ND	NA	ND	***8,400 E***	NA	***230***	NA	***800***	***1,700 E***	***7.8***	ND
Mar 1990	1.0 J	ND	***8.1 J***	NA	ND	ND	***100***	***13,000 DJ***	ND	***4,600 JD***	ND	***5,900***	***960 JD***	NA	NA
Feb 1990	***6.0***	ND	***6.0***	NA	ND	ND	***48***	***14,000***	ND	***5,800 D***	ND	***8,900***	***260***	NA	NA

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells

Notes:
Concentrations in µg/L
BOLD/ITALICIZED - equals or exceeds the Class GA criterion of 5 µg/L.
ND - Not detected
NA - Not sampled or data not available
E - Concentration exceeded the QC criterion, no dilution run data found
D - Dilution
J - Estimated concentration
The data presented in this table is a compilation of data available at the time of this report and is not a comprehensive listing of all data collected.
May 2004 - Data is very confusing. It is difficult to establish which well is presented on the Form 1s. (taken from report.hw152077.2004-05.GW04.pdf)
July 2000 data from H2M Labs, (ServAll data Summary July 2000.pdf)
January 1999 & January 1998 (Harding Lawson, 1999 Groundwater Sampling Technical Memorandum (ServAll 1999 gw sampling.pdf)
December 1995 data from Plume Discharge Study (ServAll December 1995.pdf)
February and March 1990 data from E.C. Jordan, RI/FS 1992 (ServAll Jan 1992.pdf)

Figures



USGS NY Bay Shore West and Green Lawn Quadrangles

U.S.G.S. 1:24 000 SCALE TOPOGRAPHIC MAP

Prepared by: AECOM

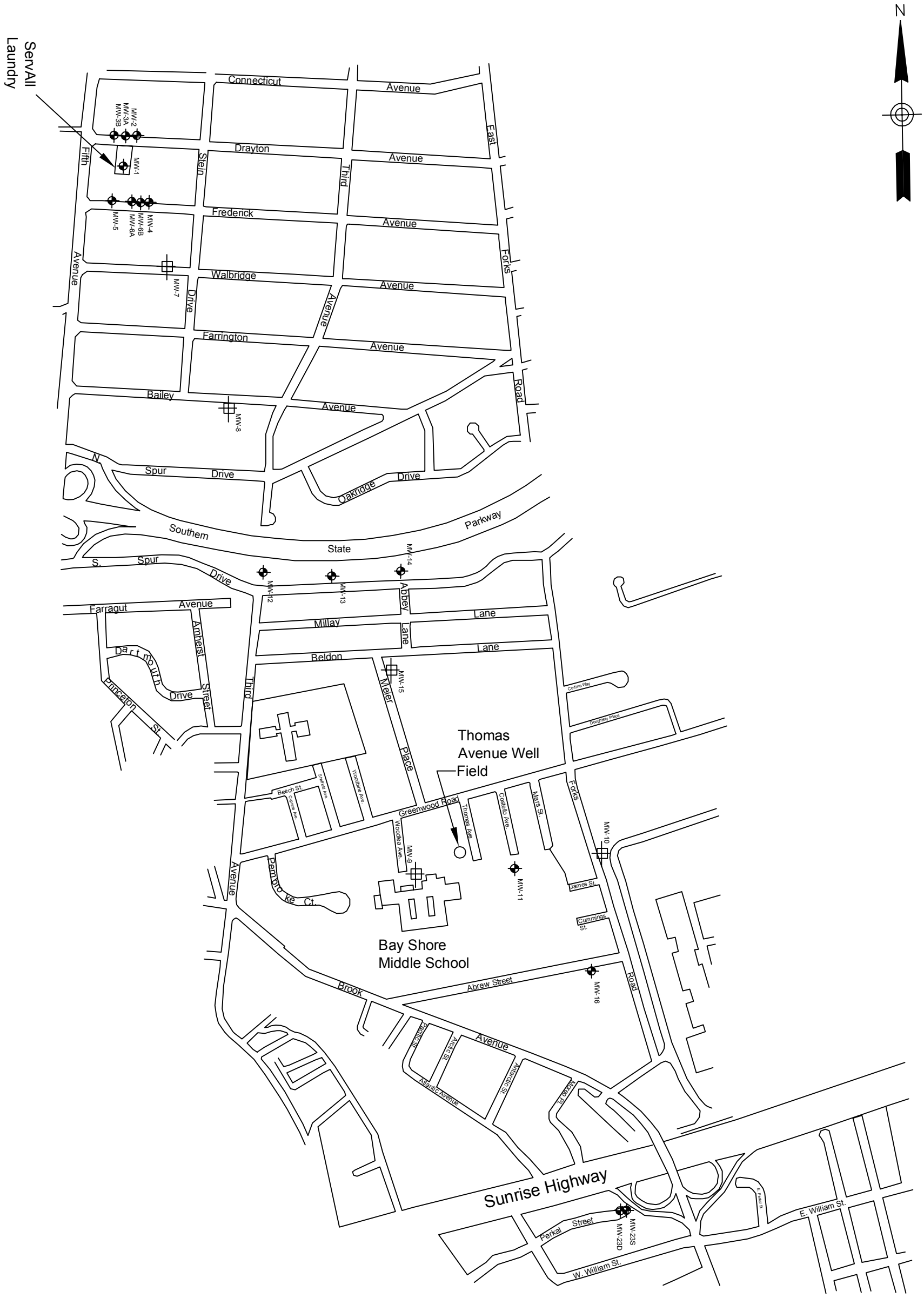
Prepared for: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Multi Site G
Operation, Maintenance & Monitoring

Site Location
ServAll Laundry Site

Date:	Scale:	Figure No. :
January 2013	1 inch = 2,500 feet	1

L:\work\60277021_Multi_Site_G\01 - ServAll Laundry\7.0 Deliverables\7.2 CADD\LTM-Reports



LEGEND:

MW-16 EXISTING MONITORING WELLS

MW-10 DAMAGED OR MISSING MONITORING WELLS

GRAPHIC SCALE

0 350 700 1400

Scale in Feet

Prepared by : AECOM

SUBMITTED BY : PK/jk	MULTI SITE G - SERVALL LAUNDRY SITE SITE NO. 1-52-026
DRAWN BY : SC	**MONITORING WELL LOCATION MAP**
APPROVED BY : PK	DATE : AUGUST 2016 / SCALE : AS SHOWN / DRAWING NO. : **2**

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LEGEND:

MW-16 — EXISTING MONITORING WELLS

DAMAGED OR MISSING MONITORING WELLS

GROUNDWATER ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL

GROUNDWATER ISOPLETH, CONTOUR INTERVAL IS 2.0 ft

DIRECTION OF GROUNDWATER FLOW

GRAPHIC SCALE

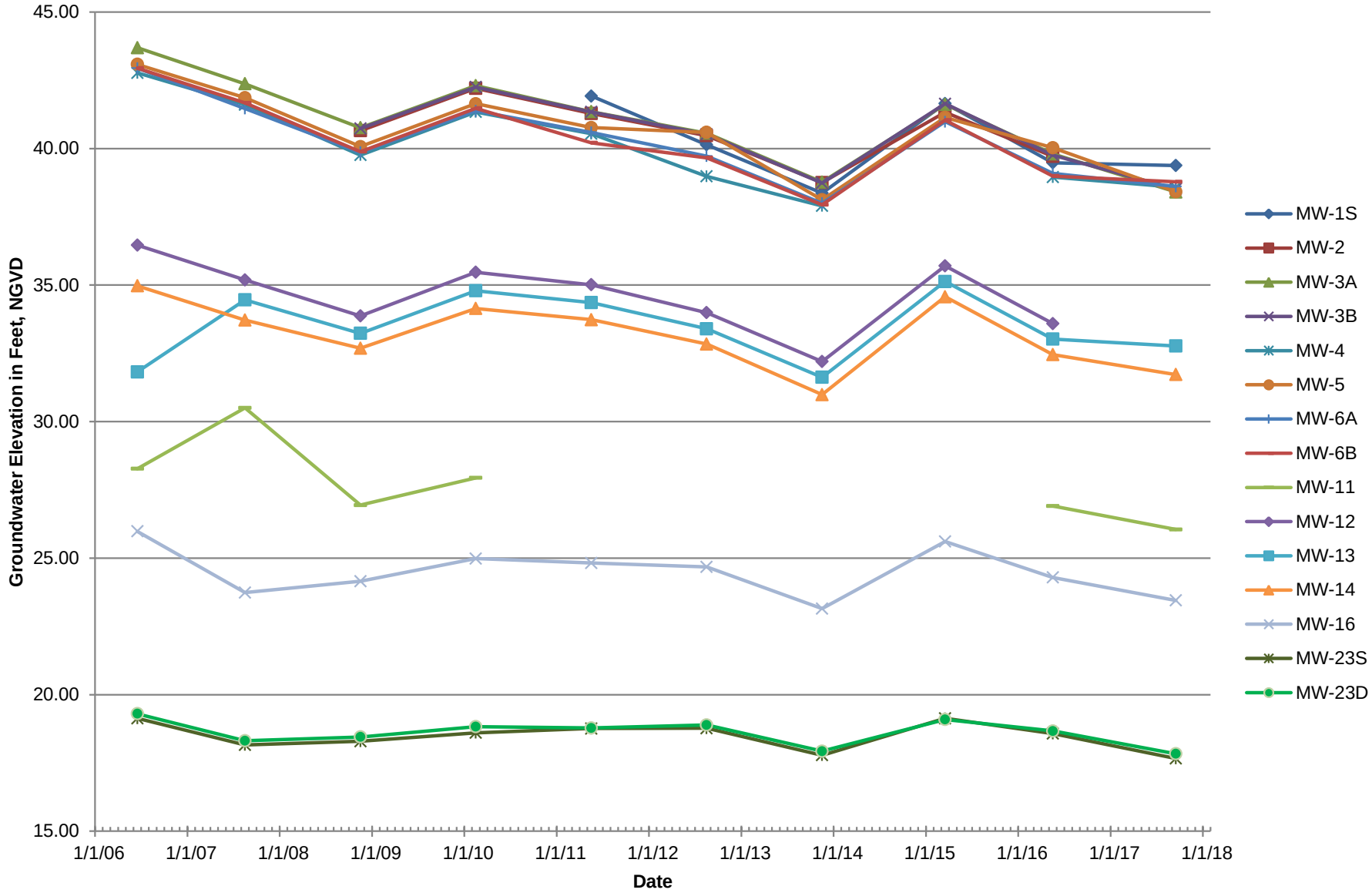
0 350 700 1400

Scale in Feet

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - SERVALL LAUNDRY SITE SITE NO. 1-52-026
DRAWN BY : SC/jk	**GROUNDWATER CONTOUR MAP SEPTEMBER 2017**
APPROVED BY : PK	DATE : NOVEMBER 2017 / SCALE : AS SHOWN / DRAWING NO. : 3

FIGURE 4
GROUNDWATER HYDROGRAPH
SERVALL LAUNDRY SITE, #1-52-077



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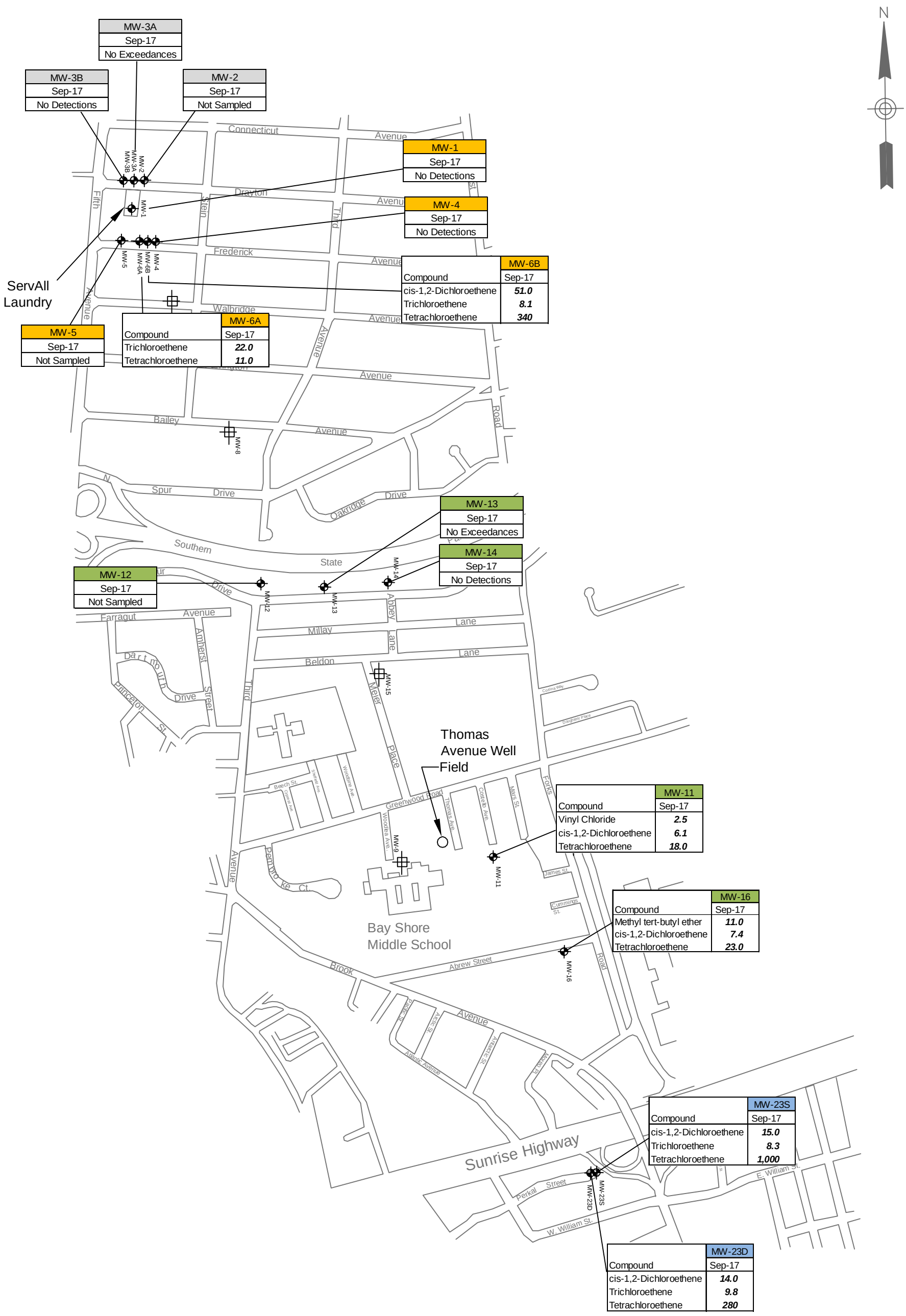


LEGEND:

MW-14 EXISTING MONITORING WELLS

MW-10 DAMAGED OR MISSING MONITORING WELL

Compound	NYSDEC Criteria
Vinyl Chloride	2
Methyl Tert Butyl Ether	10
cis-1,2-Dichloroethene	5
1,1,1-Trichloroethane	5
Trichloroethene	5
Tetrachloroethene	5

Upgradient Wells
Source Area Wells
Downgradient Wells
Sentinel Wells

Note:
All results are shown in micrograms per liter (ug/L)
BOLD: Results Exceeds Criterion
J: Estimated value
D: Dilution

GRAPHIC SCALE
0 350 700 1400
Scale in Feet

Prepared by : AECOM

SUBMITTED BY : PK

DRAWN BY : SC

APPROVED BY : PK

MULTI SITE G - SERVALL LAUNDRY SITE
SITE NO. 1-52-077

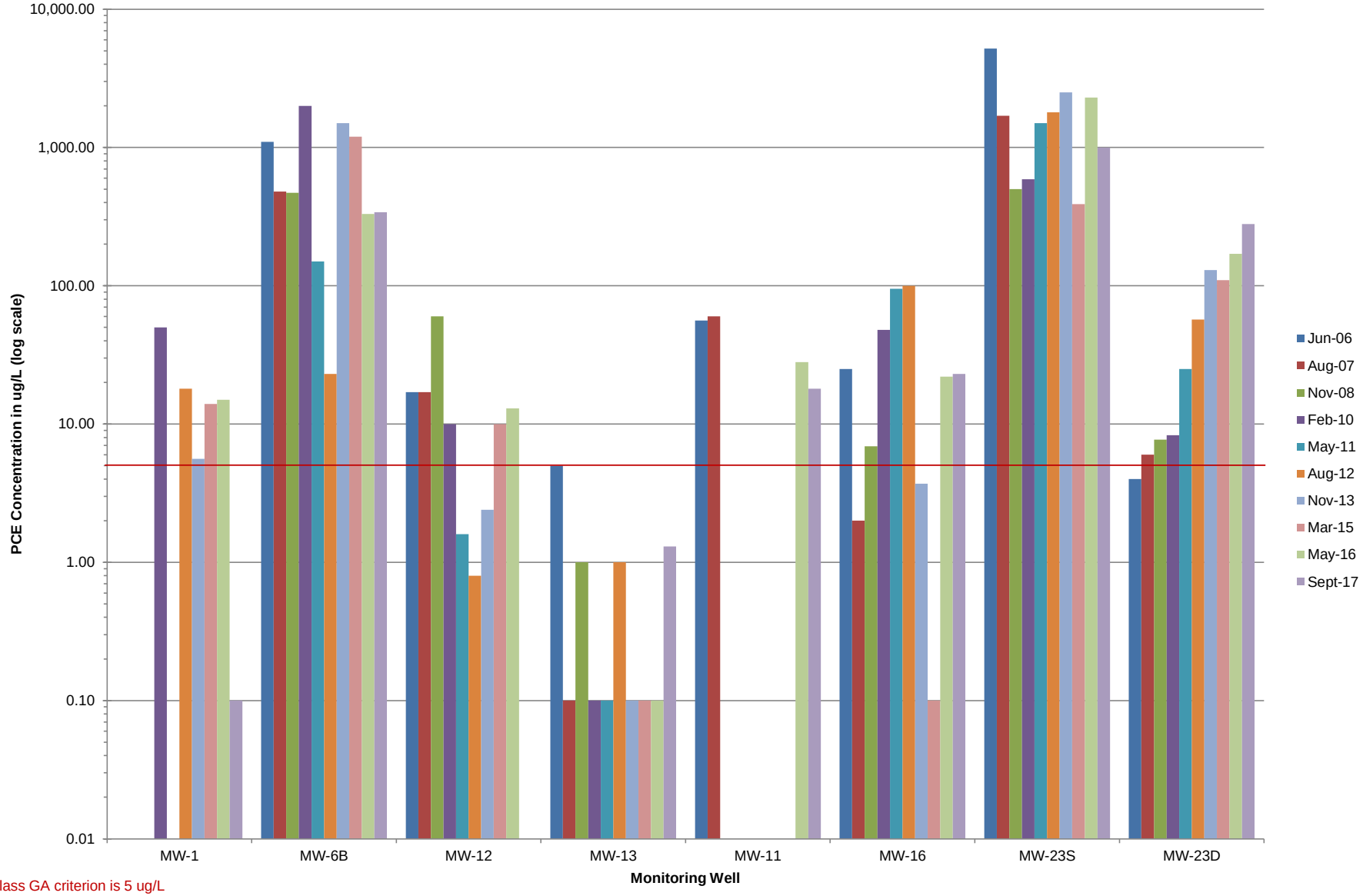
SUMMARY OF VOCs IN GROUNDWATER SEPTEMBER 2017

DATE : NOVEMBER 2017

SCALE : AS SHOWN

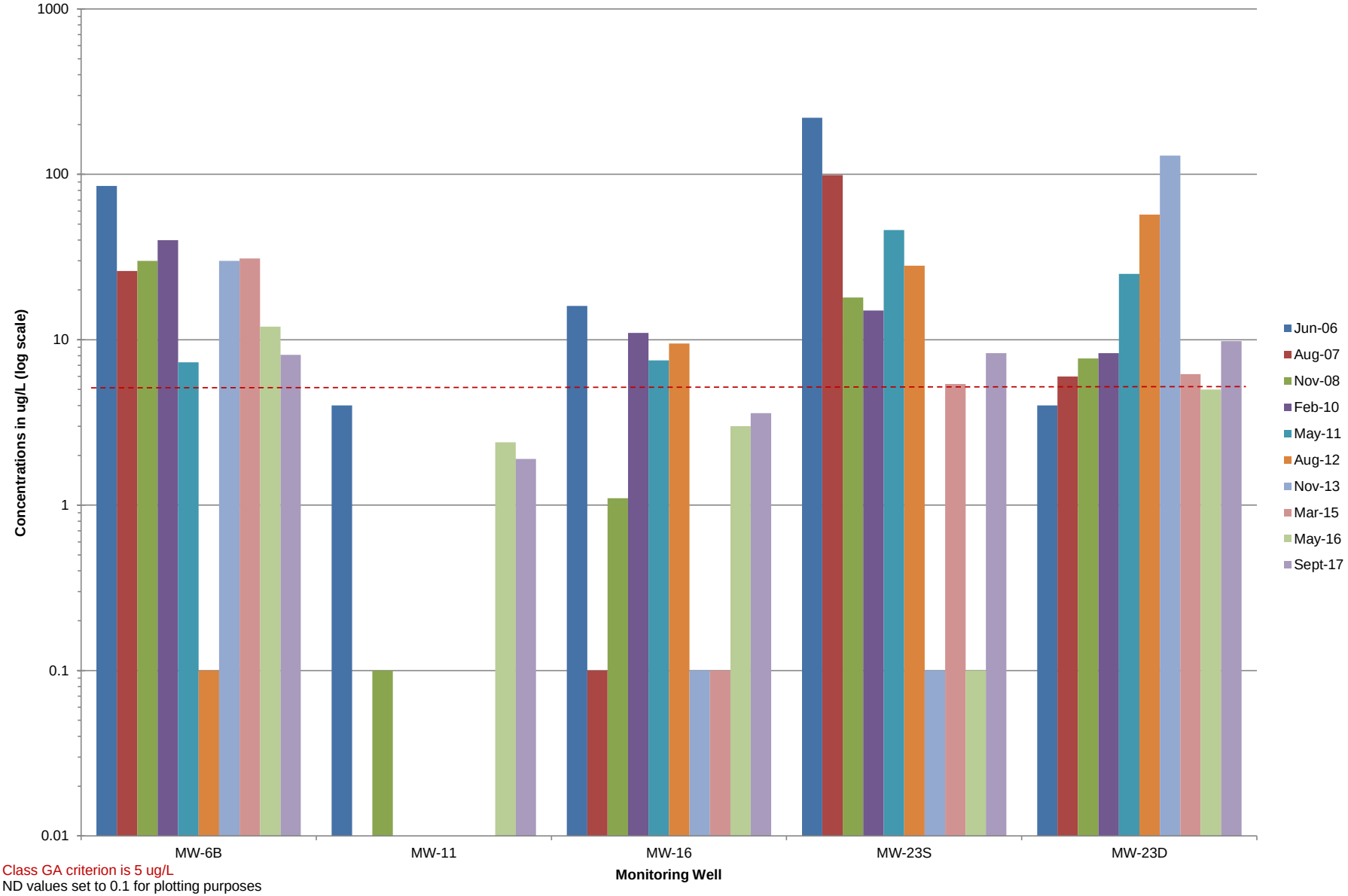
DRAWING NO. : 5

Figure 6
Tetrachloroethene Concentrations in Selected Monitoring Wells
ServAll Laundry Site (1-52-077)



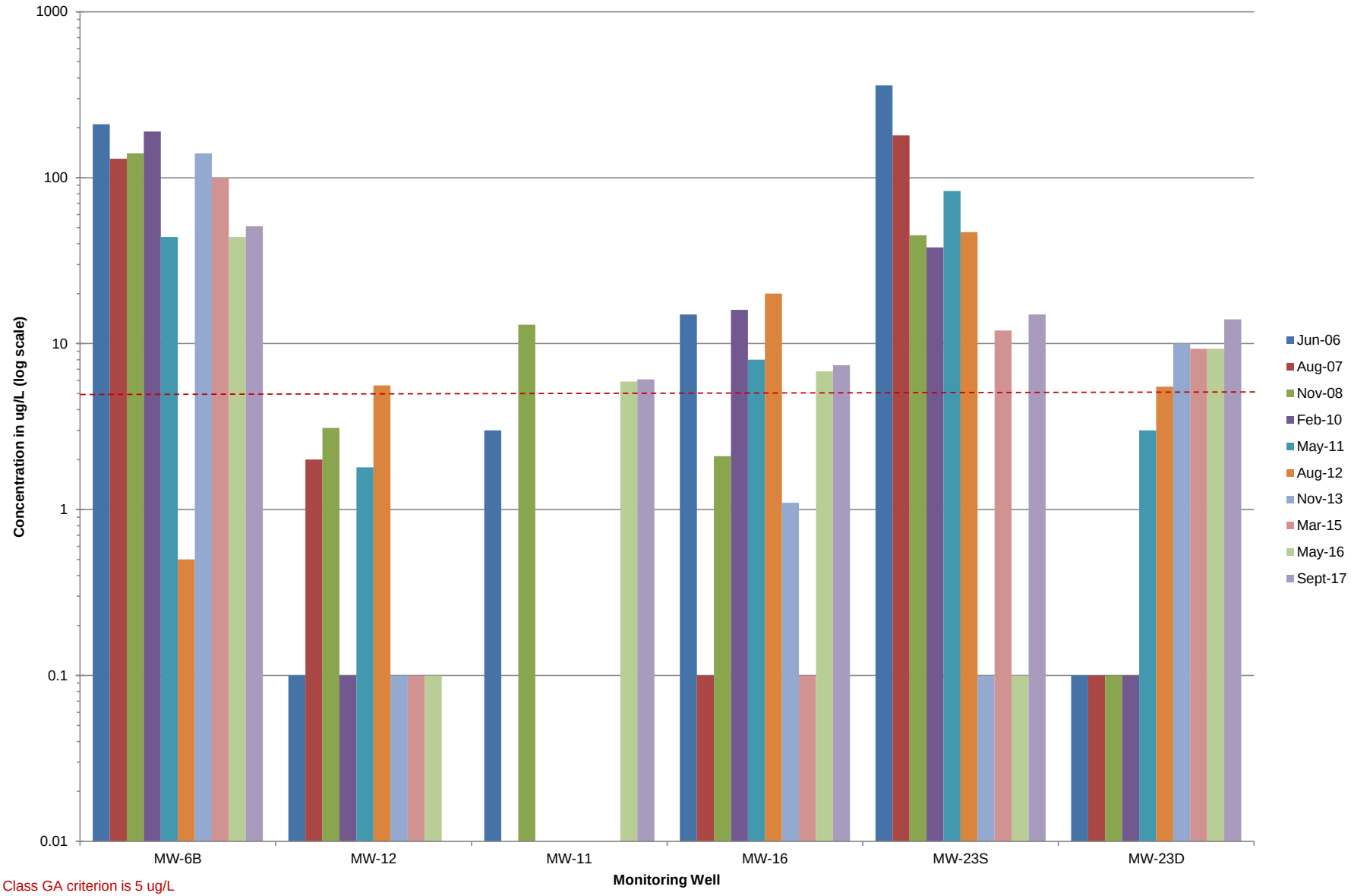
Class GA criterion is 5 ug/L
ND values set to 0.10 for plotting purposes

Figure 7
Trichloroethene Concentrations in Selected Monitoring Wells
ServAll Laundry Site (1-52-077)



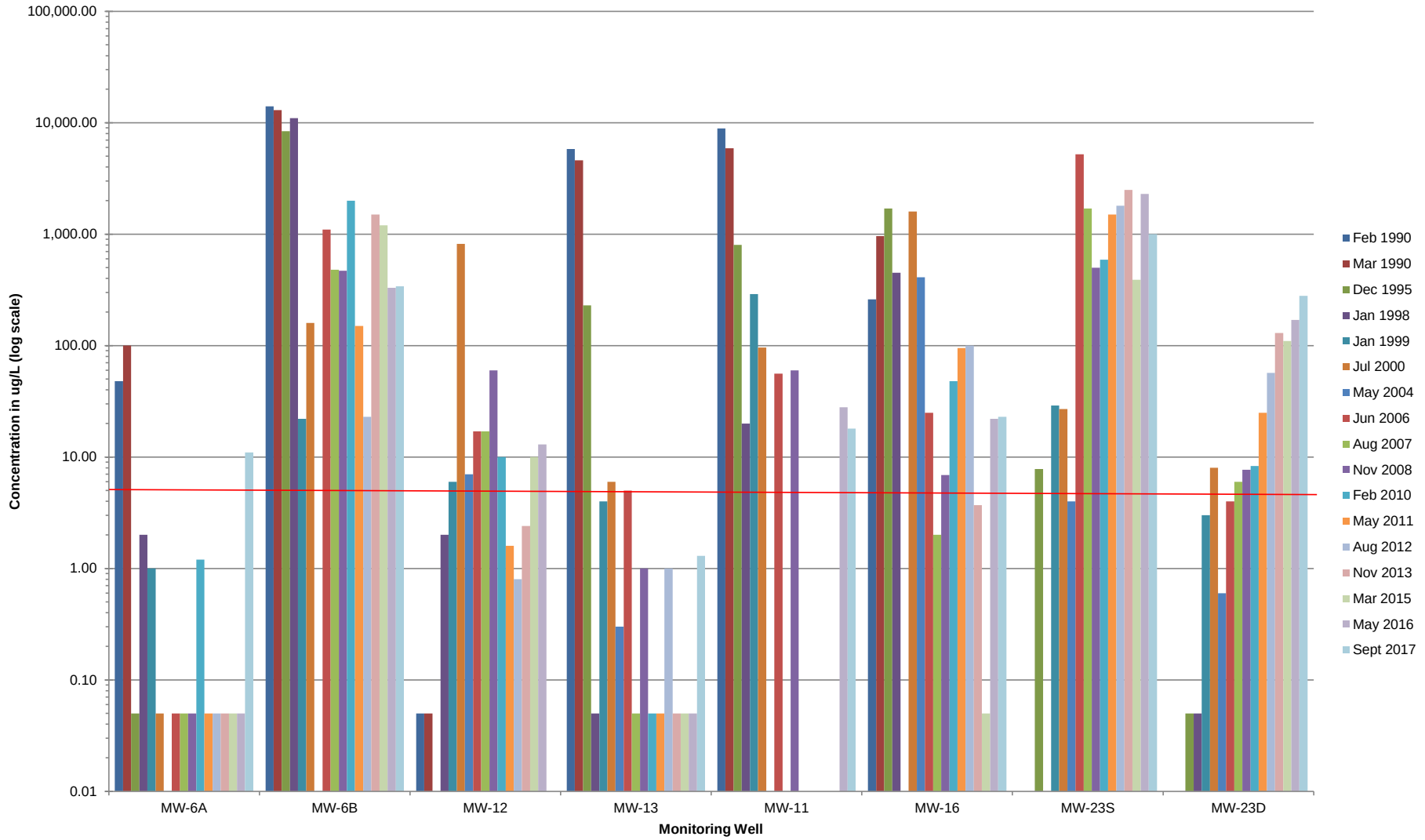
Class GA criterion is 5 ug/L
ND values set to 0.1 for plotting purposes

Figure 8
Cis-1,2-Dichloroethene Concentrations in Selected Monitoring Wells
ServAll Laundry Site (1-52-077)



Class GA criterion is 5 ug/L
ND values set to 0.1 for plotting purposes

FIGURE 9
HISTORIC PCE CONCENTRATIONS IN SELECTED MONITORING WELLS
SERVALL LAUNDRY SITE (1-52-077)



PCE Class GA criterion is 5 ug/L
ND values set to 0.05 ft to differentiate from "not collected"

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LEGEND:

MW-16	EXISTING MONITORING WELLS
MW-10	DAMAGED OR MISSING MONITORING WELL
(60)	PCE CONCENTRATION IN ug/L
10	PCE ISOCONCENTRATION LINE (ug/L), BASED ON RESULTS FROM MW-2, MW-3A, MW-3B, MW-4, MW-5, MW-6A, MW-6B, MW-11, MW-12, MW-13, MW-14, MW-16 MW-23S, AND MW-23D
NA	NOT SAMPLED
ND	NOT DETECTED
PCE	CLASS GA CRITERIA IS 5 ug/L

GRAPHIC SCALE

0 350 700 1400

Scale in Feet

Prepared by : AECOM

SUBMITTED BY : PK/jk

DRAWN BY : SC

APPROVED BY : PK

MULTI SITE G - SERVALL LAUNDRY SITE
SITE NO. 1-52-026

PCE ISOCONCENTRATION MAP JUNE 2006

DATE : JANUARY 2012

SCALE : AS SHOWN

DRAWING NO. : 10A

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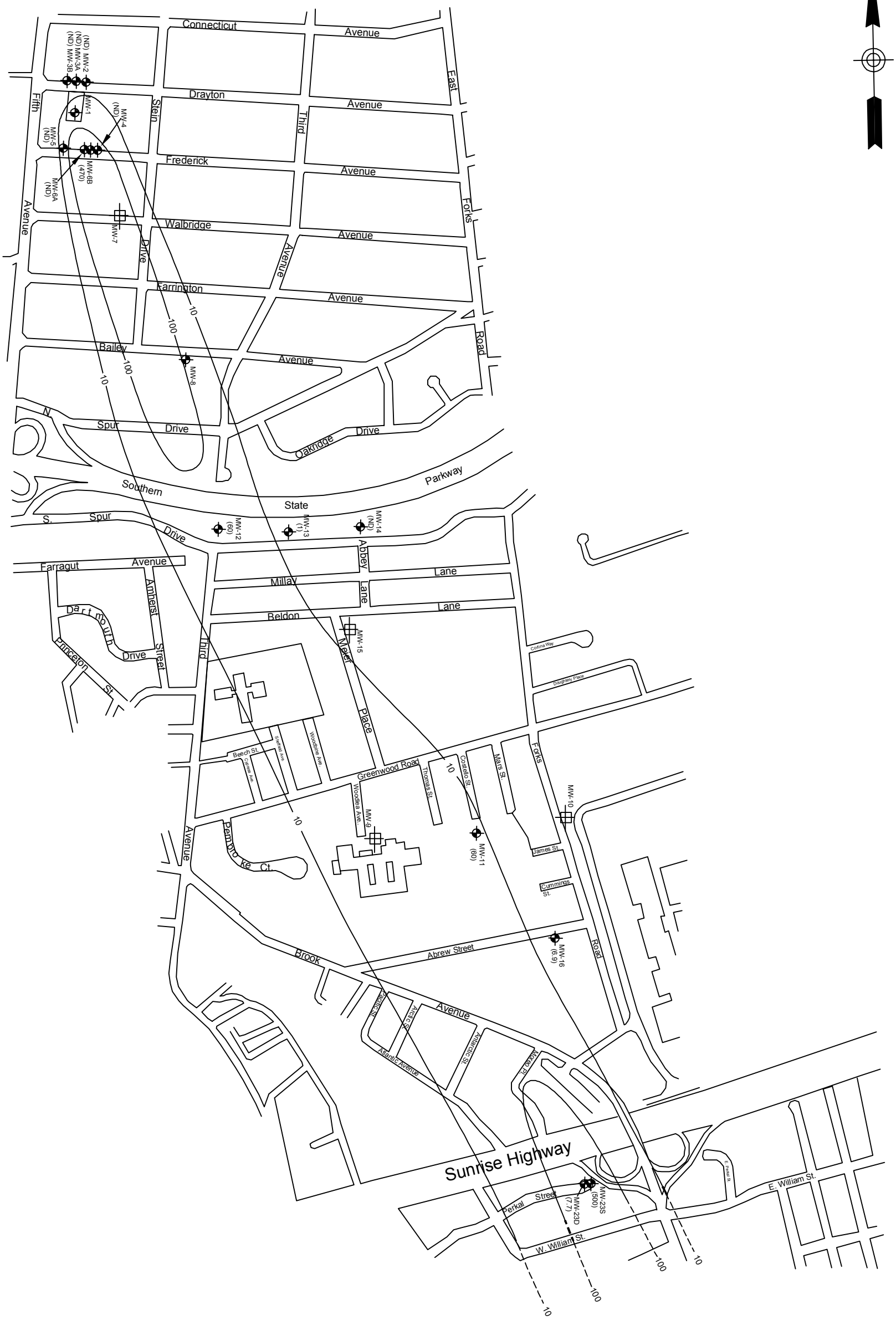

LEGEND:

MW-16	EXISTING MONITORING WELLS
MW-10	DAMAGED OR MISSING MONITORING WELL
(60)	PCE CONCENTRATION IN ug/L
10	PCE ISOCONCENTRATION LINE (ug/L), BASED ON RESULTS FROM MW-2, MW-3A, MW-3B, MW-4, MW-5, MW-6A, MW-6B, MW-11, MW-12, MW-13, MW-14, MW-16 MW-23S, AND MW-23D
NA	NOT SAMPLED
ND	NOT DETECTED
PCE	CLASS GA CRITERIA IS 5 ug/L

GRAPHIC SCALE

0 350 700 1400

Scale in Feet

Prepared by : AECOM

SUBMITTED BY : PK/jk

DRAWN BY : SC

APPROVED BY : PK

MULTI SITE G - SERVALL LAUNDRY SITE
SITE NO. 1-52-026

PCE ISOCONCENTRATION MAP NOVEMBER 2008

DATE : JANUARY 2012

SCALE : AS SHOWN

DRAWING NO. : 10B

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LEGEND:

MW-16	EXISTING MONITORING WELLS
MW-10	DAMAGED OR MISSING MONITORING WELL
(60)	PCE CONCENTRATION IN ug/L
10	PCE ISOCONCENTRATION LINE (ug/L), BASED ON RESULTS FROM MW-2, MW-3A, MW-3B, MW-4, MW-5, MW-6A, MW-6B, MW-11, MW-12, MW-13, MW-14, MW-16 MW-23S, AND MW-23D
NA	NOT SAMPLED
ND	NOT DETECTED
PCE	CLASS GA CRITERIA IS 5 ug/L

GRAPHIC SCALE

0 350 700 1400

Scale in Feet

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - SERVALL LAUNDRY SITE SITE NO. 1-52-026
DRAWN BY : SC	**PCE ISOCONCENTRATION MAP MAY 2011**
APPROVED BY : PK	DATE : JANUARY 2012 / SCALE : AS SHOWN / DRAWING NO. : 10C

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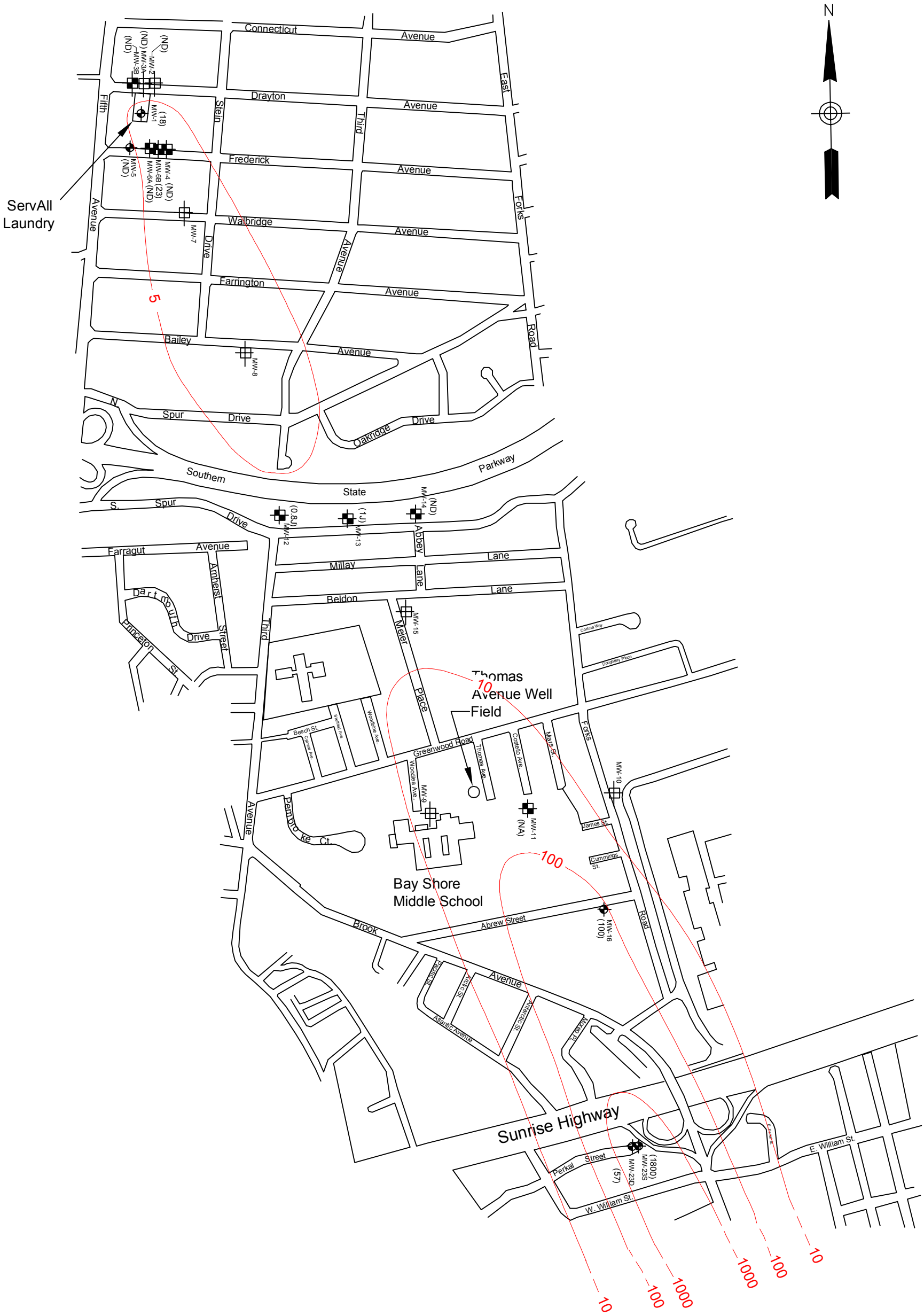

LEGEND:

MW-14 — EXISTING MONITORING WELLS

MISSING MONITORING WELLS

DAMAGED MONITORING WELLS

PCE PLUME

Note:
- All results are in micrograms per liter (ug/L)
- J: Estimated value
- NA: Not analyzed
- ND: Non detect

Note: Monitoring wells MW-6B and MW-6A are screened at a higher elevation within the glacial drift sand (not directly on top of the glacial marine clay).

GRAPHIC SCALE

0 350 700 1400

Scale in Feet

Prepared by : AECOM

SUBMITTED BY : PK

DRAWN BY : VM/jk

APPROVED BY : PK

SERVALL LAUNDARY SITE
BAY SHORE, NEW YORK

PCE ISOCONCENTRATION MAP AUGUST 2012

DATE : OCTOBER 2012

SCALE : AS SHOWN

DRAWING NO. : 10D

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LEGEND:

MW-14 EXISTING MONITORING WELLS

MISSING MONITORING WELLS

DAMAGED MONITORING WELLS

PCE PLUME

Note:
- All results are in micrograms per liter (ug/L)
- NA: Not analyzed
- ND: Non detect

Note: Monitoring wells MW-6B and MW-6A are screened at a higher elevation within the glacial drift sand (not directly on top of the glacial marine clay).

GRAPHIC SCALE

0 350 700 1400

Scale in Feet

Prepared by : AECOM

SUBMITTED BY : PK

DRAWN BY : VM/jk

APPROVED BY : PK

SERVALL LAUNDARY SITE
BAY SHORE, NEW YORK

PCE ISOCONCENTRATION MAP NOVEMBER 2013

DATE : NOVEMBER 2013

SCALE : AS SHOWN

DRAWING NO. : 10E

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LEGEND:

MW-14 — EXISTING MONITORING WELLS

MISSING MONITORING WELLS

DAMAGED MONITORING WELLS

PCE PLUME

Note:
- All results are in micrograms per liter (ug/L)
- J: Estimated value
- NA: Not analyzed
- ND: Non detect

Note: Monitoring wells MW-6B and MW-6A are screened at a higher elevation within the glacial drift sand (not directly on top of the glacial marine clay).

GRAPHIC SCALE

0 350 700 1400

Scale in Feet

Prepared by : AECOM

SUBMITTED BY : PK

DRAWN BY : SC

APPROVED BY : PK

MULTI SITE G - SERVALL LAUNDRY SITE
SITE NO. 1-52-026

PCE ISOCONCENTRATION MAP MARCH 2015

DATE : APRIL 2015

SCALE : AS SHOWN

DRAWING NO. : 10F

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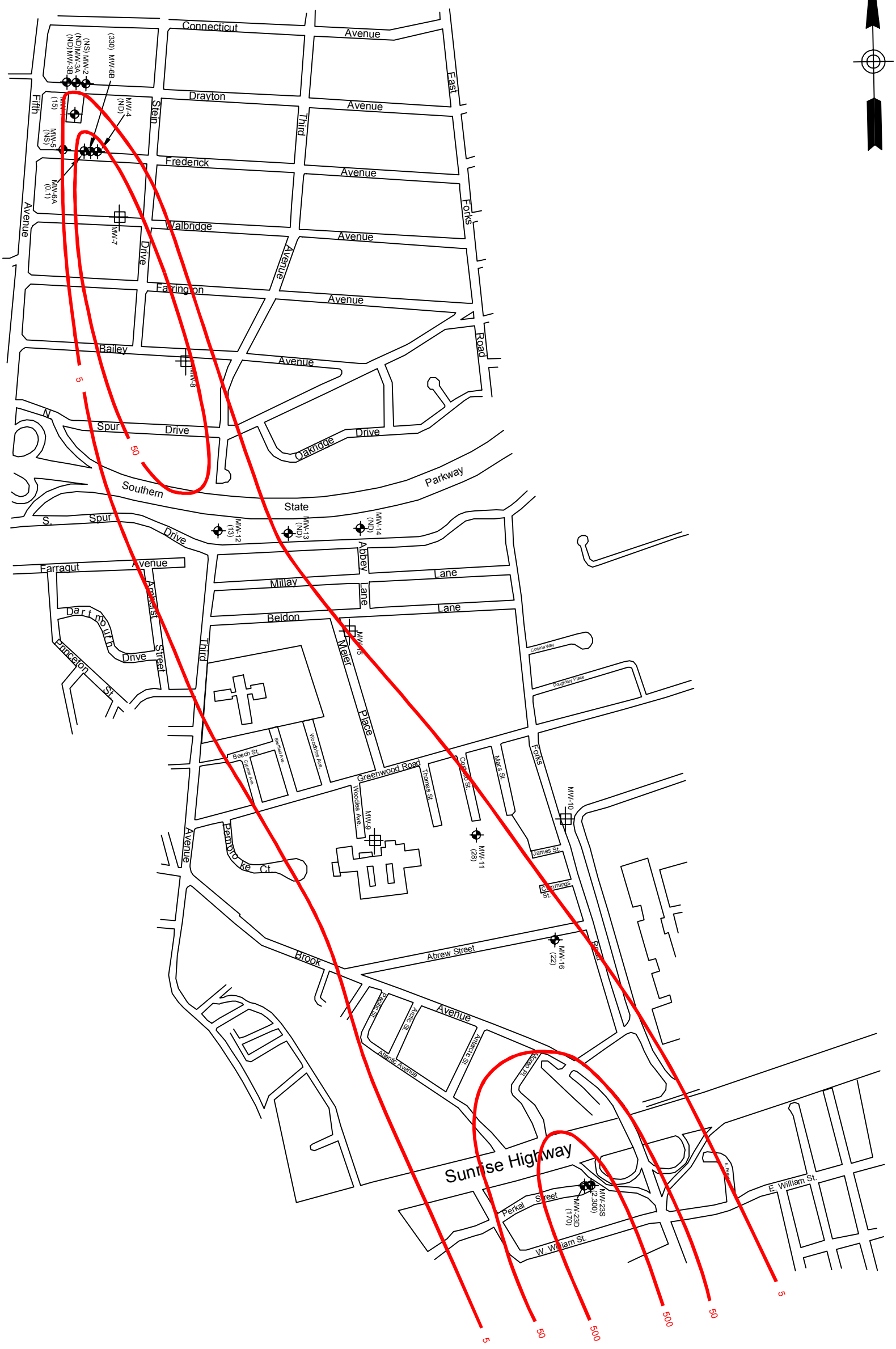

LEGEND:

MW-14 — EXISTING MONITORING WELLS

DAMAGED OR MISSING MONITORING WELLS

PCE PLUME

Note:
- All results are in micrograms per liter (ug/L)
- J: Estimated value
- NS: Not sampled
- NA: Not analyzed
- ND: Non detect

Note: Monitoring wells MW-6B and MW-6A are screened at a higher elevation within the glacial drift sand (not directly on top of the glacial marine clay).

GRAPHIC SCALE

0 350 700 1400

Scale in Feet

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - SERVALL LAUNDRY SITE SITE NO. 1-52-026
DRAWN BY : SC	**PCE ISOCONCENTRATION MAP MAY 2016**
APPROVED BY : PK	DATE : AUGUST 2016 / SCALE : AS SHOWN / DRAWING NO. : **10G**

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LEGEND:

MW-14 — EXISTING MONITORING WELLS

DAMAGED OR MISSING MONITORING WELLS

PCE PLUME

Note:
- All results are in micrograms per liter (ug/L)
- J: Estimated value
- NS: Not sampled
- NA: Not analyzed
- ND: Non detect

Note: Monitoring wells MW-6B and MW-6A are screened at a higher elevation within the glacial drift sand (not directly on top of the glacial marine clay).

GRAPHIC SCALE
0 350 700 1400
Scale in Feet

Prepared by : AECOM

SUBMITTED BY : PK

DRAWN BY : SC

APPROVED BY : PK

MULTI SITE G - SERVALL LAUNDRY SITE
SITE NO. 1-52-026

PCE ISOCONCENTRATION MAP SEPTEMBER 2017

DATE : NOVEMBER 2017

SCALE : AS SHOWN

DRAWING NO. : **10H**

Appendix A

NYSDEC Monitoring Well Field Inspection Logs

SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH/PM

MONITORING WELL FIELD INSPECTION LOG

DATE/TIME: 9/18/2017 0800
Well ID.: MW-1

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?	X	
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL: MW-1

	YES	NO
SURFACE SEAL PRESENT?	X	
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED PID	3.6
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable)	FLUSH
PROTECTIVE CASING MATERIAL TYPE:	STEEL
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches):	6

	YES	NO
LOCK PRESENT?	X	
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet):	86.47
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet):	25.41
MEASURE WELL DIAMETER (Inches):	4
WELL CASING MATERIAL:	STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING:	GOOD
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE	NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES	NO OVERHEAD, UNDER UNKOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

LOCATED BEHIND KC SCHOOBS PRODUCTS IN PARKING LOT

SOME SEMI-PERMANENT VEHICLES PARKED NEAR WELL

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

WELL IN PAVED PARKING AREA

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

PARKED CARS

REMARKS:

TUBING IN WELL

MONITORING WELL INSPECTION LOG

SKETCH

SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH/PM

MONITORING WELL FIELD INSPECTION LOG

DATE/TIME: 9/18/2017 0900
Well ID.: MW-2

	YES	NO
WELL VISIBLE? (If not, provide directions below)		X

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)		X

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?		X
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)		X

HEADSPACE READING (ppm) AND INSTRUMENT USED ..... PID	NA
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable)	NA
PROTECTIVE CASING MATERIAL TYPE:	NA
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches):	NA

	YES	NO
LOCK PRESENT?		X
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet):	NA
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet):	NA
MEASURE WELL DIAMETER (Inches):	NA
WELL CASING MATERIAL:	NA
PHYSICAL CONDITION OF VISIBLE WELL CASING:	NA
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE	NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES	NA

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

NO ACCESS TO THE WELL DUE TO NEW PAVEMENT AND LANDSCAPE

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

NA

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

NA

REMARKS:

SITE CONDITION CHANGE DUE TO LANSCAPE CHANGING, WELL NOT VISIBLE

NO SMAPLING DUE TO WELL NOT FOUND

MONITORING WELL INSPECTION LOG

SKETCH

SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH/PM

MONITORING WELL FIELD INSPECTION LOG

DATE/TIME: 9/21/2016 1020
Well ID.: MW-3A

	YES	NO
WELL VISIBLE? (If not, provide directions below)		X

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?		X
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)		X

HEADSPACE READING (ppm) AND INSTRUMENT USED PID	0.0
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable)	FLUSH
PROTECTIVE CASING MATERIAL TYPE:	STEEL
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches):	6

	YES	NO
LOCK PRESENT?		X
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet):	114.38
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet):	25.96
MEASURE WELL DIAMETER (Inches):	2
WELL CASING MATERIAL:	STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING:	POOR
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE	NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES	NO OVERHEAD, UNDER UNKOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

ALONG NORTH SIDEWALK OF DRAYTON AVE AT END OF CLOTHING BUILDING AND FENCE CORNER

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

LOCATED IN GRASSY MEDIAN BETWEEN SIDEWALK AND STREET

WELL LID MISSING, IN-FILLED WITH SOIL OVER J-PLUG

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

SOIL

REMARKS:

COVERED WITH VEGETATION, TUBING IN WELL

MONITORING WELL INSPECTION LOG

SKETCH

SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH/PM

MONITORING WELL FIELD INSPECTION LOG

DATE/TIME: 09/21/17 1010
Well ID.: MW-3B

	YES	NO
WELL VISIBLE? (If not, provide directions below)		X

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?		X
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)		X

HEADSPACE READING (ppm) AND INSTRUMENT USED ..... PID 0.0
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ..... FLUSH
PROTECTIVE CASING MATERIAL TYPE: ..... STEEL
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): 6

	YES	NO
LOCK PRESENT?		X
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet): 85.33
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet): 26.02
MEASURE WELL DIAMETER (Inches): 2
WELL CASING MATERIAL: ..... STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING: ..... POOR
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ..... NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ..... NO OVERHEAD, UNDER UNKOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

12 FEET WEST OF MW-3A

ALONG NORTHERN SIDEWALK OF DRAYTON AVE

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

WELL LOCATED IN GRASSY MEDIAN BETWEEN ROAD AND SIDEWALK

PROTECTIVE CASING IS DAMAGED, LID BROKEN AND SOIL IN-FILLED OVER J-PLUG

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

SOIL

REMARKS:

VEGETATION COVERING THE WELL, TUBING IN WELL

MONITORING WELL INSPECTION LOG

SKETCH

SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH&PM

MONITORING WELL FIELD INSPECTION LOG

DATE/TIME: 09/19/17 0730
Well ID.: MW-4

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?		X
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)		X

HEADSPACE READING (ppm) AND INSTRUMENT USED PID	0.8
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable)	FLUSH
PROTECTIVE CASING MATERIAL TYPE:	STEEL
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches):	6

	YES	NO
LOCK PRESENT?		X
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet):	83.40
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet):	24.53
MEASURE WELL DIAMETER (Inches):	2
WELL CASING MATERIAL:	STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING:	GOOD
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE	NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES	NO OVERHEAD, UNDER UNKOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

LOCATED IN FRONT OF 15 FREDERICK AVE IN BETWEEN MW-6B AND PZ-4

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

LOCATED ON GRASSY MEDIAN BETWEEN SIDEWALK AND ROADWAY

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

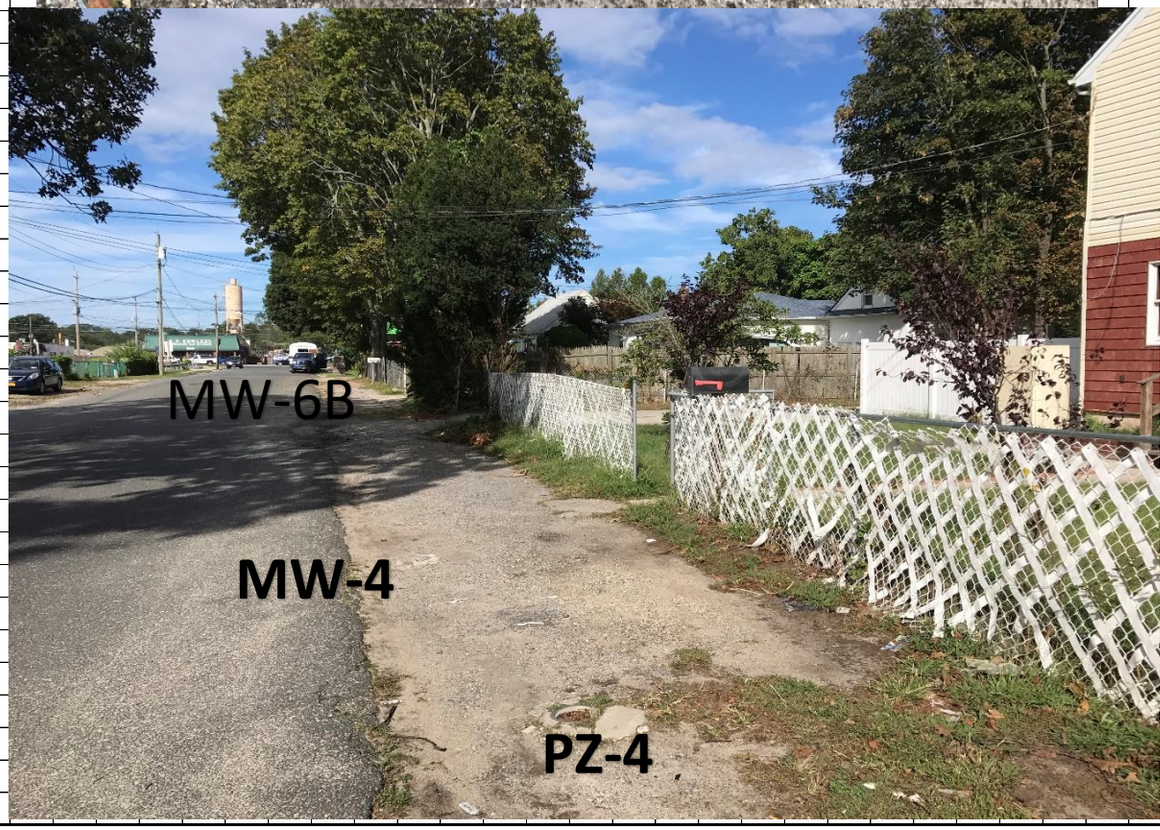
SOIL, GARBAGE

REMARKS:

TUBING IN WELL

MONITORING WELL INSPECTION LOG

SKETCH



SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH & PM

MONITORING WELL FIELD INSPECTION LOG

DATE/TIME: 9/19/17 1000
Well ID.: MW-5

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL: MW-5

	YES	NO
SURFACE SEAL PRESENT?		X
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ..... PID 0.0
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ..... FLUSH
PROTECTIVE CASING MATERIAL TYPE: ..... STEEL
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): 6

	YES	NO
LOCK PRESENT?		X
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet): 25.98
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet): 25.64
MEASURE WELL DIAMETER (Inches): 2
WELL CASING MATERIAL: ..... STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING: ..... GOOD
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ..... NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ..... NO OVERHEAD, UNDER UNKOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
LOCATED IN FRONT OF 9 FREDERICK AVE

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
WELL IN NORTHERN SHOULDER OF ROAD (GRASSY AREA)
CASING BROKEN, LID MISSING

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
SOIL

REMARKS:
UNABLE TO SAMPLE DUE TO LOW WATER LEVEL

MONITORING WELL INSPECTION LOG

SKETCH

SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH PM
DATE/TIME: 9/18/17 1510
Well ID.: MW-6A

MONITORING WELL FIELD INSPECTION LOG

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?		X
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED PID	0.0
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable)	FLUSH
PROTECTIVE CASING MATERIAL TYPE:	STEEL
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches):	6

	YES	NO
LOCK PRESENT?		X
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes,describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet):	59.33
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet):	25.05
MEASURE WELL DIAMETER (Inches):	2
WELL CASING MATERIAL:	STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING:	OK
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE	NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES	NO OVERHEAD, UNER UNKOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

7 FEET EAST OF MW-6A

IN FRONT OF 11 FREDERICK AVENUE

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

WELL IN SHOULDER OF ROAD (NO SIDEWALK), SURFACE SEAL BROKEN

TOP OF WELL FILLED WITH SOIL, GRAVEL AND ROOTS

PROTECTIVE CASING LID MISSING

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

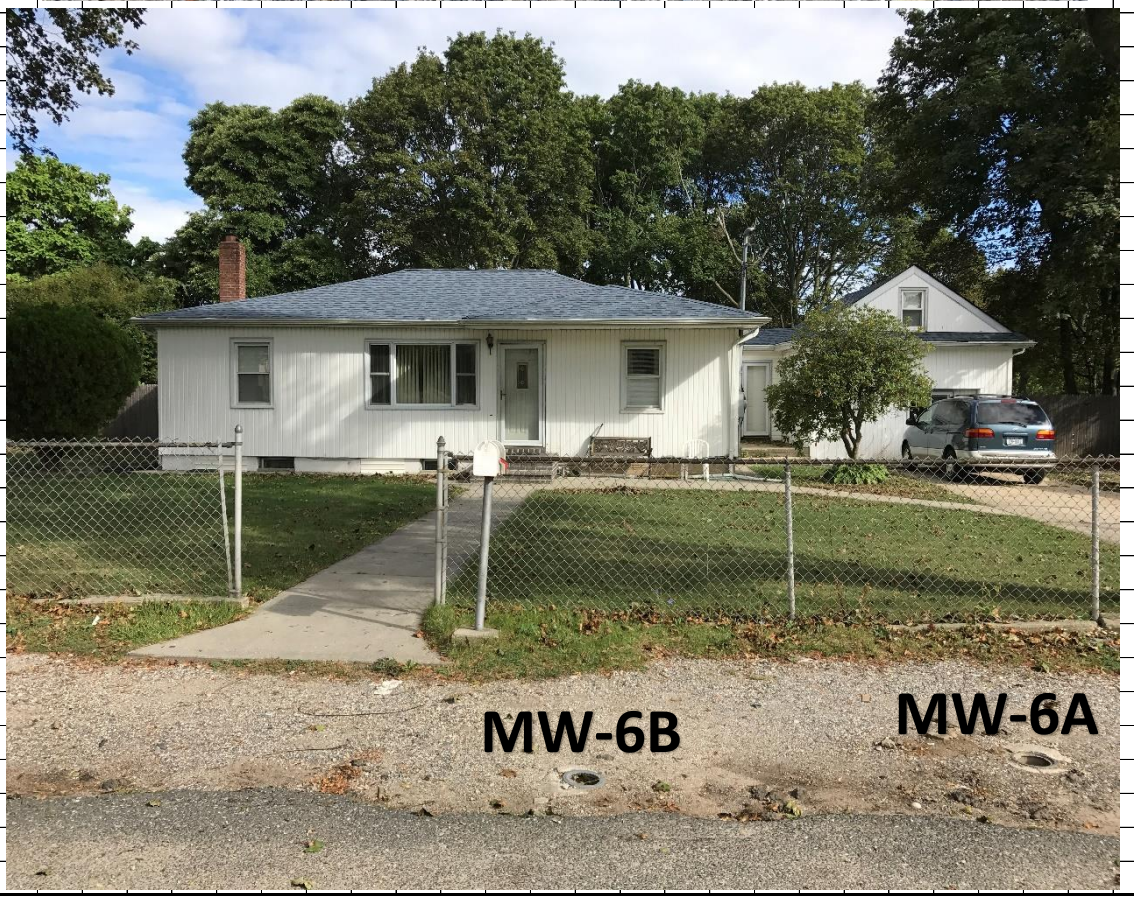
SOIL

REMARKS:

TUBING IN WELL

MONITORING WELL INSPECTION LOG

SKETCH



SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH PM

MONITORING WELL FIELD INSPECTION LOG

DATE/TIME: 9/18/17, 1500
Well ID.: MW-6B

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?		X
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED PID	0.0
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable)	FLUSH
PROTECTIVE CASING MATERIAL TYPE:	STEEL
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches):	6

	YES	NO
LOCK PRESENT?		X
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes,describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet):	28.84
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet):	25.26
MEASURE WELL DIAMETER (Inches):	2
WELL CASING MATERIAL:	STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING:	OK
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE	NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES	NO OVERHEAD, UNDER UNKOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

7 FEET WEST OF MW-6B

IN FRONT OF 11 FREDERICK AVENUE

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

WELL IN SHOULDER OF ROAD (NO SIDEWALK)

NO PROTECTIVE CASING AND LID BROKE, NO SURFACE SEAL, TOP OF WELL COVERED BY SOIL,

PLANT ROOTS AND GRAVEL IN FILLED

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

SOIL

REMARKS:

TUBING IN WELL, BOTTOM IN RED COLOR

MONITORING WELL INSPECTION LOG

SKETCH

SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH/PM

MONITORING WELL FIELD INSPECTION LOG

DATE/TIME: 9/21/17 1330
Well ID.: MW-11

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?	X	
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ..... PID 0.0
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ..... FLUSH
PROTECTIVE CASING MATERIAL TYPE: ..... PVC
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): 6

	YES	NO
LOCK PRESENT?		X
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet): 88.57
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet): 11.02
MEASURE WELL DIAMETER (Inches): 2
WELL CASING MATERIAL: ..... STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING: ..... GOOD
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ..... NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ..... NO OVERHEAD, UNDER UNKNOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
LOCATED IN MIDDLE OF FIELD, NEAR TREE LINE AT BAY SHORE MIDDLE SCHOOL PLAYGROUND

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
WELL IN GRASSY FIELD AREA

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
NONE

REMARKS:
TUBING IN WELL

MONITORING WELL INSPECTION LOG

SKETCH MW-11

SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH/PM

MONITORING WELL FIELD INSPECTION LOG

DATE/TIME: 9/20/2017 1000
Well ID.: MW-12

	YES	NO
WELL VISIBLE? (If not, provide directions below)		X

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)		X

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?		X
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)		X

HEADSPACE READING (ppm) AND INSTRUMENT USED ..... PID NA
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ..... NA
PROTECTIVE CASING MATERIAL TYPE: ..... NA
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): ..... NA

	YES	NO
LOCK PRESENT?		X
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet): ..... NA
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet): ..... NA
MEASURE WELL DIAMETER (Inches): ..... NA
WELL CASING MATERIAL: ..... NA
PHYSICAL CONDITION OF VISIBLE WELL CASING: ..... NA
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ..... NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ..... NA

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

NO ACCESS TO THE WELL DUE TO NEW LANDSCAPING
METAL DETECTOR WAS USED FOR SEARCHING THE WELL BUT FAILED

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

NA

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

NA

REMARKS:

WELL NOT VISIABLE DUE TO NEW LANDSCAPING, USED METAL DETECTOR TO SCREEN VICINITY AREA
IRON AND CONCRETE BLOCK MIXTURE WAS FOUND, NO SAMPLING DUE TO WELL NOT FOUND

MONITORING WELL INSPECTION LOG

SKETCH

SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH/PM

MONITORING WELL FIELD INSPECTION LOG

DATE/TIME: 9/20/17 1445
Well ID.: MW-13

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?		X
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ..... PID 0.0
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ..... FLUSH
PROTECTIVE CASING MATERIAL TYPE: ..... STEEL
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): 6

	YES	NO
LOCK PRESENT?	X	
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet): 94.83
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet): 17.56
MEASURE WELL DIAMETER (Inches): 2
WELL CASING MATERIAL: ..... STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING: ..... GOOD
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ..... NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ..... NO OVERHEAD, UNDER UNKNOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
ALONG HIGHWAY, 7 FT. BEFORE LIGHT POLE 1052

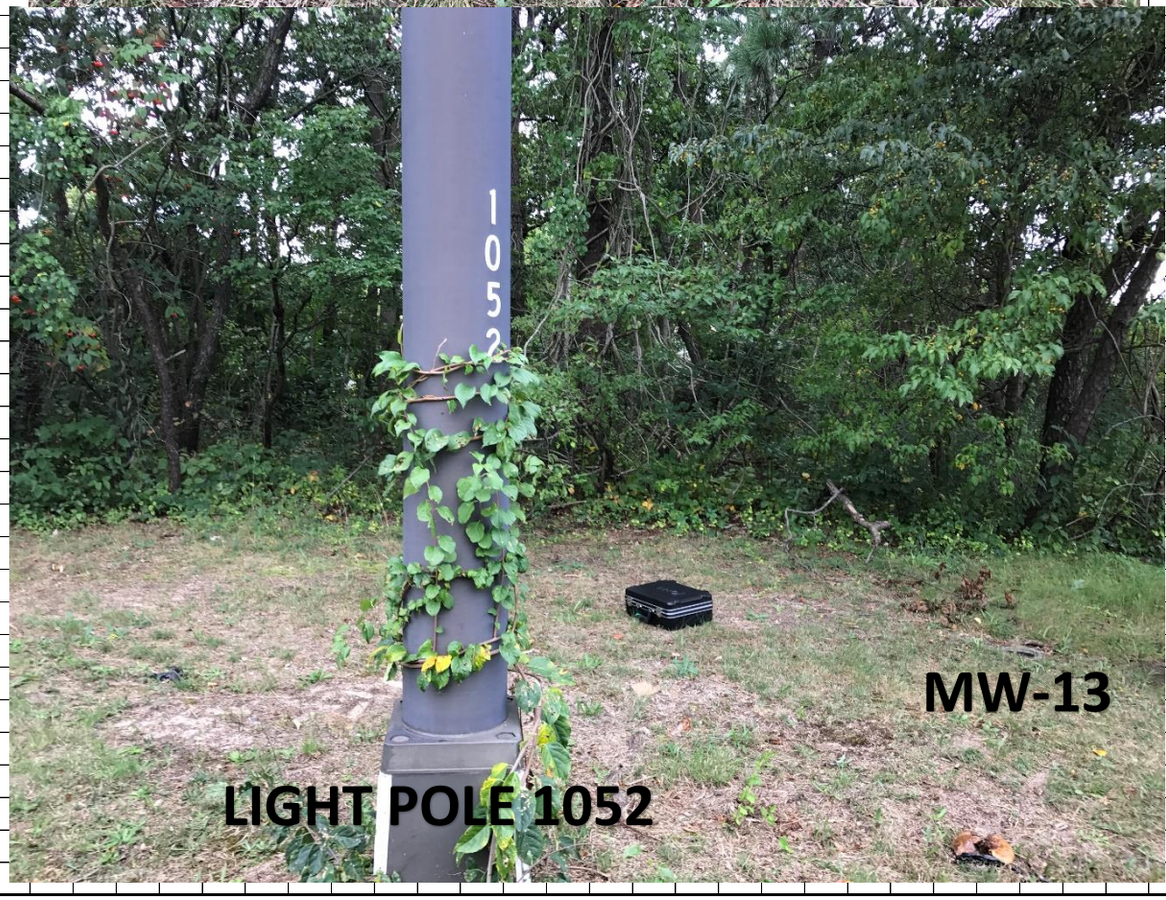
DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
GRASSY ROAD SIDE (SOUTHERN STATE PARKWAY)
LID MISSING

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
SOIL

REMARKS:
TUBING IN WELL

MONITORING WELL INSPECTION LOG

SKETCH



SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH/PM

MONITORING WELL FIELD INSPECTION LOG

DATE/TIME: 9/20/17 1530
Well ID.: MW-14

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?		X
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ..... PID 0.1
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ..... FLUSH
PROTECTIVE CASING MATERIAL TYPE: ..... STEEL
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): 6

	YES	NO
LOCK PRESENT?	X	
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet): 90.48
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet): 18.26
MEASURE WELL DIAMETER (Inches): 2
WELL CASING MATERIAL: ..... STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING: ..... GOOD
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ..... NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ..... NO OVERHEAD, UNDER UNKNOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

45 FEET PAST LIGHT POLE 1056

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

GRASSY ROAD SIDE (SOUTHERN STATE PARKWAY)

LID BROKEN, SOIL IN FILL ABOVE J PLUG

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

SOIL

REMARKS:

TUBING IN WELL

MONITORING WELL INSPECTION LOG

SKETCH

SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH&PM
DATE/TIME: 9/20/17 0900
Well ID.: MW-16

MONITORING WELL FIELD INSPECTION LOG

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?		X
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)		X

HEADSPACE READING (ppm) AND INSTRUMENT USED PID	0.0
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable)	FLUSH
PROTECTIVE CASING MATERIAL TYPE:	STEEL
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches):	6

	YES	NO
LOCK PRESENT?		X
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet):	93.18
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet):	13.05
MEASURE WELL DIAMETER (Inches):	2
WELL CASING MATERIAL:	STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING:	GOOD
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE	NA

PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES…… OVERHEAD WIRE ACROSS STREET, UNDER UNKNOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

LOCATED IN FRONT OF 44 ABREW STREET

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

WELL SET IN PAVEMENT

SOIL ON TOP OF CASING LID, CAP CRACKED UP ONE SIDE

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

PARKED CARS, SOIL

REMARKS:

TUBING IN WELL, PVC WELL CAP

MONITORING WELL INSPECTION LOG

SKETCH

SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH/PM

MONITORING WELL FIELD INSPECTION LOG

DATE/TIME: 9/19/16 1510
Well ID.: MW-23D

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?	X	
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL: MW-23D

	YES	NO
SURFACE SEAL PRESENT?	X	
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ..... PID 45.6
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ..... FLUSH
PROTECTIVE CASING MATERIAL TYPE: ..... STEEL
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): 6

	YES	NO
LOCK PRESENT?		X
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet): 87.20
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet): 6.62
MEASURE WELL DIAMETER (Inches): 2
WELL CASING MATERIAL: ..... STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING: ..... GOOD
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ..... NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ..... NO OVERHEAD, UNDER UNKNOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

END OF PERKAL STREET, WEST OF MW 23S

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

WELL SET IN PAVEMENT

LID BOLTED DOWN

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

PARKED CARS

REMARKS:

TUBING IN WELL

MONITORING WELL INSPECTION LOG

SKETCH

SITE NAME: **ServAll Laundry Site**

SITE ID.: 1-52-077
INSPECTOR: CH/PM
DATE/TIME: 9/19/2017 1500
Well ID.: MW-23S

MONITORING WELL FIELD INSPECTION LOG

	YES	NO
WELL VISIBLE? (If not, provide directions below)	X	

WELL COORDINATES? NYTM X _____ NYTM Y _____ See Report
PDOP Reading from Trimble pathfinder: _____ Satellites: _____
GPS Method (circle) Trimble And/Or Magellan

	YES	NO
WELL I.D. VISIBLE?		X
WELL LOCATION MATCH SITE MAP? (if not, sketch actual location on back)	X	

WELL I.D. AS IT APPEARS ON PROTECTIVE CASING OR WELL:

	YES	NO
SURFACE SEAL PRESENT?	X	
SURFACE SEAL COMPETENT? (If cracked, heaved etc., describe below)		X
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below)	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ..... PID	20.4
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable)	FLUSH
PROTECTIVE CASING MATERIAL TYPE:	STEEL
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches):	6

	YES	NO
LOCK PRESENT?	X	
LOCK FUNCTIONAL?		X
DID YOU REPLACE THE LOCK?		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE CASED? (If yes, describe below)		X
WELL MEASURING POINT VISIBLE?		X

MEASURE WELL DEPTH FROM MEASURING POINT (Feet):	69.27
MEASURE DEPTH TO WATER FROM MEASURING POINT (Feet):	6.72
MEASURE WELL DIAMETER (Inches):	2
WELL CASING MATERIAL:	STEEL
PHYSICAL CONDITION OF VISIBLE WELL CASING:	GOOD
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE	NA
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES	NO OVERHEAD, UNDER UNKNOWN

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.

END OF PERKAL STREET, EAST OF MW 23D

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.

WELL SET IN PAVEMENT

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):

PARKED CARS

REMARKS:

TUBING IN WELL

MONITORING WELL INSPECTION LOG

SKETCH

Appendix B

Monitoring Well Sampling Forms

AECOM

WELL NO. MW-1

WELL SAMPLING FORM	PROJECT: ServAll Laundry Site (1-52-077)	PROJECT No.: 60277021	SHEET: 1 OF 1 SHEETS
LOCATION: 8 Drayton Avenue, Bay Shore, NY		DATE WELL STARTED: 9/18/2017	DATE WELL COMPLETED: 9/21/2017
CLIENT: NYSDEC		NAME OF INSPECTOR: Chengyu Hang, Pratik Manandhar	
DRILLING COMPANY:		SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME : 40.10 Gallons WELL TD: 86.47 ft PUMP INTAKE DEPTH: 81.54 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS: Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	REMARKS
1050	25.41	300							Static water level
1055	25.41	300	16.70	0.681	0.00	6.62	168	0.0	Pump on at 40 psi, clear water
1100	25.41	300	16.57	0.680	0	6.58	162	0.0	
1105	25.41	300	15.53	0.664	0.00	6.62	160	0.0	
1110	25.41	300	16.50	0.656	0.00	6.61	159	0.0	
1130									Collect Sample: MW-1

Pump Type: Bladder Pump

Analytical Parameters: TCL VOCs, PFAS, 1,4 - Dioxane

AECOM

WELL NO. MW-3A

WELL SAMPLING FORM	PROJECT: ServAll Laundry Site (1-52-077)	PROJECT No.: 60277021	SHEET 1 OF SHEETS 1
LOCATION: 8 Drayton Avenue, Bay Shore, NY		DATE WELL STARTED: 9/22/2017	DATE WELL COMPLETED: 9/22/2017
CLIENT: NYSDEC		NAME OF INSPECTOR: Chengyu Hang, Pratik Manandhar	
DRILLING COMPANY:		SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME : 14.50 Gallons WELL TD: 114.38 ft PUMP INTAKE DEPTH: 103.22 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS: Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	REMARKS
1015	25.96	200							Static water level
1020	25.96	200	17.13	1.23	1.32	5.83	142	0.0	Pump on at 35 psi, clear water
1025	25.96	200	17.30	1.230	0.08	5.75	151	0.0	
1030	25.96	200	17.30	1.230	0.00	5.73	157	0.0	
1035	25.96	200	17.29	1.23	0.00	5.73	160	0.0	
1045									Collect Sample: MW-3A

Pump Type: Bladder Pump

Analytical Parameters: TCL VOCs, PFAS, 1,4 - Dioxane

AECOM

WELL NO. MW-3B

WELL SAMPLING FORM	PROJECT: ServAll Laundry Site (1-52-077)	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: 8 Drayton Avenue, Bay Shore, NY		DATE WELL STARTED: 9/22/2017	DATE WELL COMPLETED: 9/22/2017
CLIENT: NYSDEC		NAME OF INSPECTOR: Chengyu Hang, Pratik Manandhar	
DRILLING COMPANY:		SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME : 9.99 Gallons WELL TD: 85.33 ft PUMP INTAKE DEPTH: 80.06 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS: Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	REMARKS
1115	26.02	200							Static water level
1120	26.02	200	20.12	0.627	0.00	6.08	132	0.0	Pump on at 40 psi, clear water
1125	26.02	200	20.10	0.629	0.00	5.92	146	0.0	
1130	26.02	200	20.64	0.640	0.00	5.90	154	0.0	
1135	26.02	200	19.52	0.638	0.00	5.93	158	0.0	
1140	26.02	200	18.68	0.636	0.00	5.93	160	0.0	
1200									Collect Sample: MW-3B

Pump Type: Geotech Bladder Pump

Analytical Parameters: TCL VOCs, PFAS, 1,4 - Dioxane

AECOM

WELL NO. MW-4

WELL SAMPLING FORM	PROJECT: ServAll Laundry Site (1-52-077)	PROJECT No.: 60277021	SHEET: 1 OF 1 SHEETS
LOCATION: 8 Drayton Avenue, Bay Shore, NY		DATE WELL STARTED: 9/19/2017	DATE WELL COMPLETED: 9/19/2017
CLIENT: NYSDEC		NAME OF INSPECTOR: Chengyu Hang, Pratik Manandhar	
DRILLING COMPANY:		SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME : 9.44 Gallons WELL TD: 83.40 ft PUMP INTAKE DEPTH: 78.40 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS: Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	REMARKS
1225	24.53	250							Static water level
1230	24.53	250	16.55	0.53	0.49	5.75	259	0	Pump on at 30 psi, PID = 0.0 ppm
1235	24.53	250	16.73	0.546	0.00	5.67	264	0.0	
1240	24.53	250	16.68	0.548	0.00	5.64	265	0	
1245	24.53	250	16.69	0.549	0.00	5.62	266	0	
1250	24.53	250	16.63	0.547	0.00	5.61	266	0	
1300									Collect sample MW-4

Pump Type: Geotech Bladder Pump

Analytical Parameters: TCL VOCs, PFAS, 1,4 - Dioxane

AECOM

WELL NO. MW-5

WELL SAMPLING FORM	PROJECT: ServAll Laundry Site (1-52-077)	PROJECT No.: 60277021	SHEET: 1 OF 1 SHEETS
LOCATION: 8 Drayton Avenue, Bay Shore, NY		DATE WELL STARTED: 9/19/2017	DATE WELL COMPLETED: 9/19/2017
CLIENT: NYSDEC		NAME OF INSPECTOR: Chengyu Hang, Pratik Manandhar	
DRILLING COMPANY:		SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME : 0.06 Gallons WELL TD: 25.98 ft PUMP INTAKE DEPTH: NA ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS: Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	REMARKS
935	25.64								Static water level
									Unable to sample due to low water
									level (<1 ft of water in well)

Pump Type: Geotech Bladder Pump

Analytical Parameters: NA

AECOM

WELL NO. MW-6A

WELL SAMPLING FORM	PROJECT: ServAll Laundry Site (1-52-077)	PROJECT No.: 60277021	SHEET: 1 OF SHEETS: 1
LOCATION: 8 Drayton Avenue, Bay Shore, NY		DATE WELL STARTED: 9/19/2017	DATE WELL COMPLETED: 9/19/2017
CLIENT: NYSDEC		NAME OF INSPECTOR: Chengyu Hang, Pratik Manandhar	
DRILLING COMPANY:		SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME : 5.30 Gallons WELL TD: 59.33 ft PUMP INTAKE DEPTH: 53.92 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
1037	25.05	250							Static water level
1040	25.05	250	17.13	0.32	3.23	5.69	242	0.0	pump on at 25 psi, clean water
1045	25.05	250	16.04	0.327	2.16	5.6	242	0.0	PID = 0.0ppm
1050	25.05	250	16.01	0.325	1.87	5.5	244	0.0	
1055	25.05	250	15.93	0.325	1.74	5.48	242	0.0	
1100	25.05	250	14.88	0.323	1.72	5.42	242	0.0	
1105									Colect sample MW-6A
1110									Collect MW-6A-MS, MW-6A-MSD

Pump Type: Geotech Bladder Pump

Analytical Parameters: TCL VOCs, PFAS, 1,4 - Dioxane

AECOM

WELL NO. MW-6B

WELL SAMPLING FORM	PROJECT: ServAll Laundry Site (1-52-077)	PROJECT No.: 60277021	SHEET: 1 OF 1 SHEETS
LOCATION: 8 Drayton Avenue, Bay Shore, NY		DATE WELL STARTED: 9/18/2017	DATE WELL COMPLETED: 9/18/2017
CLIENT: NYSDEC		NAME OF INSPECTOR: Chengyu Hang, Pratik Manandhar	
DRILLING COMPANY:		SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME : 0.258 Gallons WELL TD: 28.84 ft PUMP INTAKE DEPTH: 25.00 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
1700	25.26								Static water level
1708	25.26	200	18.97	0.152	7.59	6.16	175	0.0	pump on at 25 psi
1713	25.26	200	17.58	0.144	6.68	5.71	208	0.0	
1718	25.26	200	17.10	0.144	6.44	5.53	225	0.0	
1723	25.26	200	17.07	0.144	6.52	5.53	233	0.0	
1728	25.26	200	16.98	0.144	6.14	5.54	239	0.0	
1733									Collect Sample MW-6B

Pump Type: Geotech Bladder Pump

Analytical Parameters: TCL VOCs, PFAS, 1,4 - Dioxane

AECOM

WELL NO. MW-11

WELL SAMPLING FORM	PROJECT: ServAll Laundry Site (1-52-077)	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: 8 Drayton Avenue, Bay Shore, NY		DATE WELL STARTED: 9/21/2017	DATE WELL COMPLETED: 9/21/2017
CLIENT: NYSDEC		NAME OF INSPECTOR: Chengyu Hang, Pratik Manandhar	
DRILLING COMPANY:		SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME : 12.81 Gallons WELL TD: 88.57 ft PUMP INTAKE DEPTH: 84.20 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS: Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	REMARKS
1740	11.02	300							Static water level
1745	11.02	300	14.75	0.315	0.00	5.80	207	3.6	Pump on at 40 psi, clear water
1750	11.02	300	14.62	0.312	0.00	5.80	207	0.0	
1755	11.02	300	14.58	0.313	0.00	5.84	205	0.0	
1800	11.02	300	14.66	0.312	0.00	5.81	205	0.0	
1815									Collect Sample: MW-11

Pump Type: Geotech Bladder Pump

Analytical Parameters: TCL VOCs, PFAS, 1,4 - Dioxane

AECOM

WELL NO. MW-13

WELL SAMPLING FORM	PROJECT: ServAll Laundry Site (1-52-077)	PROJECT No.: 60277021	SHEET: 1 OF 1 SHEETS
LOCATION: 8 Drayton Avenue, Bay Shore, NY		DATE WELL STARTED: 9/20/2017	DATE WELL COMPLETED: 9/20/2017
CLIENT: NYSDEC		NAME OF INSPECTOR: Chengyu Hang, Pratik Manandhar	
DRILLING COMPANY:		SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME : 12.43 Gallons WELL TD: 94.83 ft PUMP INTAKE DEPTH: 89.24 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
1700	17.56	250							Static water level
1705	17.56	250	15.72	0.31	0	6.33	204	0.0	Pump on at 40 psi, clear water
1710	17.56	250	15.26	0.311	0.00	6.3	210	0.0	
1715	17.56	250	15.20	0.312	0.00	6.31	213	0.0	
1720	17.56	250	15.11	0.313	0.00	6.31	214	0.0	
1730									Collect sample MW-13

Pump Type: Geotech Bladder Pump

Analytical Parameters: TCL VOCs, PFAS, 1,4 - Dioxane

AECOM

WELL NO. MW-14

WELL SAMPLING FORM	PROJECT: ServAll Laundry Site (1-52-077)	PROJECT No.: 60277021	SHEET: 1 OF 1
LOCATION: 8 Drayton Avenue, Bay Shore, NY		DATE WELL STARTED: 9/20/2017	DATE WELL COMPLETED: 9/21/2017
CLIENT: NYSDEC		NAME OF INSPECTOR: Chengyu Hang, Pratik Manandhar	
DRILLING COMPANY:		SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME : 11.90 Gallons WELL TD: 90.48 ft PUMP INTAKE DEPTH: 84.32 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
1220	18.26	300							Static water level
1225	18.26	300	14.96	0.404	0.91	6.57	148	0.0	Pump on at 40 psi
1230	18.26	300	14.94	0.404	0.00	6.57	148	0.0	Clear water
1235	18.26	300	14.92	0.401	0.00	6.50	146	0.0	
1240	18.26	300	14.90	0.401	0.00	6.51	143	0.0	
1300									Collect sample MW-14

Pump Type: Geotech Bladder Pump

Analytical Parameters: TCL VOCs, PFAS, 1,4 - Dioxane

AECOM

WELL NO. MW-16

WELL SAMPLING FORM	PROJECT: ServAll Laundry Site (1-52-077)	PROJECT No.: 60277021	SHEET: 1 OF SHEETS: 1
LOCATION: 8 Drayton Avenue, Bay Shore, NY		DATE WELL STARTED: 9/20/2017	DATE WELL COMPLETED: 9/20/2016
CLIENT: NYSDEC		NAME OF INSPECTOR: Chengyu Hang, Pratik Manandhar	
DRILLING COMPANY:		SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME : 13.21 Gallons WELL TD: 93.18 ft PUMP INTAKE DEPTH: 88.20 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
1225	13.05	300							Static water level
1230	13.05	300	15.35	0.295	0	5.68	-85	0	Pump on at 40 psi
1235	13.05	300	15.12	0.294	0.00	5.54	-82	0.0	
1240	13.05	300	14.90	0.294	0.00	5.47	-80	0	
1245	13.05	300	14.98	0.29	0.00	5.41	-77	0	
1250									Collect sample MW-16

Pump Type: Geotech Bladder Pump

Analytical Parameters: TCL VOCs, PFAS, 1,4 - Dioxane

Appendix C

Site Inspection Form

AECOM

SITE INSPECTION FORM

ServAll Laundry Site
8 Drayton Avenue, Bay Shore, NY
NYSDEC Site ID # 1-52-077

Client: New York State Department of Environmental Conservation

Preparer's Name: Chengyu Hang Date/Time: 09/18/2017, 0845

Asphalt Cap

Has the condition of the asphalt degraded since the last inspectio	☐ YES	■ NO	☐ NA
Are any cracks visible in the asphalt pavement?	☐ YES	■ NO	☐ NA
Is there evidence of uneven settling and or ponding?	☐ YES	■ NO	☐ NA
Is there damage to any surface coverage?	☐ YES	■ NO	☐ NA

Fence

Are there any breaks in the property fence?	☐ YES	■ NO	☐ NA
Are there any damaged or bent posts?	■ YES	☐ NO	☐ NA

Site Condition

Is the building door padlocked?	☐ YES	■ NO	☐ NA
Is the rollup door secured?	■ YES	☐ NO	☐ NA
Is there any evidence of illegal disposal?	☐ YES	■ NO	☐ NA
Is there uncontrolled vegetation growth?	■ YES	☐ NO	☐ NA
Is there any evidence of unauthorized entry?	■ YES	☐ NO	☐ NA

If yes to any question above, provide additional information with photographic evidence below.

Inspector observed the building door was open, indicating potential unauthorized entry.

Photo showing front of site from Drayton Avenue:

Photo showing door at west face of the site (no padlock on door, door partially open):

Photo showing uncontrolled vegetation growth behind the site building:

Photo showing bent fence post behind the site building:

Appendix D

Laboratory Data Packages

Hampton-Clarke
Analytical & Field Services

175 ROUTE 46 WEST, UNIT D · FAIRFIELD, NJ 07004
2 MADISON ROAD, FAIRFIELD, NJ 07004
800-426-9992 · 973-244-9770
FAX: 973-244-9787
WWW.HCVLAB.COM

Project: Multi G Servall

Client PO: D004445-14-1

Report To: AECOM
100 Red School House Rd.
Suite B-1
Chestnut Ridge, NY 10977

Attn: Paul Kareth

Received Date: 9/20/2017

Report Date: 10/11/2017

Deliverables: NYDOH-CatA

Lab ID: AD00135

Lab Project No: 7092010

Robin Cousineau - Quality Assurance Director OR **Jean Revolus - Laboratory Director**

NJ (07071) NY (ELAP11408) CT (PH-0671)
PA (68-00463) KY (90124)

NELAP ACCREDITED TNI LABORATORY

Hampton-Clarke
Analytical & Field Services

THIS CATEGORY "A" REPORT
IS NUMBERED FROM
1 to 61

(Subcontracted data is numbered as attached)

HC Case Narrative

Client: AECOM **HC Project:** 7092010
Project: Multi G Servall

Hampton-Clarke (HC) received the following samples on 9/20/17:

Client ID	HC Sample ID	Matrix	Analysis
MW-4	AD00135-001	Aqueous	Volatile Organics (8260C), Base Neutrals (8270D), PFAs 20 Compounds (537 Mod)*
MW-6A	AD00135-002	Aqueous	Volatile Organics (8260C), Base Neutrals (8270D), PFAs 20 Compounds (537 Mod)*
MW-6B	AD00135-003	Aqueous	Volatile Organics (8260C), Base Neutrals (8270D), PFAs 20 Compounds (537 Mod)*
MW-6B-MS	AD00135-004	Aqueous	Volatile Organics (8260C), Base Neutrals (8270D), PFAs 20 Compounds (537 Mod)*
MW-6B-MSD	AD00135-005	Aqueous	Volatile Organics (8260C), Base Neutrals (8270D), PFAs 20 Compounds (537 Mod)*
MW-23S	AD00135-006	Aqueous	Volatile Organics (8260C), Base Neutrals (8270D), PFAs 20 Compounds (537 Mod)*
MW-23D	AD00135-007	Aqueous	Volatile Organics (8260C), Base Neutrals (8270D), PFAs 20 Compounds (537 Mod)*

* - Indicates analysis was performed by a subcontracted laboratory.

This case narrative is in the form of an exception report. Method specific and/or QA/QC anomalies related to this report only are detailed below.

Volatile Organic Analysis:

Sample AD00135-006 was analyzed at a dilution due to high concentration of target analytes.

The Method Blank Spike for batches MBS64237 and MBS64245 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

The MS/MSD RPD, Matrix Spike and/or Matrix Spike Duplicate for batches MBS64237 and MBS64245 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

2-Chloroethylvinylether did not recover in the Matrix Spike and Matrix Spike Duplicate in batch MBS64237 due to acid preservation of sample. 2-Chloroethylvinylether readily decomposes under acidic conditions. The recovery of 2-Chloroethylvinylether is within QC limits in the Laboratory Control Sample. Please refer to the Form 3 for the recoveries.

Base Neutral/Acid Extractable Analysis:

The Method Blank Spike for batch WMB62293 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

The MS/MSD RPD, Matrix Spike and/or Matrix Spike Duplicate for batch WMB62293 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

Subcontracted Analysis:

Please refer to attached subcontracted laboratory report. Samples AD00135-001 - 007 were submitted to SGS Accutest for PFAs 20 Compounds analysis.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Robin Cousineau
Quality Assurance Director

Or

Jean Revolus
Laboratory Director

10/11/2017
Date

Hampton-Clarke, Inc. (WBE/DBE/SBE)

175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054
Ph (Service Center): 856-780-6057 Fax: 856-780-6056

Hampton-Clarke WBE/DBE/SBE 800-426-9992

A Women-Owned, Disadvantaged, Small Business Enterprise

NELAC/NJ #07071 | PA #68-00463 | NY #11408 | CT #PH-0671 | KY #90124 | DE HSCA Approved

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 7092010

Page 1 of 1

7092010 0002

3) Reporting Requirements (Please Circle)

Turnaround	Report Type	Electronic Data Deliv.
When Available:	Summary	NJ Hazsite
1 Business Day (100%)*	Results + QC (Waste)	Excel Reg. NJ / NY / PA
2 Business Days (75%)*	Reduced:	EnviroData
3 Business Days (50%)*	[ ] NJ [ ] NY	EQuIS:
4 Business Days (35%)*	[ ] PA [ ] Other___	[ ] 4-File [ ] EZ
5 Business Days (25%)	NJ Full / NY ASP CatB	[ ] NYDEC
8 Business Days (Stand.)	NY ASP CatA	[ ] Region 2 or 5
Other: Standard		Other:

* Expedited TAT Not Always Available. Please Check with Lab.

Customer Information

1a) Customer:
Address: 100 Red school House Road STE E
Chestnut Ridge, NY 10977-6715
1b) Email/Cell/Fax/Ph: 845-425-4980 ext. 13
1c) Send Invoice to: Paul.Isareth@aecom.com
1d) Send Report to: Paul.Isareth@aecom.com

Project Information

2a) Project: D004445-14-1 Multi G Sewall
2b) Project Mgr: Paul Kareth
2c) Project Location (City/State): Bayshore, NY
2d) Quote/PO # (If Applicable):

FOR LAB USE ONLY ↓

Batch # AJ00135

===> Check If Contingent ===>

Matrix Codes
DW - Drinking Water S - Soil A - Air
GW - Ground Water SL - Sludge
WW - Waste Water OL - Oil
OT - Other (please specify under item 9, Comments)

7) Analysis (specify methods & parameter lists)

<=== Check If Contingent <===

Lab Sample #	4) Customer Sample ID	5) Matrix	6) Sample Date	6) Sample Time	Sample Type: Composite (C)	Sample Type: Grab (G)	TCL VOCs	PFAS	1,4-Dioxane	8) # of Bottles: None	MeOH	En Core	NaOH	HCl	H2SO4	HNO3	Other: Trizma	9) Comments
001	MW-4	GW	9/19/17	13:00		X	X	X	X	2				3			1	3-40ml vial, 1-250ml bottle 2-1L amber Jar
002	MW-6A	GW	9/18/17	17:30		X	X	X	X	2				3			1	
003	MW-6B	GW	9/19/17	11:00		X	X	X	X	2				3			1	
004	MW-6B-MS	GW	9/19/17	11:05		X	X	X	X	2				3			1	
005	MW-6M-MSD	GW	9/19/17	11:10		X	X	X	X	2				3			1	
006	MW-23S	GW	9/19/17	1300		X	X	X	X	2				3			1	
007	MW-23D	GW	9/19/17	20:00		X	X	X	X	2				3			1	3-40ml vial, 1-250ml bottle 2-1L amber Jar

10) Relinquished by:	Accepted by:	Date	Time
		9/20/17	12:12
		9/21/17	14:30

11) Sampler (print name): Date:

Additional Notes

Comments, Notes, Special Requirements, HAZARDS

Indicate if low-level methods required to meet current groundwater standards (SPLP for soil):
- [ ] BN or BNA (8270D SIM)
- [ ] VOC (8260C SIM or 8011)
- [ ] SPLP (BN, BNA, Metals)
- [ ] 1,4 Dioxane

For NJ LSRP projects, indicate which standards need to be met:
- [ ] NJDEP GWQS
- [ ] NJDEP SRS
- [ ] NJDEP SPLP
- [ ] Other (specify):

Check if applicable:
- [ ] Project-Specific Reporting Limits
- [ ] High Contaminant Concentrations
- [ ] NJ LSRP Project (also check boxes above/right)

Cooler Temperature: 2.4 °C

Please note NUMBERED items. If not completed your analytical work may be delayed.
A fee of $5/sample will be assessed for storage should sample not be activated for any analysis.

Internal use: sampling plan (check box) HC [ ] or client [ ] FSP#

CONDITION UPON RECEIPT

Batch Number AD00135 Entered By: Frantz
Date Entered 9/20/2017 2:47:00 PM

1	Yes	Is there a corresponding COC included with the samples?
2	Yes	Are the samples in a container such as a cooler or Ice chest?
3	NO	Are the COC seals intact?
4	T0056	<--- Thermometer ID. Please specify the Temperature inside the container (in degC). 2.4
5	Yes	Are the samples refrigerated (where required)/have they arrived on ice?
6	Yes	Are the samples within the holding times for the parameters listed on the COC? IF no, list parameters and samples:
7	Yes	Are all of the sample bottles intact? If no, specify sample numbers broken/leaking
8	Yes	Are all of the sample labels or numbers legible? If no specify:
9	Yes	Do the contents match the COC? If no, specify
10	Yes	Is there enough sample sent for the analyses listed on the COC? If no, specify:
11	Yes	Are samples preserved correctly?
12	Yes	Was temperature blank present (Place comment below if not)? If not was temperature of samples verified?
13	NA	Other comments ...Specify
14	NA	Corrective actions (Specify item number and corrective action taken).

PRESERVATION DOCUMENT

Batch Number AD00135 Entered By: Frantz

Date Entered 9/20/2017 2:47:00 PM

Lab#:	Container Size	Container/Vial Check	Parameter	Preservative	Preservative Lot#	PH	pH Lot#
AD00135-001	40ml	G	VO	HCL	169353	1	HC693124
AD00135-002	40ml	G	VO	HCL	169353	1	HC693124
AD00135-003	40ml	G	VO	HCL	169353	1	HC693124
AD00135-004	40ml	G	VO	HCL	169353	1	HC693124
AD00135-005	40ml	G	VO	HCL	169353	1	HC693124
AD00135-006	40ml	G	VO	HCL	169353	1	HC693124
AD00135-007	40ml	G	VO	HCL	169353	1	HC693124

Internal Chain of Custody

Lab#:	DateTime:	Loc or User	Bot Nu	A/M	Analysis
AD00135-001	09/20/17 14:30	FRANT	0	M	Received
AD00135-001	09/20/17 14:46	FRANT	0	M	Login
AD00135-001	09/20/17 16:00	R12	1	A	NONE
AD00135-001	09/21/17 07:59	JKR	1	A	bna
AD00135-001	09/20/17 16:00	R12	2	A	NONE
AD00135-001	09/21/17 08:52	R31	4	A	NONE
AD00135-001	09/21/17 08:52	R31	5	A	NONE
AD00135-001	09/21/17 16:49	WP	5	A	VOA
AD00135-001	09/21/17 08:50	R31	6	A	PH/CHECK
AD00135-002	09/20/17 14:30	FRANT	0	M	Received
AD00135-002	09/20/17 14:46	FRANT	0	M	Login
AD00135-002	09/20/17 16:00	R12	1	A	NONE
AD00135-002	09/21/17 07:59	JKR	1	A	bna
AD00135-002	09/20/17 16:00	R12	2	A	NONE
AD00135-002	09/21/17 08:52	R31	4	A	NONE
AD00135-002	09/21/17 08:52	R31	5	A	NONE
AD00135-002	09/21/17 16:49	WP	5	A	VOA
AD00135-002	09/21/17 08:50	R31	6	A	PH/CHECK
AD00135-003	09/20/17 14:30	FRANT	0	M	Received
AD00135-003	09/20/17 14:46	FRANT	0	M	Login
AD00135-003	09/20/17 16:00	R12	1	A	NONE
AD00135-003	09/21/17 07:59	JKR	1	A	bna
AD00135-003	09/20/17 16:00	R12	2	A	NONE
AD00135-003	09/21/17 08:52	R31	4	A	NONE
AD00135-003	09/21/17 08:52	R31	5	A	NONE
AD00135-003	09/21/17 16:49	WP	5	A	VOA
AD00135-003	09/21/17 08:50	R31	6	A	PH/CHECK
AD00135-004	09/20/17 14:30	FRANT	0	M	Received
AD00135-004	09/20/17 14:46	FRANT	0	M	Login
AD00135-004	09/20/17 16:00	R12	1	A	NONE
AD00135-004	09/21/17 07:59	JKR	1	A	bna
AD00135-004	09/20/17 16:00	R12	2	A	NONE
AD00135-004	09/21/17 08:52	R31	4	A	NONE
AD00135-004	09/21/17 08:52	R31	5	A	NONE
AD00135-004	09/21/17 16:49	WP	5	A	VOA
AD00135-004	09/21/17 08:50	R31	6	A	PH/CHECK
AD00135-005	09/20/17 14:30	FRANT	0	M	Received
AD00135-005	09/20/17 14:46	FRANT	0	M	Login
AD00135-005	09/20/17 16:00	R12	1	A	NONE
AD00135-005	09/20/17 16:00	R12	2	A	NONE
AD00135-005	09/21/17 07:59	JKR	2	A	bna
AD00135-005	09/21/17 08:52	R31	4	A	NONE
AD00135-005	09/21/17 08:52	R31	5	A	NONE
AD00135-005	09/21/17 16:49	WP	5	A	VOA
AD00135-005	09/21/17 08:50	R31	6	A	PH/CHECK
AD00135-006	09/20/17 14:30	FRANT	0	M	Received
AD00135-006	09/20/17 14:46	FRANT	0	M	Login
AD00135-006	09/20/17 16:00	R12	1	A	NONE
AD00135-006	09/21/17 07:59	JKR	1	A	bna
AD00135-006	09/20/17 16:00	R12	2	A	NONE
AD00135-006	09/21/17 08:52	R31	4	A	NONE
AD00135-006	09/22/17 07:56	SG	4	A	VOA
AD00135-006	09/21/17 08:52	R31	5	A	NONE
AD00135-006	09/21/17 16:49	WP	5	A	VOA
AD00135-006	09/21/17 08:50	R31	6	A	PH/CHECK
AD00135-007	09/20/17 14:30	FRANT	0	M	Received
AD00135-007	09/20/17 14:46	FRANT	0	M	Login
AD00135-007	09/20/17 16:00	R12	1	A	NONE
AD00135-007	09/21/17 08:02	JKR	1	A	bna
AD00135-007	09/20/17 16:00	R12	2	A	NONE
AD00135-007	09/21/17 08:50	R31	4	A	PH/CHECK
AD00135-007	09/21/17 08:52	R31	5	A	NONE
AD00135-007	09/21/17 16:49	WP	5	A	VOA
AD00135-007	09/21/17 08:52	R31	6	A	NONE
AD00135-007	09/22/17 07:56	SG	6	A	VOA

Lab#:	DateTime:	Loc or User	Bot Nu	A/M	Analysis

Samples marked as received are stored in coolers or refrigerator R12, or R24 at 4 deg C until Login

Laboratory Chronicle

Client: AECOM
Project: Multi G Servall

HC Project #: 7092010

Lab#: AD00135-001 **Sample ID: MW-4**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
Base Neutrals (no search) 8270	3510C/3550C	09/21/17 08:00	jkr	EPA 8270D	9/21/17 16:51	AH/JB
PFAs EPA537 Mod 20 compounds	SolidPhase			EPA 537 mod	9/28/17 20:28	SGS Accutest
Volatile Organics (no search) 8260	EPA5030/5035			EPA 8260C	9/21/17 17:41	SG

Lab#: AD00135-002 **Sample ID: MW-6A**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
Base Neutrals (no search) 8270	3510C/3550C	09/21/17 08:00	jkr	EPA 8270D	9/21/17 17:14	AH/JB
PFAs EPA537 Mod 20 compounds	SolidPhase			EPA 537 mod	9/28/17 20:58	SGS Accutest
Volatile Organics (no search) 8260	EPA5030/5035			EPA 8260C	9/21/17 17:58	SG

Lab#: AD00135-003 **Sample ID: MW-6B**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
Base Neutrals (no search) 8270	3510C/3550C	09/21/17 08:00	jkr	EPA 8270D	9/21/17 15:41	AH/JB
PFAs EPA537 Mod 20 compounds	SolidPhase			EPA 537 mod	9/28/17 21:29	SGS Accutest
Volatile Organics (no search) 8260	EPA5030/5035			EPA 8260C	9/21/17 19:23	SG

Lab#: AD00135-004 **Sample ID: MW-6B-MS**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
Base Neutrals (no search) 8270	3510C/3550C	09/21/17 08:00	jkr	EPA 8270D	9/21/17 16:04	AH/JB
PFAs EPA537 Mod 20 compounds	SolidPhase			EPA 537 mod	9/28/17 22:00	SGS Accutest
Volatile Organics (no search) 8260	EPA5030/5035			EPA 8260C	9/21/17 18:32	SG

Lab#: AD00135-005 **Sample ID: MW-6B-MSD**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
Base Neutrals (no search) 8270	3510C/3550C	09/21/17 08:00	jkr	EPA 8270D	9/21/17 16:27	AH/JB
PFAs EPA537 Mod 20 compounds	SolidPhase			EPA 537 mod	9/28/17 22:30	SGS Accutest
Volatile Organics (no search) 8260	EPA5030/5035			EPA 8260C	9/21/17 18:49	SG

Laboratory Chronicle

Client: AECOM
Project: Multi G Servall

HC Project #: 7092010

Lab#: AD00135-006 **Sample ID: MW-23S**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
Base Neutrals (no search) 8270	3510C/3550C	09/21/17 08:00	jkr	EPA 8270D	9/21/17 17:38	AH/JB
PFAs EPA537 Mod 20 compounds	SolidPhase			EPA 537 mod	9/28/17 23:01	SGS Accutest
Volatile Organics (no search) 8260	EPA5030/5035			EPA 8260C	9/22/17 09:48	SG

Lab#: AD00135-007 **Sample ID: MW-23D**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
Base Neutrals (no search) 8270	3510C/3550C	09/21/17 08:00	jkr	EPA 8270D	9/21/17 18:01	AH/JB
PFAs EPA537 Mod 20 compounds	SolidPhase			EPA 537 mod	9/28/17 23:32	SGS Accutest
Volatile Organics (no search) 8260	EPA5030/5035			EPA 8260C	9/22/17 09:31	SG

HC Reporting Limit Definitions/Data Qualifiers

REPORTING DEFINITIONS

DF = Dilution Factor

MDL = Method Detection Limit

RL* = Reporting Limit

ND = Not Detected

RT = Retention Time

NA = Not Applicable

**Samples with elevated Reporting Limits (RLs) as a result of a dilution may not achieve client reporting limits in some cases. The elevated RLs are unavoidable consequences of sample dilution required to quantitate target analytes that exceed the calibration range of the instrument.*

DATA QUALIFIERS

A- Indicates that the Tentatively Identified Compound (TIC) is suspected to be an aldol-condensation product. These compounds are by-products of acetone and methylene chloride used in the extraction process.

B- Indicates analyte was present in the Method Blank and sample.

d- For Pesticide and PCB analysis, the concentration between primary and secondary columns is greater than 40%. The lower concentration is generally reported.

E- Indicates the concentration exceeded the upper calibration range of the instrument.

J- Indicates the value is estimated because it is either a Tentatively Identified Compound (TIC) or the reported concentration is greater than the MDL but less than the RL. For samples results between the MDL and RL there is a possibility of false positives or misidentification at the quantitation levels. Additionally, the acceptance criteria for QC samples may not be met.

R- Retention Time is out.

Y- Indicates a contaminant found in the blank at less than 10% of the concentration of a contaminant found in the sample.

HC Report of Analysis

Client: AECOM
Project: Multi G Servall

HC Project #: 7092010

Sample ID: MW-4
Lab#: AD00135-001
Matrix: Aqueous

Collection Date: 9/19/2017
Receipt Date: 9/20/2017

Base Neutrals (no search) 8270

Analyte	DF	Units	RL	Result
1,4-Dioxane	1	ug/l	0.12	ND

PFAs EPA537 Mod 20 compounds

Analyte	DF	Units	RL	Result
Perfluoro-n-undeconoic acid	1	ng/l		Attached

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	1.0	ND
1,1,2,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	1.0	ND
1,1,2-Trichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethene	1	ug/l	1.0	ND
1,2,3-Trichlorobenzene	1	ug/l	1.0	ND
1,2,4-Trichlorobenzene	1	ug/l	1.0	ND
1,2-Dibromo-3-chloropropane	1	ug/l	1.0	ND
1,2-Dibromoethane	1	ug/l	1.0	ND
1,2-Dichlorobenzene	1	ug/l	1.0	ND
1,2-Dichloroethane	1	ug/l	0.50	ND
1,2-Dichloropropane	1	ug/l	1.0	ND
1,3-Dichlorobenzene	1	ug/l	1.0	ND
1,4-Dichlorobenzene	1	ug/l	1.0	ND
2-Butanone	1	ug/l	1.0	ND
2-Hexanone	1	ug/l	1.0	ND
4-Methyl-2-pentanone	1	ug/l	1.0	ND
Acetone	1	ug/l	5.0	ND
Benzene	1	ug/l	0.50	ND
Bromochloromethane	1	ug/l	1.0	ND
Bromodichloromethane	1	ug/l	1.0	ND
Bromoform	1	ug/l	1.0	ND
Bromomethane	1	ug/l	1.0	ND
Carbon disulfide	1	ug/l	1.0	ND
Carbon tetrachloride	1	ug/l	1.0	ND
Chlorobenzene	1	ug/l	1.0	ND
Chloroethane	1	ug/l	1.0	ND
Chloroform	1	ug/l	1.0	ND
Chloromethane	1	ug/l	1.0	ND
cis-1,2-Dichloroethene	1	ug/l	1.0	ND
cis-1,3-Dichloropropene	1	ug/l	1.0	ND
Cyclohexane	1	ug/l	1.0	ND
Dibromochloromethane	1	ug/l	1.0	ND
Dichlorodifluoromethane	1	ug/l	1.0	ND
Ethylbenzene	1	ug/l	1.0	ND
Isopropylbenzene	1	ug/l	1.0	ND
m&p-Xylenes	1	ug/l	1.0	ND
Methyl Acetate	1	ug/l	1.0	ND
Methylcyclohexane	1	ug/l	1.0	ND

Sample ID: MW-4 **Collection Date:** 9/19/2017
Lab#: AD00135-001 **Receipt Date:** 9/20/2017
Matrix: Aqueous

Methylene chloride	1	ug/l	1.0	ND
Methyl-t-butyl ether	1	ug/l	0.50	ND
o-Xylene	1	ug/l	1.0	ND
Styrene	1	ug/l	1.0	ND
Tetrachloroethene	1	ug/l	1.0	ND
Toluene	1	ug/l	1.0	ND
trans-1,2-Dichloroethene	1	ug/l	1.0	ND
trans-1,3-Dichloropropene	1	ug/l	1.0	ND
Trichloroethene	1	ug/l	1.0	ND
Trichlorofluoromethane	1	ug/l	1.0	ND
Vinyl chloride	1	ug/l	1.0	ND
Xylenes (Total)	1	ug/l	1.0	ND

Sample ID: MW-6A
Lab#: AD00135-002
Matrix: Aqueous

Collection Date: 9/19/2017
Receipt Date: 9/20/2017

Base Neutrals (no search) 8270

Analyte	DF	Units	RL	Result
1,4-Dioxane	1	ug/l	0.13	ND

PFAs EPA537 Mod 20 compounds

Analyte	DF	Units	RL	Result
Perfluoro-n-undeconoic acid	**1**	**ng/l**		**Attached**

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	1.0	ND
1,1,2,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	1.0	ND
1,1,2-Trichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethene	1	ug/l	1.0	ND
1,2,3-Trichlorobenzene	1	ug/l	1.0	ND
1,2,4-Trichlorobenzene	1	ug/l	1.0	ND
1,2-Dibromo-3-chloropropane	1	ug/l	1.0	ND
1,2-Dibromoethane	1	ug/l	1.0	ND
1,2-Dichlorobenzene	1	ug/l	1.0	ND
1,2-Dichloroethane	1	ug/l	0.50	ND
1,2-Dichloropropane	1	ug/l	1.0	ND
1,3-Dichlorobenzene	1	ug/l	1.0	ND
1,4-Dichlorobenzene	1	ug/l	1.0	ND
2-Butanone	1	ug/l	1.0	ND
2-Hexanone	1	ug/l	1.0	ND
4-Methyl-2-pentanone	1	ug/l	1.0	ND
Acetone	1	ug/l	5.0	ND
Benzene	1	ug/l	0.50	ND
Bromochloromethane	1	ug/l	1.0	ND
Bromodichloromethane	1	ug/l	1.0	ND
Bromoform	1	ug/l	1.0	ND
Bromomethane	1	ug/l	1.0	ND
Carbon disulfide	1	ug/l	1.0	ND
Carbon tetrachloride	1	ug/l	1.0	ND
Chlorobenzene	1	ug/l	1.0	ND
Chloroethane	1	ug/l	1.0	ND
Chloroform	1	ug/l	1.0	ND
Chloromethane	1	ug/l	1.0	ND
cis-1,2-Dichloroethene	**1**	**ug/l**	**1.0**	**51**
cis-1,3-Dichloropropene	1	ug/l	1.0	ND
Cyclohexane	1	ug/l	1.0	ND
Dibromochloromethane	1	ug/l	1.0	ND
Dichlorodifluoromethane	1	ug/l	1.0	ND
Ethylbenzene	1	ug/l	1.0	ND
Isopropylbenzene	1	ug/l	1.0	ND
m&p-Xylenes	1	ug/l	1.0	ND
Methyl Acetate	1	ug/l	1.0	ND
Methylcyclohexane	1	ug/l	1.0	ND
Methylene chloride	1	ug/l	1.0	ND
Methyl-t-butyl ether	1	ug/l	0.50	ND
o-Xylene	1	ug/l	1.0	ND
Styrene	1	ug/l	1.0	ND
Tetrachloroethene	**1**	**ug/l**	**1.0**	**340**
Toluene	1	ug/l	1.0	ND
trans-1,2-Dichloroethene	1	ug/l	1.0	ND

Sample ID: MW-6A **Collection Date: 9/19/2017**
Lab#: AD00135-002 **Receipt Date: 9/20/2017**
Matrix: Aqueous

trans-1,3-Dichloropropene	1	ug/l	1.0	ND
Trichloroethene	**1**	**ug/l**	**1.0**	**8.1**
Trichlorofluoromethane	1	ug/l	1.0	ND
Vinyl chloride	1	ug/l	1.0	ND
Xylenes (Total)	1	ug/l	1.0	ND

Sample ID: MW-6B
Lab#: AD00135-003
Matrix: Aqueous

Collection Date: 9/19/2017
Receipt Date: 9/20/2017

Base Neutrals (no search) 8270

Analyte	DF	Units	RL	Result
1,4-Dioxane	1	ug/l	0.13	ND

PFAs EPA537 Mod 20 compounds

Analyte	DF	Units	RL	Result
Perfluoro-n-undeconoic acid	**1**	**ng/l**		**Attached**

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	1.0	ND
1,1,2,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	1.0	ND
1,1,2-Trichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethene	1	ug/l	1.0	ND
1,2,3-Trichlorobenzene	1	ug/l	1.0	ND
1,2,4-Trichlorobenzene	1	ug/l	1.0	ND
1,2-Dibromo-3-chloropropane	1	ug/l	1.0	ND
1,2-Dibromoethane	1	ug/l	1.0	ND
1,2-Dichlorobenzene	1	ug/l	1.0	ND
1,2-Dichloroethane	1	ug/l	0.50	ND
1,2-Dichloropropane	1	ug/l	1.0	ND
1,3-Dichlorobenzene	1	ug/l	1.0	ND
1,4-Dichlorobenzene	1	ug/l	1.0	ND
2-Butanone	1	ug/l	1.0	ND
2-Hexanone	1	ug/l	1.0	ND
4-Methyl-2-pentanone	1	ug/l	1.0	ND
Acetone	1	ug/l	5.0	ND
Benzene	1	ug/l	0.50	ND
Bromochloromethane	1	ug/l	1.0	ND
Bromodichloromethane	1	ug/l	1.0	ND
Bromoform	1	ug/l	1.0	ND
Bromomethane	1	ug/l	1.0	ND
Carbon disulfide	1	ug/l	1.0	ND
Carbon tetrachloride	1	ug/l	1.0	ND
Chlorobenzene	1	ug/l	1.0	ND
Chloroethane	1	ug/l	1.0	ND
Chloroform	1	ug/l	1.0	ND
Chloromethane	1	ug/l	1.0	ND
cis-1,2-Dichloroethene	1	ug/l	1.0	ND
cis-1,3-Dichloropropene	1	ug/l	1.0	ND
Cyclohexane	1	ug/l	1.0	ND
Dibromochloromethane	1	ug/l	1.0	ND
Dichlorodifluoromethane	1	ug/l	1.0	ND
Ethylbenzene	1	ug/l	1.0	ND
Isopropylbenzene	1	ug/l	1.0	ND
m&p-Xylenes	1	ug/l	1.0	ND
Methyl Acetate	1	ug/l	1.0	ND
Methylcyclohexane	1	ug/l	1.0	ND
Methylene chloride	1	ug/l	1.0	ND
Methyl-t-butyl ether	1	ug/l	0.50	ND
o-Xylene	1	ug/l	1.0	ND
Styrene	1	ug/l	1.0	ND
Tetrachloroethene	**1**	**ug/l**	**1.0**	**11**
Toluene	1	ug/l	1.0	ND
trans-1,2-Dichloroethene	1	ug/l	1.0	ND

Sample ID: MW-6B **Collection Date: 9/19/2017**
Lab#: AD00135-003 **Receipt Date: 9/20/2017**
Matrix: Aqueous

trans-1,3-Dichloropropene	1	ug/l	1.0	ND
Trichloroethene	**1**	**ug/l**	**1.0**	**22**
Trichlorofluoromethane	1	ug/l	1.0	ND
Vinyl chloride	1	ug/l	1.0	ND
Xylenes (Total)	1	ug/l	1.0	ND

Sample ID: MW-6B-MS
Lab#: AD00135-004
Matrix: Aqueous

Collection Date: 9/19/2017
Receipt Date: 9/20/2017

Base Neutrals (no search) 8270

Analyte	DF	Units	RL	Result
1,4-Dioxane	1	ug/l	0.13	26

PFAs EPA537 Mod 20 compounds

Analyte	DF	Units	RL	Result
Perfluoro-n-undeconoic acid	1	ng/l		Attached

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	1.0	23
1,1,2,2-Tetrachloroethane	1	ug/l	1.0	14
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	1.0	26
1,1,2-Trichloroethane	1	ug/l	1.0	17
1,1-Dichloroethane	1	ug/l	1.0	20
1,1-Dichloroethene	1	ug/l	1.0	21
1,2,3-Trichlorobenzene	1	ug/l	1.0	11
1,2,4-Trichlorobenzene	1	ug/l	1.0	13
1,2-Dibromo-3-chloropropane	1	ug/l	1.0	10
1,2-Dibromoethane	1	ug/l	1.0	18
1,2-Dichlorobenzene	1	ug/l	1.0	15
1,2-Dichloroethane	1	ug/l	0.50	23
1,2-Dichloropropane	1	ug/l	1.0	20
1,3-Dichlorobenzene	1	ug/l	1.0	16
1,4-Dichlorobenzene	1	ug/l	1.0	16
2-Butanone	1	ug/l	1.0	14
2-Hexanone	1	ug/l	1.0	17
4-Methyl-2-pentanone	1	ug/l	1.0	17
Acetone	1	ug/l	5.0	96
Benzene	1	ug/l	0.50	22
Bromochloromethane	1	ug/l	1.0	20
Bromodichloromethane	1	ug/l	1.0	21
Bromoform	1	ug/l	1.0	15
Bromomethane	1	ug/l	1.0	23
Carbon disulfide	1	ug/l	1.0	25
Carbon tetrachloride	1	ug/l	1.0	26
Chlorobenzene	1	ug/l	1.0	19
Chloroethane	1	ug/l	1.0	22
Chloroform	1	ug/l	1.0	22
Chloromethane	1	ug/l	1.0	25
cis-1,2-Dichloroethene	1	ug/l	1.0	22
cis-1,3-Dichloropropene	1	ug/l	1.0	16
Cyclohexane	1	ug/l	1.0	23
Dibromochloromethane	1	ug/l	1.0	19
Dichlorodifluoromethane	1	ug/l	1.0	30
Ethylbenzene	1	ug/l	1.0	17
Isopropylbenzene	1	ug/l	1.0	17
m&p-Xylenes	1	ug/l	1.0	36
Methyl Acetate	1	ug/l	1.0	18
Methylcyclohexane	1	ug/l	1.0	23
Methylene chloride	1	ug/l	1.0	20
Methyl-t-butyl ether	1	ug/l	0.50	19
o-Xylene	1	ug/l	1.0	18
Styrene	1	ug/l	1.0	17
Tetrachloroethene	1	ug/l	1.0	33
Toluene	1	ug/l	1.0	19
trans-1,2-Dichloroethene	1	ug/l	1.0	22

Sample ID: MW-6B-MS
Lab#: AD00135-004
Matrix: Aqueous

Collection Date: 9/19/2017
Receipt Date: 9/20/2017

trans-1,3-Dichloropropene	1	ug/l	1.0	17
Trichloroethene	1	ug/l	1.0	44
Trichlorofluoromethane	1	ug/l	1.0	26
Vinyl chloride	1	ug/l	1.0	21
Xylenes (Total)	1	ug/l	1.0	54

Sample ID: MW-6B-MSD
Lab#: AD00135-005
Matrix: Aqueous

Collection Date: 9/19/2017
Receipt Date: 9/20/2017

Base Neutrals (no search) 8270

Analyte	DF	Units	RL	Result
1,4-Dioxane	1	ug/l	0.13	32

PFAs EPA537 Mod 20 compounds

Analyte	DF	Units	RL	Result
Perfluoro-n-undeconoic acid	1	ng/l		Attached

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	1.0	23
1,1,2,2-Tetrachloroethane	1	ug/l	1.0	14
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	1.0	24
1,1,2-Trichloroethane	1	ug/l	1.0	17
1,1-Dichloroethane	1	ug/l	1.0	20
1,1-Dichloroethene	1	ug/l	1.0	22
1,2,3-Trichlorobenzene	1	ug/l	1.0	14
1,2,4-Trichlorobenzene	1	ug/l	1.0	14
1,2-Dibromo-3-chloropropane	1	ug/l	1.0	11
1,2-Dibromoethane	1	ug/l	1.0	18
1,2-Dichlorobenzene	1	ug/l	1.0	16
1,2-Dichloroethane	1	ug/l	0.50	22
1,2-Dichloropropane	1	ug/l	1.0	20
1,3-Dichlorobenzene	1	ug/l	1.0	16
1,4-Dichlorobenzene	1	ug/l	1.0	15
2-Butanone	1	ug/l	1.0	16
2-Hexanone	1	ug/l	1.0	17
4-Methyl-2-pentanone	1	ug/l	1.0	16
Acetone	1	ug/l	5.0	94
Benzene	1	ug/l	0.50	23
Bromochloromethane	1	ug/l	1.0	20
Bromodichloromethane	1	ug/l	1.0	21
Bromoform	1	ug/l	1.0	15
Bromomethane	1	ug/l	1.0	22
Carbon disulfide	1	ug/l	1.0	25
Carbon tetrachloride	1	ug/l	1.0	25
Chlorobenzene	1	ug/l	1.0	18
Chloroethane	1	ug/l	1.0	24
Chloroform	1	ug/l	1.0	22
Chloromethane	1	ug/l	1.0	25
cis-1,2-Dichloroethene	1	ug/l	1.0	22
cis-1,3-Dichloropropene	1	ug/l	1.0	16
Cyclohexane	1	ug/l	1.0	21
Dibromochloromethane	1	ug/l	1.0	18
Dichlorodifluoromethane	1	ug/l	1.0	28
Ethylbenzene	1	ug/l	1.0	18
Isopropylbenzene	1	ug/l	1.0	17
m&p-Xylenes	1	ug/l	1.0	35
Methyl Acetate	1	ug/l	1.0	18
Methylcyclohexane	1	ug/l	1.0	24
Methylene chloride	1	ug/l	1.0	21
Methyl-t-butyl ether	1	ug/l	0.50	20
o-Xylene	1	ug/l	1.0	18
Styrene	1	ug/l	1.0	17
Tetrachloroethene	1	ug/l	1.0	32
Toluene	1	ug/l	1.0	18
trans-1,2-Dichloroethene	1	ug/l	1.0	22

Sample ID: MW-6B-MSD
Lab#: AD00135-005
Matrix: Aqueous

Collection Date: 9/19/2017
Receipt Date: 9/20/2017

trans-1,3-Dichloropropene	1	ug/l	1.0	16
Trichloroethene	1	ug/l	1.0	44
Trichlorofluoromethane	1	ug/l	1.0	24
Vinyl chloride	1	ug/l	1.0	21
Xylenes (Total)	1	ug/l	1.0	53

Sample ID: MW-23S
Lab#: AD00135-006
Matrix: Aqueous

Collection Date: 9/19/2017
Receipt Date: 9/20/2017

Base Neutrals (no search) 8270

Analyte	DF	Units	RL	Result
1,4-Dioxane	1	ug/l	0.12	ND

PFAs EPA537 Mod 20 compounds

Analyte	DF	Units	RL	Result
Perfluoro-n-undeconoic acid	**1**	**ng/l**		**Attached**

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	5	ug/l	5.0	ND
1,1,2,2-Tetrachloroethane	5	ug/l	5.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ug/l	5.0	ND
1,1,2-Trichloroethane	5	ug/l	5.0	ND
1,1-Dichloroethane	5	ug/l	5.0	ND
1,1-Dichloroethene	5	ug/l	5.0	ND
1,2,3-Trichlorobenzene	5	ug/l	5.0	ND
1,2,4-Trichlorobenzene	5	ug/l	5.0	ND
1,2-Dibromo-3-chloropropane	5	ug/l	5.0	ND
1,2-Dibromoethane	5	ug/l	5.0	ND
1,2-Dichlorobenzene	5	ug/l	5.0	ND
1,2-Dichloroethane	5	ug/l	2.5	ND
1,2-Dichloropropane	5	ug/l	5.0	ND
1,3-Dichlorobenzene	5	ug/l	5.0	ND
1,4-Dichlorobenzene	5	ug/l	5.0	ND
2-Butanone	5	ug/l	5.0	ND
2-Hexanone	5	ug/l	5.0	ND
4-Methyl-2-pentanone	5	ug/l	5.0	ND
Acetone	5	ug/l	25	ND
Benzene	5	ug/l	2.5	ND
Bromochloromethane	5	ug/l	5.0	ND
Bromodichloromethane	5	ug/l	5.0	ND
Bromoform	5	ug/l	5.0	ND
Bromomethane	5	ug/l	5.0	ND
Carbon disulfide	5	ug/l	5.0	ND
Carbon tetrachloride	5	ug/l	5.0	ND
Chlorobenzene	5	ug/l	5.0	ND
Chloroethane	5	ug/l	5.0	ND
Chloroform	5	ug/l	5.0	ND
Chloromethane	5	ug/l	5.0	ND
cis-1,2-Dichloroethene	**5**	**ug/l**	**5.0**	**15**
cis-1,3-Dichloropropene	5	ug/l	5.0	ND
Cyclohexane	5	ug/l	5.0	ND
Dibromochloromethane	5	ug/l	5.0	ND
Dichlorodifluoromethane	5	ug/l	5.0	ND
Ethylbenzene	5	ug/l	5.0	ND
Isopropylbenzene	5	ug/l	5.0	ND
m&p-Xylenes	5	ug/l	5.0	ND
Methyl Acetate	5	ug/l	5.0	ND
Methylcyclohexane	5	ug/l	5.0	ND
Methylene chloride	5	ug/l	5.0	ND
Methyl-t-butyl ether	5	ug/l	2.5	ND
o-Xylene	5	ug/l	5.0	ND
Styrene	5	ug/l	5.0	ND
Tetrachloroethene	**5**	**ug/l**	**5.0**	**1000**
Toluene	5	ug/l	5.0	ND
trans-1,2-Dichloroethene	5	ug/l	5.0	ND

Sample ID: MW-23S **Collection Date: 9/19/2017**
Lab#: AD00135-006 **Receipt Date: 9/20/2017**
Matrix: Aqueous

trans-1,3-Dichloropropene	5	ug/l	5.0	ND
Trichloroethene	**5**	**ug/l**	**5.0**	**8.3**
Trichlorofluoromethane	5	ug/l	5.0	ND
Vinyl chloride	5	ug/l	5.0	ND
Xylenes (Total)	5	ug/l	5.0	ND

Sample ID: MW-23D
Lab#: AD00135-007
Matrix: Aqueous

Collection Date: 9/19/2017
Receipt Date: 9/20/2017

Base Neutrals (no search) 8270

Analyte	DF	Units	RL	Result
1,4-Dioxane	**1**	**ug/l**	**0.12**	**0.99**

PFAs EPA537 Mod 20 compounds

Analyte	DF	Units	RL	Result
Perfluoro-n-undeconoic acid	**1**	**ng/l**		**Attached**

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	1.0	ND
1,1,2,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	1.0	ND
1,1,2-Trichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethene	**1**	**ug/l**	**1.0**	**1.1**
1,2,3-Trichlorobenzene	1	ug/l	1.0	ND
1,2,4-Trichlorobenzene	1	ug/l	1.0	ND
1,2-Dibromo-3-chloropropane	1	ug/l	1.0	ND
1,2-Dibromoethane	1	ug/l	1.0	ND
1,2-Dichlorobenzene	1	ug/l	1.0	ND
1,2-Dichloroethane	1	ug/l	0.50	ND
1,2-Dichloropropane	1	ug/l	1.0	ND
1,3-Dichlorobenzene	1	ug/l	1.0	ND
1,4-Dichlorobenzene	1	ug/l	1.0	ND
2-Butanone	1	ug/l	1.0	ND
2-Hexanone	1	ug/l	1.0	ND
4-Methyl-2-pentanone	1	ug/l	1.0	ND
Acetone	1	ug/l	5.0	ND
Benzene	1	ug/l	0.50	ND
Bromochloromethane	1	ug/l	1.0	ND
Bromodichloromethane	1	ug/l	1.0	ND
Bromoform	1	ug/l	1.0	ND
Bromomethane	1	ug/l	1.0	ND
Carbon disulfide	1	ug/l	1.0	ND
Carbon tetrachloride	1	ug/l	1.0	ND
Chlorobenzene	1	ug/l	1.0	ND
Chloroethane	1	ug/l	1.0	ND
Chloroform	1	ug/l	1.0	ND
Chloromethane	1	ug/l	1.0	ND
cis-1,2-Dichloroethene	**1**	**ug/l**	**1.0**	**14**
cis-1,3-Dichloropropene	1	ug/l	1.0	ND
Cyclohexane	1	ug/l	1.0	ND
Dibromochloromethane	1	ug/l	1.0	ND
Dichlorodifluoromethane	1	ug/l	1.0	ND
Ethylbenzene	1	ug/l	1.0	ND
Isopropylbenzene	1	ug/l	1.0	ND
m&p-Xylenes	1	ug/l	1.0	ND
Methyl Acetate	1	ug/l	1.0	ND
Methylcyclohexane	1	ug/l	1.0	ND
Methylene chloride	1	ug/l	1.0	ND
Methyl-t-butyl ether	**1**	**ug/l**	**0.50**	**1.6**
o-Xylene	1	ug/l	1.0	ND
Styrene	1	ug/l	1.0	ND
Tetrachloroethene	**1**	**ug/l**	**1.0**	**280**
Toluene	1	ug/l	1.0	ND
trans-1,2-Dichloroethene	1	ug/l	1.0	ND

Sample ID: MW-23D **Collection Date: 9/19/2017**
Lab#: AD00135-007 **Receipt Date: 9/20/2017**
Matrix: Aqueous

trans-1,3-Dichloropropene	1	ug/l	1.0	ND
Trichloroethene	**1**	**ug/l**	**1.0**	**9.8**
Trichlorofluoromethane	1	ug/l	1.0	ND
Vinyl chloride	1	ug/l	1.0	ND
Xylenes (Total)	1	ug/l	1.0	ND

Form1

ORGANICS VOLATILE REPORT

Sample Number: DAILY BLANK
Client Id:
Data File: 3M117275.D
Analysis Date: 09/21/17 17:08
Date Rec/Extracted:
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
71-55-6	1,1,1-Trichloroethane	1.0	U	108-90-7	Chlorobenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	75-00-3	Chloroethane	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluor	1.0	U	67-66-3	Chloroform	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U	74-87-3	Chloromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U	156-59-2	cis-1,2-Dichloroethene	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U	10061-01-5	cis-1,3-Dichloropropene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U	110-82-7	Cyclohexane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U	124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropa	1.0	U	75-71-8	Dichlorodifluoromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U	100-41-4	Ethylbenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U	98-82-8	Isopropylbenzene	1.0	U
107-06-2	1,2-Dichloroethane	0.50	U	79601-23-1	m&p-Xylenes	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U	79-20-9	Methyl Acetate	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U	108-87-2	Methylcyclohexane	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U	75-09-2	Methylene Chloride	1.0	U
78-93-3	2-Butanone	1.0	U	1634-04-4	Methyl-t-butyl ether	0.50	U
591-78-6	2-Hexanone	1.0	U	95-47-6	o-Xylene	1.0	U
108-10-1	4-Methyl-2-Pentanone	1.0	U	100-42-5	Styrene	1.0	U
67-64-1	Acetone	5.0	U	127-18-4	Tetrachloroethene	1.0	U
71-43-2	Benzene	0.50	U	108-88-3	Toluene	1.0	U
74-97-5	Bromochloromethane	1.0	U	156-60-5	trans-1,2-Dichloroethene	1.0	U
75-27-4	Bromodichloromethane	1.0	U	10061-02-6	trans-1,3-Dichloropropene	1.0	U
75-25-2	Bromoform	1.0	U	79-01-6	Trichloroethene	1.0	U
74-83-9	Bromomethane	1.0	U	75-69-4	Trichlorofluoromethane	1.0	U
75-15-0	Carbon Disulfide	1.0	U	75-01-4	Vinyl Chloride	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U				

Worksheet #: 438809

Total Target Concentration 0

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS VOLATILE REPORT

Sample Number: DAILY BLANK
Client Id:
Data File: 3M117326.D
Analysis Date: 09/22/17 07:16
Date Rec/Extracted:
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
71-55-6	1,1,1-Trichloroethane	1.0	U	108-90-7	Chlorobenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	75-00-3	Chloroethane	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluor	1.0	U	67-66-3	Chloroform	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U	74-87-3	Chloromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U	156-59-2	cis-1,2-Dichloroethene	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U	10061-01-5	cis-1,3-Dichloropropene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U	110-82-7	Cyclohexane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U	124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropa	1.0	U	75-71-8	Dichlorodifluoromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U	100-41-4	Ethylbenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U	98-82-8	Isopropylbenzene	1.0	U
107-06-2	1,2-Dichloroethane	0.50	U	79601-23-1	m&p-Xylenes	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U	79-20-9	Methyl Acetate	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U	108-87-2	Methylcyclohexane	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U	75-09-2	Methylene Chloride	1.0	U
78-93-3	2-Butanone	1.0	U	1634-04-4	Methyl-t-butyl ether	0.50	U
591-78-6	2-Hexanone	1.0	U	95-47-6	o-Xylene	1.0	U
108-10-1	4-Methyl-2-Pentanone	1.0	U	100-42-5	Styrene	1.0	U
67-64-1	Acetone	5.0	U	127-18-4	Tetrachloroethene	1.0	U
71-43-2	Benzene	0.50	U	108-88-3	Toluene	1.0	U
74-97-5	Bromochloromethane	1.0	U	156-60-5	trans-1,2-Dichloroethene	1.0	U
75-27-4	Bromodichloromethane	1.0	U	10061-02-6	trans-1,3-Dichloropropene	1.0	U
75-25-2	Bromoform	1.0	U	79-01-6	Trichloroethene	1.0	U
74-83-9	Bromomethane	1.0	U	75-69-4	Trichlorofluoromethane	1.0	U
75-15-0	Carbon Disulfide	1.0	U	75-01-4	Vinyl Chloride	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U				

Worksheet #: 438809

Total Target Concentration 0

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS VOLATILE REPORT

Sample Number: AD00135-001
Client Id: MW-4
Data File: 3M117277.D
Analysis Date: 09/21/17 17:41
Date Rec/Extracted: 09/20/17-NA
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
71-55-6	1,1,1-Trichloroethane	1.0	U	108-90-7	Chlorobenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	75-00-3	Chloroethane	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluor	1.0	U	67-66-3	Chloroform	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U	74-87-3	Chloromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U	156-59-2	cis-1,2-Dichloroethene	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U	10061-01-5	cis-1,3-Dichloropropene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U	110-82-7	Cyclohexane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U	124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropa	1.0	U	75-71-8	Dichlorodifluoromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U	100-41-4	Ethylbenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U	98-82-8	Isopropylbenzene	1.0	U
107-06-2	1,2-Dichloroethane	0.50	U	79601-23-1	m&p-Xylenes	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U	79-20-9	Methyl Acetate	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U	108-87-2	Methylcyclohexane	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U	75-09-2	Methylene Chloride	1.0	U
78-93-3	2-Butanone	1.0	U	1634-04-4	Methyl-t-butyl ether	0.50	U
591-78-6	2-Hexanone	1.0	U	95-47-6	o-Xylene	1.0	U
108-10-1	4-Methyl-2-Pentanone	1.0	U	100-42-5	Styrene	1.0	U
67-64-1	Acetone	5.0	U	127-18-4	Tetrachloroethene	1.0	U
71-43-2	Benzene	0.50	U	108-88-3	Toluene	1.0	U
74-97-5	Bromochloromethane	1.0	U	156-60-5	trans-1,2-Dichloroethene	1.0	U
75-27-4	Bromodichloromethane	1.0	U	10061-02-6	trans-1,3-Dichloropropene	1.0	U
75-25-2	Bromoform	1.0	U	79-01-6	Trichloroethene	1.0	U
74-83-9	Bromomethane	1.0	U	75-69-4	Trichlorofluoromethane	1.0	U
75-15-0	Carbon Disulfide	1.0	U	75-01-4	Vinyl Chloride	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U	1330-20-7	Xylenes (Total)	1.0	U

Worksheet #: 438809

Total Target Concentration 0

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea

Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS VOLATILE REPORT

Sample Number: AD00135-002
Client Id: MW-6A
Data File: 3M117278.D
Analysis Date: 09/21/17 17:58
Date Rec/Extracted: 09/20/17-NA
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
71-55-6	1,1,1-Trichloroethane	1.0	U	108-90-7	Chlorobenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	75-00-3	Chloroethane	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluor	1.0	U	67-66-3	Chloroform	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U	74-87-3	Chloromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U	**156-59-2**	**cis-1,2-Dichloroethene**	**1.0**	**51**
75-35-4	1,1-Dichloroethene	1.0	U	10061-01-5	cis-1,3-Dichloropropene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U	110-82-7	Cyclohexane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U	124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropa	1.0	U	75-71-8	Dichlorodifluoromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U	100-41-4	Ethylbenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U	98-82-8	Isopropylbenzene	1.0	U
107-06-2	1,2-Dichloroethane	0.50	U	79601-23-1	m&p-Xylenes	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U	79-20-9	Methyl Acetate	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U	108-87-2	Methylcyclohexane	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U	75-09-2	Methylene Chloride	1.0	U
78-93-3	2-Butanone	1.0	U	1634-04-4	Methyl-t-butyl ether	0.50	U
591-78-6	2-Hexanone	1.0	U	95-47-6	o-Xylene	1.0	U
108-10-1	4-Methyl-2-Pentanone	1.0	U	100-42-5	Styrene	1.0	U
67-64-1	Acetone	5.0	U	**127-18-4**	**Tetrachloroethene**	**1.0**	**340**
71-43-2	Benzene	0.50	U	108-88-3	Toluene	1.0	U
74-97-5	Bromochloromethane	1.0	U	156-60-5	trans-1,2-Dichloroethene	1.0	U
75-27-4	Bromodichloromethane	1.0	U	10061-02-6	trans-1,3-Dichloropropene	1.0	U
75-25-2	Bromoform	1.0	U	**79-01-6**	**Trichloroethene**	**1.0**	**8.1**
74-83-9	Bromomethane	1.0	U	75-69-4	Trichlorofluoromethane	1.0	U
75-15-0	Carbon Disulfide	1.0	U	75-01-4	Vinyl Chloride	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U	1330-20-7	Xylenes (Total)	1.0	U

Worksheet #: 438809

Total Target Concentration 400

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea

Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS VOLATILE REPORT

Sample Number: AD00135-003
Client Id: MW-6B
Data File: 3M117283.D
Analysis Date: 09/21/17 19:23
Date Rec/Extracted: 09/20/17-NA
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
71-55-6	1,1,1-Trichloroethane	1.0	U	108-90-7	Chlorobenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	75-00-3	Chloroethane	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluor	1.0	U	67-66-3	Chloroform	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U	74-87-3	Chloromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U	156-59-2	cis-1,2-Dichloroethene	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U	10061-01-5	cis-1,3-Dichloropropene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U	110-82-7	Cyclohexane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U	124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropa	1.0	U	75-71-8	Dichlorodifluoromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U	100-41-4	Ethylbenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U	98-82-8	Isopropylbenzene	1.0	U
107-06-2	1,2-Dichloroethane	0.50	U	79601-23-1	m&p-Xylenes	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U	79-20-9	Methyl Acetate	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U	108-87-2	Methylcyclohexane	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U	75-09-2	Methylene Chloride	1.0	U
78-93-3	2-Butanone	1.0	U	1634-04-4	Methyl-t-butyl ether	0.50	U
591-78-6	2-Hexanone	1.0	U	95-47-6	o-Xylene	1.0	U
108-10-1	4-Methyl-2-Pentanone	1.0	U	100-42-5	Styrene	1.0	U
67-64-1	Acetone	5.0	U	**127-18-4**	**Tetrachloroethene**	**1.0**	**11**
71-43-2	Benzene	0.50	U	108-88-3	Toluene	1.0	U
74-97-5	Bromochloromethane	1.0	U	156-60-5	trans-1,2-Dichloroethene	1.0	U
75-27-4	Bromodichloromethane	1.0	U	10061-02-6	trans-1,3-Dichloropropene	1.0	U
75-25-2	Bromoform	1.0	U	**79-01-6**	**Trichloroethene**	**1.0**	**22**
74-83-9	Bromomethane	1.0	U	75-69-4	Trichlorofluoromethane	1.0	U
75-15-0	Carbon Disulfide	1.0	U	75-01-4	Vinyl Chloride	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U	1330-20-7	Xylenes (Total)	1.0	U

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS VOLATILE REPORT

Sample Number: AD00135-004(MS:AD00
Client Id: MW-6B-MS
Data File: 3M117280.D
Analysis Date: 09/21/17 18:32
Date Rec/Extracted: 09/20/17-NA
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
71-55-6	1,1,1-Trichloroethane	1.0	23	108-90-7	Chlorobenzene	1.0	19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	14	75-00-3	Chloroethane	1.0	22
76-13-1	1,1,2-Trichloro-1,2,2-triflu	1.0	26	67-66-3	Chloroform	1.0	22
79-00-5	1,1,2-Trichloroethane	1.0	17	74-87-3	Chloromethane	1.0	25
75-34-3	1,1-Dichloroethane	1.0	20	156-59-2	cis-1,2-Dichloroethene	1.0	22
75-35-4	1,1-Dichloroethene	1.0	21	10061-01-5	cis-1,3-Dichloropropene	1.0	16
87-61-6	1,2,3-Trichlorobenzene	1.0	11	110-82-7	Cyclohexane	1.0	23
120-82-1	1,2,4-Trichlorobenzene	1.0	13	124-48-1	Dibromochloromethane	1.0	19
96-12-8	1,2-Dibromo-3-Chloroprop	1.0	10	75-71-8	Dichlorodifluoromethane	1.0	30
106-93-4	1,2-Dibromoethane	1.0	18	100-41-4	Ethylbenzene	1.0	17
95-50-1	1,2-Dichlorobenzene	1.0	15	98-82-8	Isopropylbenzene	1.0	17
107-06-2	1,2-Dichloroethane	0.50	23	79601-23-1	m&p-Xylenes	1.0	36
78-87-5	1,2-Dichloropropane	1.0	20	79-20-9	Methyl Acetate	1.0	18
541-73-1	1,3-Dichlorobenzene	1.0	16	108-87-2	Methylcyclohexane	1.0	23
106-46-7	1,4-Dichlorobenzene	1.0	16	75-09-2	Methylene Chloride	1.0	20
78-93-3	2-Butanone	1.0	14	1634-04-4	Methyl-t-butyl ether	0.50	19
591-78-6	2-Hexanone	1.0	17	95-47-6	o-Xylene	1.0	18
108-10-1	4-Methyl-2-Pentanone	1.0	17	100-42-5	Styrene	1.0	17
67-64-1	Acetone	5.0	96	127-18-4	Tetrachloroethene	1.0	33
71-43-2	Benzene	0.50	22	108-88-3	Toluene	1.0	19
74-97-5	Bromochloromethane	1.0	20	156-60-5	trans-1,2-Dichloroethene	1.0	22
75-27-4	Bromodichloromethane	1.0	21	10061-02-6	trans-1,3-Dichloropropene	1.0	17
75-25-2	Bromoform	1.0	15	79-01-6	Trichloroethene	1.0	44
74-83-9	Bromomethane	1.0	23	75-69-4	Trichlorofluoromethane	1.0	26
75-15-0	Carbon Disulfide	1.0	25	75-01-4	Vinyl Chloride	1.0	21
56-23-5	Carbon Tetrachloride	1.0	26	1330-20-7	Xylenes (Total)	1.0	54

Worksheet #: 438809

Total Target Concentration 1100

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea

Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS VOLATILE REPORT

Sample Number: AD00135-005(MSD:AD
Client Id: MW-6B-MSD
Data File: 3M117281.D
Analysis Date: 09/21/17 18:49
Date Rec/Extracted: 09/20/17-NA
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
71-55-6	1,1,1-Trichloroethane	1.0	23	108-90-7	Chlorobenzene	1.0	18
79-34-5	1,1,2,2-Tetrachloroethane	1.0	14	75-00-3	Chloroethane	1.0	24
76-13-1	1,1,2-Trichloro-1,2,2-triflu	1.0	24	67-66-3	Chloroform	1.0	22
79-00-5	1,1,2-Trichloroethane	1.0	17	74-87-3	Chloromethane	1.0	25
75-34-3	1,1-Dichloroethane	1.0	20	156-59-2	cis-1,2-Dichloroethene	1.0	22
75-35-4	1,1-Dichloroethene	1.0	22	10061-01-5	cis-1,3-Dichloropropene	1.0	16
87-61-6	1,2,3-Trichlorobenzene	1.0	14	110-82-7	Cyclohexane	1.0	21
120-82-1	1,2,4-Trichlorobenzene	1.0	14	124-48-1	Dibromochloromethane	1.0	18
96-12-8	1,2-Dibromo-3-Chloroprop	1.0	11	75-71-8	Dichlorodifluoromethane	1.0	28
106-93-4	1,2-Dibromoethane	1.0	18	100-41-4	Ethylbenzene	1.0	18
95-50-1	1,2-Dichlorobenzene	1.0	16	98-82-8	Isopropylbenzene	1.0	17
107-06-2	1,2-Dichloroethane	0.50	22	79601-23-1	m&p-Xylenes	1.0	35
78-87-5	1,2-Dichloropropane	1.0	20	79-20-9	Methyl Acetate	1.0	18
541-73-1	1,3-Dichlorobenzene	1.0	16	108-87-2	Methylcyclohexane	1.0	24
106-46-7	1,4-Dichlorobenzene	1.0	15	75-09-2	Methylene Chloride	1.0	21
78-93-3	2-Butanone	1.0	16	1634-04-4	Methyl-t-butyl ether	0.50	20
591-78-6	2-Hexanone	1.0	17	95-47-6	o-Xylene	1.0	18
108-10-1	4-Methyl-2-Pentanone	1.0	16	100-42-5	Styrene	1.0	17
67-64-1	Acetone	5.0	94	127-18-4	Tetrachloroethene	1.0	32
71-43-2	Benzene	0.50	23	108-88-3	Toluene	1.0	18
74-97-5	Bromochloromethane	1.0	20	156-60-5	trans-1,2-Dichloroethene	1.0	22
75-27-4	Bromodichloromethane	1.0	21	10061-02-6	trans-1,3-Dichloropropene	1.0	16
75-25-2	Bromoform	1.0	15	79-01-6	Trichloroethene	1.0	44
74-83-9	Bromomethane	1.0	22	75-69-4	Trichlorofluoromethane	1.0	24
75-15-0	Carbon Disulfide	1.0	25	75-01-4	Vinyl Chloride	1.0	21
56-23-5	Carbon Tetrachloride	1.0	25	1330-20-7	Xylenes (Total)	1.0	53

Worksheet #: 438809

Total Target Concentration 1100

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea

Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS VOLATILE REPORT

Sample Number: AD00135-006(5X)
Client Id: MW-23S
Data File: 3M117335.D
Analysis Date: 09/22/17 09:48
Date Rec/Extracted: 09/20/17-NA
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 5.00
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
71-55-6	1,1,1-Trichloroethane	5.0	U	108-90-7	Chlorobenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	75-00-3	Chloroethane	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluor	5.0	U	67-66-3	Chloroform	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U	74-87-3	Chloromethane	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U	**156-59-2**	**cis-1,2-Dichloroethene**	**5.0**	**15**
75-35-4	1,1-Dichloroethene	5.0	U	10061-01-5	cis-1,3-Dichloropropene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U	110-82-7	Cyclohexane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U	124-48-1	Dibromochloromethane	5.0	U
96-12-8	1,2-Dibromo-3-Chloropropa	5.0	U	75-71-8	Dichlorodifluoromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U	100-41-4	Ethylbenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U	98-82-8	Isopropylbenzene	5.0	U
107-06-2	1,2-Dichloroethane	2.5	U	79601-23-1	m&p-Xylenes	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U	79-20-9	Methyl Acetate	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U	108-87-2	Methylcyclohexane	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U	75-09-2	Methylene Chloride	5.0	U
78-93-3	2-Butanone	5.0	U	1634-04-4	Methyl-t-butyl ether	2.5	U
591-78-6	2-Hexanone	5.0	U	95-47-6	o-Xylene	5.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U	100-42-5	Styrene	5.0	U
67-64-1	Acetone	25	U	**127-18-4**	**Tetrachloroethene**	**5.0**	**1000**
71-43-2	Benzene	2.5	U	108-88-3	Toluene	5.0	U
74-97-5	Bromochloromethane	5.0	U	156-60-5	trans-1,2-Dichloroethene	5.0	U
75-27-4	Bromodichloromethane	5.0	U	10061-02-6	trans-1,3-Dichloropropene	5.0	U
75-25-2	Bromoform	5.0	U	**79-01-6**	**Trichloroethene**	**5.0**	**8.3**
74-83-9	Bromomethane	5.0	U	75-69-4	Trichlorofluoromethane	5.0	U
75-15-0	Carbon Disulfide	5.0	U	75-01-4	Vinyl Chloride	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U	1330-20-7	Xylenes (Total)	5.0	U

Worksheet #: 438809

Total Target Concentration 1000

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea

Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS VOLATILE REPORT

Sample Number: AD00135-007
Client Id: MW-23D
Data File: 3M117334.D
Analysis Date: 09/22/17 09:31
Date Rec/Extracted: 09/20/17-NA
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
71-55-6	1,1,1-Trichloroethane	1.0	U	108-90-7	Chlorobenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	75-00-3	Chloroethane	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluor	1.0	U	67-66-3	Chloroform	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U	74-87-3	Chloromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U	**156-59-2**	**cis-1,2-Dichloroethene**	**1.0**	**14**
75-35-4	**1,1-Dichloroethene**	**1.0**	**1.1**	10061-01-5	cis-1,3-Dichloropropene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U	110-82-7	Cyclohexane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U	124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropa	1.0	U	75-71-8	Dichlorodifluoromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U	100-41-4	Ethylbenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U	98-82-8	Isopropylbenzene	1.0	U
107-06-2	1,2-Dichloroethane	0.50	U	79601-23-1	m&p-Xylenes	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U	79-20-9	Methyl Acetate	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U	108-87-2	Methylcyclohexane	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U	75-09-2	Methylene Chloride	1.0	U
78-93-3	2-Butanone	1.0	U	**1634-04-4**	**Methyl-t-butyl ether**	**0.50**	**1.6**
591-78-6	2-Hexanone	1.0	U	95-47-6	o-Xylene	1.0	U
108-10-1	4-Methyl-2-Pentanone	1.0	U	100-42-5	Styrene	1.0	U
67-64-1	Acetone	5.0	U	**127-18-4**	**Tetrachloroethene**	**1.0**	**280**
71-43-2	Benzene	0.50	U	108-88-3	Toluene	1.0	U
74-97-5	Bromochloromethane	1.0	U	156-60-5	trans-1,2-Dichloroethene	1.0	U
75-27-4	Bromodichloromethane	1.0	U	10061-02-6	trans-1,3-Dichloropropene	1.0	U
75-25-2	Bromoform	1.0	U	**79-01-6**	**Trichloroethene**	**1.0**	**9.8**
74-83-9	Bromomethane	1.0	U	75-69-4	Trichlorofluoromethane	1.0	U
75-15-0	Carbon Disulfide	1.0	U	75-01-4	Vinyl Chloride	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U	1330-20-7	Xylenes (Total)	1.0	U

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64237

Data File	Sample ID:	Analysis Date
Spike or Dup: 3M117282.D	MBS64237	9/21/2017 7:06:00 PM
Non Spike(If applicable):		
Inst Blank(If applicable):		
Method: 8260C	Matrix: Aqueous	QC Type: MBS

Analyte:	Col	Spike Conc	Sample Conc	Expected Conc	Recovery	Lower Limit	Upper Limit
Chlorodifluoromethane	1	27.2399	0	20	136	50	150
Dichlorodifluoromethane	1	28.1563	0	20	141	50	150
Chloromethane	1	21.7618	0	20	109	50	150
Bromomethane	1	20.0157	0	20	100	50	150
Vinyl Chloride	1	19.306	0	20	97	50	150
Chloroethane	1	18.7897	0	20	94	50	150
Trichlorofluoromethane	1	22.8484	0	20	114	50	150
Ethyl ether	1	17.7076	0	20	89	50	150
Furan	1	19.6927	0	20	98	50	150
1,1,2-Trichloro-1,2,2-trifluoroethane	1	22.6266	0	20	113	50	150
Methylene Chloride	1	18.77	0	20	94	70	130
Acrolein	1	75.9985	0	100	76	50	150
Acrylonitrile	1	17.8773	0	20	89	50	150
Iodomethane	1	21.7708	0	20	109	50	150
Acetone	1	89.6818	0	100	90	50	150
Carbon Disulfide	1	23.2756	0	20	116	50	150
t-Butyl Alcohol	1	55.8228	0	100	56	50	150
n-Hexane	1	20.7301	0	20	104	70	130
Di-isopropyl-ether	1	18.3303	0	20	92	70	130
1,1-Dichloroethene	1	20.6125	0	20	103	70	130
Methyl Acetate	1	16.3914	0	20	82	50	150
Methyl-t-butyl ether	1	18.2829	0	20	91	70	130
1,1-Dichloroethane	1	19.2335	0	20	96	70	130
trans-1,2-Dichloroethene	1	21.1651	0	20	106	70	130
Ethyl-t-butyl ether	1	17.7296	0	20	89	70	130
cis-1,2-Dichloroethene	1	19.3969	0	20	97	70	130
Bromochloromethane	1	17.9983	0	20	90	70	130
2,2-Dichloropropane	1	21.9098	0	20	110	70	130
Ethyl acetate	1	18.9644	0	20	95	50	130
1,4-Dioxane	1	952.7129	0	1000	95	50	150
1,1-Dichloropropene	1	21.7913	0	20	109	70	130
Chloroform	1	20.7391	0	20	104	70	130
Cyclohexane	1	21.0812	0	20	105	70	130
1,2-Dichloroethane	1	20.6115	0	20	103	70	130
2-Butanone	1	19.2711	0	20	96	50	150
1,1,1-Trichloroethane	1	21.2346	0	20	106	70	130
Carbon Tetrachloride	1	21.9085	0	20	110	50	150
Vinyl Acetate	1	20.8371	0	20	104	50	150
Bromodichloromethane	1	19.5012	0	20	98	70	130
Methylcyclohexane	1	22.13	0	20	111	70	130
Dibromomethane	1	20.3337	0	20	102	70	130
1,2-Dichloropropane	1	18.3926	0	20	92	70	130
Trichloroethene	1	21.9261	0	20	110	70	130
Benzene	1	20.7651	0	20	104	70	130
tert-Amyl methyl ether	1	16.8743	0	20	84	70	130
Iso-propylacetate	1	16.0904	0	20	80	70	130
Methyl methacrylate	1	16.2102	0	20	81	70	130
Dibromochloromethane	1	17.5239	0	20	88	70	130
2-Chloroethylvinylether	1	11.8382	0	20	59*	70	130
cis-1,3-Dichloropropene	1	15.259	0	20	76	70	130
trans-1,3-Dichloropropene	1	15.4167	0	20	77	70	130
Ethyl methacrylate	1	16.8637	0	20	84	70	130
1,1,2-Trichloroethane	1	15.7312	0	20	79	70	130
1,2-Dibromoethane	1	17.0076	0	20	85	70	130
1,3-Dichloropropane	1	17.2678	0	20	86	70	130
4-Methyl-2-Pentanone	1	15.0927	0	20	75	50	150
2-Hexanone	1	15.7394	0	20	79	50	150
Tetrachloroethene	1	19.9678	0	20	100	50	130
Toluene	1	17.3711	0	20	87	70	130
1,1,1,2-Tetrachloroethane	1	18.814	0	20	94	70	130
Chlorobenzene	1	16.9226	0	20	85	70	130

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3

Recovery Data Laboratory Limits

QC Batch: MBS64237

n-Butyl acrylate	1	9.8853	0	20	49*	70	130
n-Amyl acetate	1	14.7254	0	20	74	70	130
Bromoform	1	13.8069	0	20	69*	70	130
Ethylbenzene	1	16.9624	0	20	85	70	130
1,1,2,2-Tetrachloroethane	1	13.7981	0	20	69*	70	130
Styrene	1	17.0562	0	20	85	70	130
m&p-Xylenes	1	33.0652	0	40	83	70	130
o-Xylene	1	16.5224	0	20	83	70	130
trans-1,4-Dichloro-2-butene	1	16.2627	0	20	81	50	150
1,3-Dichlorobenzene	1	15.4415	0	20	77	70	130
1,4-Dichlorobenzene	1	15.3633	0	20	77	70	130
1,2-Dichlorobenzene	1	14.7761	0	20	74	70	130
Isopropylbenzene	1	16.6217	0	20	83	70	130
Cyclohexanone	1	39.6032	0	100	40*	50	150
Camphene	1	14.9762	0	20	75	70	130
1,2,3-Trichloropropane	1	14.4003	0	20	72	70	130
2-Chlorotoluene	1	18.4664	0	20	92	70	130
p-Ethyltoluene	1	14.7381	0	20	74	70	130
4-Chlorotoluene	1	16.6029	0	20	83	70	130
n-Propylbenzene	1	16.6508	0	20	83	70	130
Bromobenzene	1	15.8923	0	20	79	70	130
1,3,5-Trimethylbenzene	1	19.9174	0	20	100	70	130
Butyl methacrylate	1	15.1232	0	20	76	70	130
t-Butylbenzene	1	15.838	0	20	79	70	130
1,2,4-Trimethylbenzene	1	16.2211	0	20	81	70	130
sec-Butylbenzene	1	15.745	0	20	79	70	130
4-Isopropyltoluene	1	16.0321	0	20	80	70	130
n-Butylbenzene	1	16.7792	0	20	84	70	130
p-Diethylbenzene	1	16.7034	0	20	84	70	130
1,2,4,5-Tetramethylbenzene	1	16.1579	0	20	81	70	130
1,2-Dibromo-3-Chloropropane	1	9.7654	0	20	49*	50	150
Camphor	1	122.0231	0	200	61	50	150
Hexachlorobutadiene	1	10.4833	0	20	52	50	150
1,2,4-Trichlorobenzene	1	13.8945	0	20	69*	70	130
1,2,3-Trichlorobenzene	1	13.8521	0	20	69*	70	130
Naphthalene	1	13.3516	0	20	67	50	150

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64245

Data File	Sample ID:	Analysis Date
Spike or Dup: 3M117351.D	MBS64245	9/22/2017 2:26:00 PM
Non Spike(If applicable):		
Inst Blank(If applicable):		
Method: 8260C	Matrix: Aqueous	QC Type: MBS

Analyte:	Col	Spike Conc	Sample Conc	Expected Conc	Recovery	Lower Limit	Upper Limit
Chlorodifluoromethane	1	20.8694	0	20	104	50	150
Dichlorodifluoromethane	1	45.6246	0	20	228*	50	150
Chloromethane	1	26.8557	0	20	134	50	150
Bromomethane	1	22.4285	0	20	112	50	150
Vinyl Chloride	1	22.8137	0	20	114	50	150
Chloroethane	1	24.0096	0	20	120	50	150
Trichlorofluoromethane	1	24.7794	0	20	124	50	150
Ethyl ether	1	21.3304	0	20	107	50	150
Furan	1	21.0329	0	20	105	50	150
1,1,2-Trichloro-1,2,2-trifluoroethane	1	25.481	0	20	127	50	150
Methylene Chloride	1	22.5412	0	20	113	70	130
Acrolein	1	110.3537	0	100	110	50	150
Acrylonitrile	1	22.5856	0	20	113	50	150
Iodomethane	1	26.2317	0	20	131	50	150
Acetone	1	114.4213	0	100	114	50	150
Carbon Disulfide	1	26.1126	0	20	131	50	150
t-Butyl Alcohol	1	66.9371	0	100	67	50	150
n-Hexane	1	24.5138	0	20	123	70	130
Di-isopropyl-ether	1	21.4532	0	20	107	70	130
1,1-Dichloroethene	1	22.419	0	20	112	70	130
Methyl Acetate	1	20.6642	0	20	103	50	150
Methyl-t-butyl ether	1	21.3314	0	20	107	70	130
1,1-Dichloroethane	1	20.6022	0	20	103	70	130
trans-1,2-Dichloroethene	1	23.7535	0	20	119	70	130
Ethyl-t-butyl ether	1	20.1122	0	20	101	70	130
cis-1,2-Dichloroethene	1	21.6364	0	20	108	70	130
Bromochloromethane	1	19.8654	0	20	99	70	130
2,2-Dichloropropane	1	23.004	0	20	115	70	130
Ethyl acetate	1	26.7009	0	20	134*	50	130
1,4-Dioxane	1	1192.854	0	1000	119	50	150
1,1-Dichloropropene	1	24.5204	0	20	123	70	130
Chloroform	1	22.748	0	20	114	70	130
Cyclohexane	1	22.152	0	20	111	70	130
1,2-Dichloroethane	1	23.3795	0	20	117	70	130
2-Butanone	1	16.9442	0	20	85	50	150
1,1,1-Trichloroethane	1	22.1342	0	20	111	70	130
Carbon Tetrachloride	1	24.0236	0	20	120	50	150
Vinyl Acetate	1	23.6915	0	20	118	50	150
Bromodichloromethane	1	22.9643	0	20	115	70	130
Methylcyclohexane	1	24.2401	0	20	121	70	130
Dibromomethane	1	23.9807	0	20	120	70	130
1,2-Dichloropropane	1	21.5234	0	20	108	70	130
Trichloroethene	1	23.0629	0	20	115	70	130
Benzene	1	23.3791	0	20	117	70	130
tert-Amyl methyl ether	1	20.8255	0	20	104	70	130
Iso-propylacetate	1	20.5089	0	20	103	70	130
Methyl methacrylate	1	19.738	0	20	99	70	130
Dibromochloromethane	1	20.5799	0	20	103	70	130
2-Chloroethylvinylether	1	18.1293	0	20	91	70	130
cis-1,3-Dichloropropene	1	18.2742	0	20	91	70	130
trans-1,3-Dichloropropene	1	18.8526	0	20	94	70	130
Ethyl methacrylate	1	18.8645	0	20	94	70	130
1,1,2-Trichloroethane	1	19.3462	0	20	97	70	130
1,2-Dibromoethane	1	19.2075	0	20	96	70	130
1,3-Dichloropropane	1	20.8066	0	20	104	70	130
4-Methyl-2-Pentanone	1	19.3111	0	20	97	50	150
2-Hexanone	1	21.1228	0	20	106	50	150
Tetrachloroethene	1	21.2371	0	20	106	50	130
Toluene	1	19.4498	0	20	97	70	130
1,1,1,2-Tetrachloroethane	1	20.6163	0	20	103	70	130
Chlorobenzene	1	19.1053	0	20	96	70	130

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64245

n-Butyl acrylate	1	12.4713	0	20	62*	70	130
n-Amyl acetate	1	18.0271	0	20	90	70	130
Bromoform	1	17.1906	0	20	86	70	130
Ethylbenzene	1	18.6064	0	20	93	70	130
1,1,2,2-Tetrachloroethane	1	15.8818	0	20	79	70	130
Styrene	1	19.0607	0	20	95	70	130
m&p-Xylenes	1	36.9297	0	40	92	70	130
o-Xylene	1	19.5649	0	20	98	70	130
trans-1,4-Dichloro-2-butene	1	20.7918	0	20	104	50	150
1,3-Dichlorobenzene	1	17.7606	0	20	89	70	130
1,4-Dichlorobenzene	1	17.534	0	20	88	70	130
1,2-Dichlorobenzene	1	17.3623	0	20	87	70	130
Isopropylbenzene	1	18.1927	0	20	91	70	130
Cyclohexanone	1	74.6367	0	100	75	50	150
Camphene	1	19.7696	0	20	99	70	130
1,2,3-Trichloropropane	1	17.301	0	20	87	70	130
2-Chlorotoluene	1	19.7455	0	20	99	70	130
p-Ethyltoluene	1	16.6283	0	20	83	70	130
4-Chlorotoluene	1	19.1181	0	20	96	70	130
n-Propylbenzene	1	18.607	0	20	93	70	130
Bromobenzene	1	18.4558	0	20	92	70	130
1,3,5-Trimethylbenzene	1	21.774	0	20	109	70	130
Butyl methacrylate	1	17.9728	0	20	90	70	130
t-Butylbenzene	1	17.705	0	20	89	70	130
1,2,4-Trimethylbenzene	1	18.4466	0	20	92	70	130
sec-Butylbenzene	1	17.3	0	20	86	70	130
4-Isopropyltoluene	1	17.0281	0	20	85	70	130
n-Butylbenzene	1	18.2762	0	20	91	70	130
p-Diethylbenzene	1	18.7484	0	20	94	70	130
1,2,4,5-Tetramethylbenzene	1	19.7296	0	20	99	70	130
1,2-Dibromo-3-Chloropropane	1	12.0358	0	20	60	50	150
Camphor	1	155.4334	0	200	78	50	150
Hexachlorobutadiene	1	11.7881	0	20	59	50	150
1,2,4-Trichlorobenzene	1	16.5842	0	20	83	70	130
1,2,3-Trichlorobenzene	1	15.9825	0	20	80	70	130
Naphthalene	1	16.9365	0	20	85	50	150

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64237

Data File	Sample ID:	Analysis Date
Spike or Dup: 3M117280.D	AD00135-004(MS:AD00135-003	9/21/2017 6:32:00 PM
Non Spike(If applicable): 3M117283.D	AD00135-003	9/21/2017 7:23:00 PM
Inst Blank(If applicable):		

Method: 8260C Matrix: Aqueous QC Type: MS

Analyte:	Col	Spike Conc	Sample Conc	Expected Conc	Recovery	Lower Limit	Upper Limit
Chlorodifluoromethane	1	29.226	0	20	146	50	150
Dichlorodifluoromethane	1	30.0172	0	20	150	50	150
Chloromethane	1	24.5924	0	20	123	50	150
Bromomethane	1	23.1983	0	20	116	50	150
Vinyl Chloride	1	20.8543	0	20	104	50	150
Chloroethane	1	21.6659	0	20	108	50	150
Trichlorofluoromethane	1	25.873	0	20	129	50	150
Ethyl ether	1	20.0887	0	20	100	50	150
Furan	1	21.1556	0	20	106	50	150
1,1,2-Trichloro-1,2,2-trifluoroethane	1	25.6833	0	20	128	50	150
Methylene Chloride	1	20.4872	0	20	102	70	130
Acrolein	1	80.819	0	100	81	50	150
Acrylonitrile	1	18.5147	0	20	93	50	150
Iodomethane	1	24.2383	0	20	121	50	150
Acetone	1	96.2977	0	100	96	50	150
Carbon Disulfide	1	24.697	0	20	123	50	150
t-Butyl Alcohol	1	56.5883	0	100	57	50	150
n-Hexane	1	21.924	0	20	110	70	130
Di-isopropyl-ether	1	18.6374	0	20	93	70	130
1,1-Dichloroethene	1	21.487	0	20	107	70	130
Methyl Acetate	1	17.6603	0	20	88	50	150
Methyl-t-butyl ether	1	19.4113	0	20	97	70	130
1,1-Dichloroethane	1	20.4326	0	20	102	70	130
trans-1,2-Dichloroethene	1	22.2462	0	20	111	70	130
Ethyl-t-butyl ether	1	18.3491	0	20	92	70	130
cis-1,2-Dichloroethene	1	21.7546	0	20	109	70	130
Bromochloromethane	1	20.0282	0	20	100	70	130
2,2-Dichloropropane	1	23.5189	0	20	118	70	130
Ethyl acetate	1	22.7162	0	20	114	50	130
1,4-Dioxane	1	1009.621	0	1000	101	50	150
1,1-Dichloropropene	1	24.0539	0	20	120	70	130
Chloroform	1	22.3374	0	20	112	70	130
Cyclohexane	1	22.897	0	20	114	70	130
1,2-Dichloroethane	1	22.7082	0	20	114	70	130
2-Butanone	1	14.282	0	20	71	50	150
1,1,1-Trichloroethane	1	22.5562	0	20	113	70	130
Carbon Tetrachloride	1	25.5097	0	20	128	50	150
Vinyl Acetate	1	21.6306	0	20	108	50	150
Bromodichloromethane	1	21.2771	0	20	106	70	130
Methylcyclohexane	1	22.7816	0	20	114	70	130
Dibromomethane	1	22.2328	0	20	111	70	130
1,2-Dichloropropane	1	20.1872	0	20	101	70	130
Trichloroethene	1	44.2594	21.5507	20	114	70	130
Benzene	1	22.0318	0	20	110	70	130
tert-Amyl methyl ether	1	18.1487	0	20	91	70	130
Iso-propylacetate	1	17.4591	0	20	87	70	130
Methyl methacrylate	1	17.9218	0	20	90	70	130
Dibromochloromethane	1	19.4494	0	20	97	70	130
2-Chloroethylvinylether	1	0	0	20	0*	70	130
cis-1,3-Dichloropropene	1	16.3759	0	20	82	70	130
trans-1,3-Dichloropropene	1	16.9311	0	20	85	70	130
Ethyl methacrylate	1	17.5513	0	20	88	70	130
1,1,2-Trichloroethane	1	17.4439	0	20	87	70	130
1,2-Dibromoethane	1	17.9338	0	20	90	70	130
1,3-Dichloropropane	1	19.0933	0	20	95	70	130
4-Methyl-2-Pentanone	1	17.2287	0	20	86	50	150
2-Hexanone	1	16.6598	0	20	83	50	150
Tetrachloroethene	1	32.7346	11.1062	20	108	50	130
Toluene	1	19.4493	0	20	97	70	130
1,1,1,2-Tetrachloroethane	1	19.7537	0	20	99	70	130
Chlorobenzene	1	19.0959	0	20	95	70	130

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3

Recovery Data Laboratory Limits

QC Batch: MBS64237

n-Butyl acrylate	1	10.7109	0	20	54*	70	130
n-Amyl acetate	1	14.7943	0	20	74	70	130
Bromoform	1	15.128	0	20	76	70	130
Ethylbenzene	1	17.4845	0	20	87	70	130
1,1,2,2-Tetrachloroethane	1	14.3456	0	20	72	70	130
Styrene	1	17.0051	0	20	85	70	130
m&p-Xylenes	1	35.6071	0	40	89	70	130
o-Xylene	1	17.734	0	20	89	70	130
trans-1,4-Dichloro-2-butene	1	14.4442	0	20	72	50	150
1,3-Dichlorobenzene	1	16.3443	0	20	82	70	130
1,4-Dichlorobenzene	1	16.0108	0	20	80	70	130
1,2-Dichlorobenzene	1	15.4328	0	20	77	70	130
Isopropylbenzene	1	17.1157	0	20	86	70	130
Cyclohexanone	1	34.7179	0	100	35*	50	150
Camphene	1	5.3309	0	20	27*	70	130
1,2,3-Trichloropropane	1	15.0269	0	20	75	70	130
2-Chlorotoluene	1	18.6098	0	20	93	70	130
p-Ethyltoluene	1	15.256	0	20	76	70	130
4-Chlorotoluene	1	17.6195	0	20	88	70	130
n-Propylbenzene	1	17.4929	0	20	87	70	130
Bromobenzene	1	15.9551	0	20	80	70	130
1,3,5-Trimethylbenzene	1	21.044	0	20	105	70	130
Butyl methacrylate	1	16.1087	0	20	81	70	130
t-Butylbenzene	1	16.3726	0	20	82	70	130
1,2,4-Trimethylbenzene	1	16.9653	0	20	85	70	130
sec-Butylbenzene	1	15.2329	0	20	76	70	130
4-Isopropyltoluene	1	14.6141	0	20	73	70	130
n-Butylbenzene	1	15.5981	0	20	78	70	130
p-Diethylbenzene	1	15.0927	0	20	75	70	130
1,2,4,5-Tetramethylbenzene	1	15.1088	0	20	76	70	130
1,2-Dibromo-3-Chloropropane	1	10.2594	0	20	51	50	150
Camphor	1	120.2794	0	200	60	50	150
Hexachlorobutadiene	1	9.7178	0	20	49*	50	150
1,2,4-Trichlorobenzene	1	12.7229	0	20	64*	70	130
1,2,3-Trichlorobenzene	1	11.3431	0	20	57*	70	130
Naphthalene	1	12.446	0	20	62	50	150

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64237

Data File	Sample ID:	Analysis Date
Spike or Dup: 3M117281.D	AD00135-005(MSD:AD00135-0	9/21/2017 6:49:00 PM
Non Spike(If applicable): 3M117283.D	AD00135-003	9/21/2017 7:23:00 PM
Inst Blank(If applicable):		

Method: 8260C | Matrix: Aqueous | QC Type: MSD

Analyte:	Col	Spike Conc	Sample Conc	Expected Conc	Recovery	Lower Limit	Upper Limit
Chlorodifluoromethane	1	29.4243	0	20	147	50	150
Dichlorodifluoromethane	1	28.4256	0	20	142	50	150
Chloromethane	1	24.9684	0	20	125	50	150
Bromomethane	1	21.8305	0	20	109	50	150
Vinyl Chloride	1	20.9544	0	20	105	50	150
Chloroethane	1	24.0834	0	20	120	50	150
Trichlorofluoromethane	1	24.4321	0	20	122	50	150
Ethyl ether	1	20.6714	0	20	103	50	150
Furan	1	21.6438	0	20	108	50	150
1,1,2-Trichloro-1,2,2-trifluoroethane	1	23.9937	0	20	120	50	150
Methylene Chloride	1	20.9554	0	20	105	70	130
Acrolein	1	86.2927	0	100	86	50	150
Acrylonitrile	1	20.1523	0	20	101	50	150
Iodomethane	1	24.1488	0	20	121	50	150
Acetone	1	93.8908	0	100	94	50	150
Carbon Disulfide	1	24.6147	0	20	123	50	150
t-Butyl Alcohol	1	59.1251	0	100	59	50	150
n-Hexane	1	22.0598	0	20	110	70	130
Di-isopropyl-ether	1	19.6912	0	20	98	70	130
1,1-Dichloroethene	1	21.6917	0	20	108	70	130
Methyl Acetate	1	18.3436	0	20	92	50	150
Methyl-t-butyl ether	1	19.512	0	20	98	70	130
1,1-Dichloroethane	1	20.3431	0	20	102	70	130
trans-1,2-Dichloroethene	1	22.101	0	20	111	70	130
Ethyl-t-butyl ether	1	18.3808	0	20	92	70	130
cis-1,2-Dichloroethene	1	21.5332	0	20	108	70	130
Bromochloromethane	1	19.7098	0	20	99	70	130
2,2-Dichloropropane	1	22.9536	0	20	115	70	130
Ethyl acetate	1	22.4769	0	20	112	50	130
1,4-Dioxane	1	999.7785	0	1000	100	50	150
1,1-Dichloropropene	1	23.8833	0	20	119	70	130
Chloroform	1	22.2103	0	20	111	70	130
Cyclohexane	1	21.3967	0	20	107	70	130
1,2-Dichloroethane	1	22.1113	0	20	111	70	130
2-Butanone	1	15.5006	0	20	78	50	150
1,1,1-Trichloroethane	1	22.8282	0	20	114	70	130
Carbon Tetrachloride	1	25.0307	0	20	125	50	150
Vinyl Acetate	1	20.6089	0	20	103	50	150
Bromodichloromethane	1	21.1117	0	20	106	70	130
Methylcyclohexane	1	23.8996	0	20	119	70	130
Dibromomethane	1	21.8152	0	20	109	70	130
1,2-Dichloropropane	1	20.1975	0	20	101	70	130
Trichloroethene	1	44.2112	21.5507	20	113	70	130
Benzene	1	22.5865	0	20	113	70	130
tert-Amyl methyl ether	1	18.4651	0	20	92	70	130
Iso-propylacetate	1	17.0216	0	20	85	70	130
Methyl methacrylate	1	17.4789	0	20	87	70	130
Dibromochloromethane	1	18.3935	0	20	92	70	130
2-Chloroethylvinylether	1	0	0	20	0*	70	130
cis-1,3-Dichloropropene	1	15.5358	0	20	78	70	130
trans-1,3-Dichloropropene	1	16.0494	0	20	80	70	130
Ethyl methacrylate	1	17.0385	0	20	85	70	130
1,1,2-Trichloroethane	1	17.0266	0	20	85	70	130
1,2-Dibromoethane	1	17.8359	0	20	89	70	130
1,3-Dichloropropane	1	18.2867	0	20	91	70	130
4-Methyl-2-Pentanone	1	15.8201	0	20	79	50	150
2-Hexanone	1	17.0561	0	20	85	50	150
Tetrachloroethene	1	31.9436	11.1062	20	104	50	130
Toluene	1	18.4934	0	20	92	70	130
1,1,1,2-Tetrachloroethane	1	19.5494	0	20	98	70	130
Chlorobenzene	1	17.9337	0	20	90	70	130

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Form3
Recovery Data Laboratory Limits
QC Batch: MBS64237

n-Butyl acrylate	1	10.9967	0	20	55*	70	130
n-Amyl acetate	1	15.2614	0	20	76	70	130
Bromoform	1	15.2701	0	20	76	70	130
Ethylbenzene	1	17.9485	0	20	90	70	130
1,1,2,2-Tetrachloroethane	1	13.8251	0	20	69*	70	130
Styrene	1	17.4626	0	20	87	70	130
m&p-Xylenes	1	35.1421	0	40	88	70	130
o-Xylene	1	17.5938	0	20	88	70	130
trans-1,4-Dichloro-2-butene	1	15.1575	0	20	76	50	150
1,3-Dichlorobenzene	1	15.8009	0	20	79	70	130
1,4-Dichlorobenzene	1	15.3781	0	20	77	70	130
1,2-Dichlorobenzene	1	15.6187	0	20	78	70	130
Isopropylbenzene	1	17.0707	0	20	85	70	130
Cyclohexanone	1	37.7574	0	100	38*	50	150
Camphene	1	5.3762	0	20	27*	70	130
1,2,3-Trichloropropane	1	15.3888	0	20	77	70	130
2-Chlorotoluene	1	18.7896	0	20	94	70	130
p-Ethyltoluene	1	16.3115	0	20	82	70	130
4-Chlorotoluene	1	18.4146	0	20	92	70	130
n-Propylbenzene	1	17.9752	0	20	90	70	130
Bromobenzene	1	15.8153	0	20	79	70	130
1,3,5-Trimethylbenzene	1	20.5641	0	20	103	70	130
Butyl methacrylate	1	16.0635	0	20	80	70	130
t-Butylbenzene	1	16.7965	0	20	84	70	130
1,2,4-Trimethylbenzene	1	17.0002	0	20	85	70	130
sec-Butylbenzene	1	16.3179	0	20	82	70	130
4-Isopropyltoluene	1	15.384	0	20	77	70	130
n-Butylbenzene	1	16.3987	0	20	82	70	130
p-Diethylbenzene	1	16.4353	0	20	82	70	130
1,2,4,5-Tetramethylbenzene	1	16.893	0	20	84	70	130
1,2-Dibromo-3-Chloropropane	1	10.7364	0	20	54	50	150
Camphor	1	135.0514	0	200	68	50	150
Hexachlorobutadiene	1	11.1145	0	20	56	50	150
1,2,4-Trichlorobenzene	1	14.416	0	20	72	70	130
1,2,3-Trichlorobenzene	1	13.9287	0	20	70	70	130
Naphthalene	1	14.0792	0	20	70	50	150

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64245

Data File	Sample ID:	Analysis Date
Spike or Dup: 3M117349.D	AD00104-001(T:MS)	9/22/2017 1:52:00 PM
Non Spike(If applicable): 3M117337.D	AD00104-001(T)	9/22/2017 10:22:00 AM
Inst Blank(If applicable):		

Method: 8260C | Matrix: Aqueous | QC Type: MS

Analyte:	Col	Spike Conc	Sample Conc	Expected Conc	Recovery	Lower Limit	Upper Limit
Chlorodifluoromethane	1	26.3896	0	20	132	50	150
Dichlorodifluoromethane	1	61.1851	0	20	306*	50	150
Chloromethane	1	35.5745	0	20	178*	50	150
Bromomethane	1	30.0752	0	20	150	50	150
Vinyl Chloride	1	29.4668	0	20	147	50	150
Chloroethane	1	33.5803	0	20	168*	50	150
Trichlorofluoromethane	1	33.9477	0	20	170*	50	150
Ethyl ether	1	27.867	0	20	139	50	150
Furan	1	26.8011	0	20	134	50	150
1,1,2-Trichloro-1,2,2-trifluoroethane	1	30.911	0	20	155*	50	150
Methylene Chloride	1	51.8698	0	20	259*	70	130
Acrolein	1	119.6349	0	100	120	50	150
Acrylonitrile	1	26.191	0	20	131	50	150
Iodomethane	1	25.088	0	20	125	50	150
Acetone	1	146.0273	0	100	146	50	150
Carbon Disulfide	1	25.0292	0	20	125	50	150
t-Butyl Alcohol	1	72.5597	0	100	73	50	150
n-Hexane	1	26.1363	0	20	131*	70	130
Di-isopropyl-ether	1	23.8776	0	20	119	70	130
1,1-Dichloroethene	1	28.3866	0	20	142*	70	130
Methyl Acetate	1	39.5654	0	20	198*	50	150
Methyl-t-butyl ether	1	23.8573	0	20	119	70	130
1,1-Dichloroethane	1	25.543	0	20	128	70	130
trans-1,2-Dichloroethene	1	28.5771	0	20	143*	70	130
Ethyl-t-butyl ether	1	22.3028	0	20	112	70	130
cis-1,2-Dichloroethene	1	26.6722	0	20	133*	70	130
Bromochloromethane	1	22.6793	0	20	113	70	130
2,2-Dichloropropane	1	28.8987	0	20	144*	70	130
Ethyl acetate	1	28.4636	0	20	142*	50	130
1,4-Dioxane	1	1365.867	0	1000	137	50	150
1,1-Dichloropropene	1	28.7085	0	20	144*	70	130
Chloroform	1	28.0324	0	20	140*	70	130
Cyclohexane	1	27.0608	0	20	135*	70	130
1,2-Dichloroethane	1	28.0123	0	20	140*	70	130
2-Butanone	1	18.7804	0	20	94	50	150
1,1,1-Trichloroethane	1	29.3221	0	20	147*	70	130
Carbon Tetrachloride	1	31.3862	0	20	157*	50	150
Vinyl Acetate	1	25.0774	0	20	125	50	150
Bromodichloromethane	1	29.0162	0	20	145*	70	130
Methylcyclohexane	1	28.7463	0	20	144*	70	130
Dibromomethane	1	26.9051	0	20	135*	70	130
1,2-Dichloropropane	1	25.4886	0	20	127	70	130
Trichloroethene	1	28.3087	0	20	142*	70	130
Benzene	1	26.5822	0	20	133*	70	130
tert-Amyl methyl ether	1	22.5742	0	20	113	70	130
Iso-propylacetate	1	21.7227	0	20	109	70	130
Methyl methacrylate	1	21.186	0	20	106	70	130
Dibromochloromethane	1	24.7691	0	20	124	70	130
2-Chloroethylvinylether	1	19.2778	0	20	96	70	130
cis-1,3-Dichloropropene	1	22.0132	0	20	110	70	130
trans-1,3-Dichloropropene	1	22.7788	0	20	114	70	130
Ethyl methacrylate	1	23.1876	0	20	116	70	130
1,1,2-Trichloroethane	1	23.2608	0	20	116	70	130
1,2-Dibromoethane	1	22.1722	0	20	111	70	130
1,3-Dichloropropane	1	22.8731	0	20	114	70	130
4-Methyl-2-Pentanone	1	22.9199	0	20	115	50	150
2-Hexanone	1	22.52	0	20	113	50	150
Tetrachloroethene	1	26.6772	0	20	133*	50	130
Toluene	1	23.0171	0	20	115	70	130
1,1,1,2-Tetrachloroethane	1	24.9894	0	20	125	70	130
Chlorobenzene	1	23.2328	0	20	116	70	130

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64245

n-Butyl acrylate	1	16.0508	0	20	80	70	130
n-Amyl acetate	1	19.7407	0	20	99	70	130
Bromoform	1	21.7746	0	20	109	70	130
Ethylbenzene	1	23.537	0	20	118	70	130
1,1,2,2-Tetrachloroethane	1	19.9162	0	20	100	70	130
Styrene	1	22.8817	0	20	114	70	130
m&p-Xylenes	1	45.5937	0	40	114	70	130
o-Xylene	1	21.9593	0	20	110	70	130
trans-1,4-Dichloro-2-butene	1	23.9083	0	20	120	50	150
1,3-Dichlorobenzene	1	22.7609	0	20	114	70	130
1,4-Dichlorobenzene	1	22.0529	0	20	110	70	130
1,2-Dichlorobenzene	1	23.1014	0	20	116	70	130
Isopropylbenzene	1	23.0814	0	20	115	70	130
Cyclohexanone	1	54.1281	0	100	54	50	150
Camphene	1	22.1961	0	20	111	70	130
1,2,3-Trichloropropane	1	20.6772	0	20	103	70	130
2-Chlorotoluene	1	23.3903	0	20	117	70	130
p-Ethyltoluene	1	24.7865	0	20	124	70	130
4-Chlorotoluene	1	22.7223	0	20	114	70	130
n-Propylbenzene	1	24.7063	0	20	124	70	130
Bromobenzene	1	22.1634	0	20	111	70	130
1,3,5-Trimethylbenzene	1	29.0506	0	20	145*	70	130
Butyl methacrylate	1	22.3904	0	20	112	70	130
t-Butylbenzene	1	22.8998	0	20	114	70	130
1,2,4-Trimethylbenzene	1	25.2947	0	20	126	70	130
sec-Butylbenzene	1	23.1301	0	20	116	70	130
4-Isopropyltoluene	1	23.5061	0	20	118	70	130
n-Butylbenzene	1	24.5813	0	20	123	70	130
p-Diethylbenzene	1	31.8854	0	20	159*	70	130
1,2,4,5-Tetramethylbenzene	1	27.5156	0	20	138*	70	130
1,2-Dibromo-3-Chloropropane	1	15.8375	0	20	79	50	150
Camphor	1	178.3426	0	200	89	50	150
Hexachlorobutadiene	1	14.4394	0	20	72	50	150
1,2,4-Trichlorobenzene	1	19.5493	0	20	98	70	130
1,2,3-Trichlorobenzene	1	18.5173	0	20	93	70	130
Naphthalene	1	24.8907	0	20	124	50	150

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64245

Data File	Sample ID:	Analysis Date
Spike or Dup: 3M117350.D	AD00104-001(T:MSD)	9/22/2017 2:09:00 PM
Non Spike(If applicable): 3M117337.D	AD00104-001(T)	9/22/2017 10:22:00 AM
Inst Blank(If applicable):		

Method: 8260C | Matrix: Aqueous | QC Type: MSD

Analyte:	Col	Spike Conc	Sample Conc	Expected Conc	Recovery	Lower Limit	Upper Limit
Chlorodifluoromethane	1	24.1401	0	20	121	50	150
Dichlorodifluoromethane	1	52.6553	0	20	263*	50	150
Chloromethane	1	30.4957	0	20	152*	50	150
Bromomethane	1	26.6313	0	20	133	50	150
Vinyl Chloride	1	27.125	0	20	136	50	150
Chloroethane	1	23.5863	0	20	118	50	150
Trichlorofluoromethane	1	30.3998	0	20	152*	50	150
Ethyl ether	1	26.5052	0	20	133	50	150
Furan	1	24.1054	0	20	121	50	150
1,1,2-Trichloro-1,2,2-trifluoroethane	1	27.1332	0	20	136	50	150
Methylene Chloride	1	49.2157	0	20	246*	70	130
Acrolein	1	119.7849	0	100	120	50	150
Acrylonitrile	1	24.3986	0	20	122	50	150
Iodomethane	1	23.2481	0	20	116	50	150
Acetone	1	133.4323	0	100	133	50	150
Carbon Disulfide	1	23.294	0	20	116	50	150
t-Butyl Alcohol	1	70.8268	0	100	71	50	150
n-Hexane	1	25.2504	0	20	126	70	130
Di-isopropyl-ether	1	23.3926	0	20	117	70	130
1,1-Dichloroethene	1	23.2887	0	20	116	70	130
Methyl Acetate	1	40.7464	0	20	204*	50	150
Methyl-t-butyl ether	1	22.7253	0	20	114	70	130
1,1-Dichloroethane	1	24.1874	0	20	121	70	130
trans-1,2-Dichloroethene	1	25.9007	0	20	130	70	130
Ethyl-t-butyl ether	1	21.7018	0	20	109	70	130
cis-1,2-Dichloroethene	1	24.2483	0	20	121	70	130
Bromochloromethane	1	22.7571	0	20	114	70	130
2,2-Dichloropropane	1	25.9103	0	20	130	70	130
Ethyl acetate	1	27.0555	0	20	135*	50	130
1,4-Dioxane	1	1252.511	0	1000	125	50	150
1,1-Dichloropropene	1	27.0538	0	20	135*	70	130
Chloroform	1	25.7744	0	20	129	70	130
Cyclohexane	1	25.4957	0	20	127	70	130
1,2-Dichloroethane	1	25.5148	0	20	128	70	130
2-Butanone	1	18.1979	0	20	91	50	150
1,1,1-Trichloroethane	1	26.2767	0	20	131*	70	130
Carbon Tetrachloride	1	28.0469	0	20	140	50	150
Vinyl Acetate	1	24.0983	0	20	120	50	150
Bromodichloromethane	1	26.6957	0	20	133*	70	130
Methylcyclohexane	1	26.991	0	20	135*	70	130
Dibromomethane	1	26.4743	0	20	132*	70	130
1,2-Dichloropropane	1	22.5012	0	20	113	70	130
Trichloroethene	1	26.1771	0	20	131*	70	130
Benzene	1	25.3289	0	20	127	70	130
tert-Amyl methyl ether	1	21.0669	0	20	105	70	130
Iso-propylacetate	1	20.1578	0	20	101	70	130
Methyl methacrylate	1	19.1362	0	20	96	70	130
Dibromochloromethane	1	22.4198	0	20	112	70	130
2-Chloroethylvinylether	1	18.5948	0	20	93	70	130
cis-1,3-Dichloropropene	1	20.3516	0	20	102	70	130
trans-1,3-Dichloropropene	1	21.226	0	20	106	70	130
Ethyl methacrylate	1	20.812	0	20	104	70	130
1,1,2-Trichloroethane	1	21.2146	0	20	106	70	130
1,2-Dibromoethane	1	20.6741	0	20	103	70	130
1,3-Dichloropropane	1	21.5753	0	20	108	70	130
4-Methyl-2-Pentanone	1	21.5437	0	20	108	50	150
2-Hexanone	1	21.0738	0	20	105	50	150
Tetrachloroethene	1	25.1915	0	20	126	50	130
Toluene	1	21.7851	0	20	109	70	130
1,1,1,2-Tetrachloroethane	1	23.1599	0	20	116	70	130
Chlorobenzene	1	21.826	0	20	109	70	130

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64245

n-Butyl acrylate	1	15.8064	0	20	79	70	130
n-Amyl acetate	1	19.2312	0	20	96	70	130
Bromoform	1	20.1752	0	20	101	70	130
Ethylbenzene	1	21.7617	0	20	109	70	130
1,1,2,2-Tetrachloroethane	1	18.6687	0	20	93	70	130
Styrene	1	21.7836	0	20	109	70	130
m&p-Xylenes	1	43.7595	0	40	109	70	130
o-Xylene	1	21.2915	0	20	106	70	130
trans-1,4-Dichloro-2-butene	1	23.7586	0	20	119	50	150
1,3-Dichlorobenzene	1	21.5136	0	20	108	70	130
1,4-Dichlorobenzene	1	20.7397	0	20	104	70	130
1,2-Dichlorobenzene	1	21.6353	0	20	108	70	130
Isopropylbenzene	1	21.5264	0	20	108	70	130
Cyclohexanone	1	52.267	0	100	52	50	150
Camphene	1	22.3415	0	20	112	70	130
1,2,3-Trichloropropane	1	19.3813	0	20	97	70	130
2-Chlorotoluene	1	23.0067	0	20	115	70	130
p-Ethyltoluene	1	23.7807	0	20	119	70	130
4-Chlorotoluene	1	22.3699	0	20	112	70	130
n-Propylbenzene	1	23.0345	0	20	115	70	130
Bromobenzene	1	20.9664	0	20	105	70	130
1,3,5-Trimethylbenzene	1	28.0855	0	20	140*	70	130
Butyl methacrylate	1	20.9218	0	20	105	70	130
t-Butylbenzene	1	22.6152	0	20	113	70	130
1,2,4-Trimethylbenzene	1	23.5417	0	20	118	70	130
sec-Butylbenzene	1	22.2997	0	20	111	70	130
4-Isopropyltoluene	1	23.26	0	20	116	70	130
n-Butylbenzene	1	23.9471	0	20	120	70	130
p-Diethylbenzene	1	30.3666	0	20	152*	70	130
1,2,4,5-Tetramethylbenzene	1	26.4637	0	20	132*	70	130
1,2-Dibromo-3-Chloropropane	1	14.609	0	20	73	50	150
Camphor	1	178.9637	0	200	89	50	150
Hexachlorobutadiene	1	15.9692	0	20	80	50	150
1,2,4-Trichlorobenzene	1	20.2036	0	20	101	70	130
1,2,3-Trichlorobenzene	1	19.7533	0	20	99	70	130
Naphthalene	1	25.065	0	20	125	50	150

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
RPD Data Laboratory Limits
QC Batch: MBS64245

	Data File	Sample ID:	Analysis Date
Spike or Dup:	3M117350.D	AD00104-001(T:MSD)	9/22/2017 2:09:00 PM
Duplicate(If applicable):	3M117349.D	AD00104-001(T:MS)	9/22/2017 1:52:00 PM
Inst Blank(If applicable):			

Method: 8260C Matrix: Aqueous QC Type: MSD

Analyte:	Column	Dup/MSD/MBSD Conc	Sample/MS/MBS Conc	RPD	Limit
Chlorodifluoromethane	1	24.1401	26.3896	8.9	20
Dichlorodifluoromethane	1	52.6553	61.1851	15	20
Chloromethane	1	30.4957	35.5745	15	20
Bromomethane	1	26.6313	30.0752	12	20
Vinyl Chloride	1	27.125	29.4668	8.3	40
Chloroethane	1	23.5863	33.5803	35*	20
Trichlorofluoromethane	1	30.3998	33.9477	11	20
Ethyl ether	1	26.5052	27.867	5	20
Furan	1	24.1054	26.8011	11	20
1,1,2-Trichloro-1,2,2-trifluoroethane	1	27.1332	30.911	13	20
Methylene Chloride	1	49.2157	51.8698	5.3	20
Acrolein	1	119.7849	119.6349	0.13	20
Acrylonitrile	1	24.3986	26.191	7.1	20
Iodomethane	1	23.2481	25.088	7.6	20
Acetone	1	133.4323	146.0273	9	20
Carbon Disulfide	1	23.294	25.0292	7.2	20
t-Butyl Alcohol	1	70.8268	72.5597	2.4	20
n-Hexane	1	25.2504	26.1363	3.4	20
Di-isopropyl-ether	1	23.3926	23.8776	2.1	20
1,1-Dichloroethene	1	23.2887	28.3866	20	40
Methyl Acetate	1	40.7464	39.5654	2.9	20
Methyl-t-butyl ether	1	22.7253	23.8573	4.9	20
1,1-Dichloroethane	1	24.1874	25.543	5.5	40
trans-1,2-Dichloroethene	1	25.9007	28.5771	9.8	20
Ethyl-t-butyl ether	1	21.7018	22.3028	2.7	20
cis-1,2-Dichloroethene	1	24.2483	26.6722	9.5	20
Bromochloromethane	1	22.7571	22.6793	0.34	20
2,2-Dichloropropane	1	25.9103	28.8987	11	20
Ethyl acetate	1	27.0555	28.4636	5.1	20
1,4-Dioxane	1	1252.511	1365.867	8.7	20
1,1-Dichloropropene	1	27.0538	28.7085	5.9	20
Chloroform	1	25.7744	28.0324	8.4	40
Cyclohexane	1	25.4957	27.0608	6	20
1,2-Dichloroethane	1	25.5148	28.0123	9.3	40
2-Butanone	1	18.1979	18.7804	3.2	40
1,1,1-Trichloroethane	1	26.2767	29.3221	11	20
Carbon Tetrachloride	1	28.0469	31.3862	11	40
Vinyl Acetate	1	24.0983	25.0774	4	20
Bromodichloromethane	1	26.6957	29.0162	8.3	20
Methylcyclohexane	1	26.991	28.7463	6.3	20
Dibromomethane	1	26.4743	26.9051	1.6	20
1,2-Dichloropropane	1	22.5012	25.4886	12	20
Trichloroethene	1	26.1771	28.3087	7.8	40
Benzene	1	25.3289	26.5822	4.8	40
tert-Amyl methyl ether	1	21.0669	22.5742	6.9	20
Iso-propylacetate	1	20.1578	21.7227	7.5	20
Methyl methacrylate	1	19.1362	21.186	10	20
Dibromochloromethane	1	22.4198	24.7691	10	20
2-Chloroethylvinylether	1	18.5948	19.2778	3.6	20
cis-1,3-Dichloropropene	1	20.3516	22.0132	7.8	20
trans-1,3-Dichloropropene	1	21.226	22.7788	7.1	20
Ethyl methacrylate	1	20.812	23.1876	11	20
1,1,2-Trichloroethane	1	21.2146	23.2608	9.2	20
1,2-Dibromoethane	1	20.6741	22.1722	7	20
1,3-Dichloropropane	1	21.5753	22.8731	5.8	20
4-Methyl-2-Pentanone	1	21.5437	22.9199	6.2	20
2-Hexanone	1	21.0738	22.52	6.6	20
Tetrachloroethene	1	25.1915	26.6772	5.7	40
Toluene	1	21.7851	23.0171	5.5	40
1,1,1,2-Tetrachloroethane	1	23.1599	24.9894	7.6	20
Chlorobenzene	1	21.826	23.2328	6.2	40
n-Butyl acrylate	1	15.8064	16.0508	1.5	20
n-Amyl acetate	1	19.2312	19.7407	2.6	20

Form3
RPD Data Laboratory Limits
QC Batch: MBS64245

Bromoform	1	20.1752	21.7746	7.6	20
Ethylbenzene	1	21.7617	23.537	7.8	20
1,1,2,2-Tetrachloroethane	1	18.6687	19.9162	6.5	20
Styrene	1	21.7836	22.8817	4.9	20
m&p-Xylenes	1	43.7595	45.5937	4.1	20
o-Xylene	1	21.2915	21.9593	3.1	20
trans-1,4-Dichloro-2-butene	1	23.7586	23.9083	0.63	20
1,3-Dichlorobenzene	1	21.5136	22.7609	5.6	20
1,4-Dichlorobenzene	1	20.7397	22.0529	6.1	40
1,2-Dichlorobenzene	1	21.6353	23.1014	6.6	40
Isopropylbenzene	1	21.5264	23.0814	7	20
Cyclohexanone	1	52.267	54.1281	3.5	20
Camphene	1	22.3415	22.1961	0.65	20
1,2,3-Trichloropropane	1	19.3813	20.6772	6.5	20
2-Chlorotoluene	1	23.0067	23.3903	1.7	20
p-Ethyltoluene	1	23.7807	24.7865	4.1	20
4-Chlorotoluene	1	22.3699	22.7223	1.6	20
n-Propylbenzene	1	23.0345	24.7063	7	40
Bromobenzene	1	20.9664	22.1634	5.6	20
1,3,5-Trimethylbenzene	1	28.0855	29.0506	3.4	20
Butyl methacrylate	1	20.9218	22.3904	6.8	20
t-Butylbenzene	1	22.6152	22.8998	1.3	20
1,2,4-Trimethylbenzene	1	23.5417	25.2947	7.2	20
sec-Butylbenzene	1	22.2997	23.1301	3.7	40
4-Isopropyltoluene	1	23.26	23.5061	1.1	20
n-Butylbenzene	1	23.9471	24.5813	2.6	20
p-Diethylbenzene	1	30.3666	31.8854	4.9	20
1,2,4,5-Tetramethylbenzene	1	26.4637	27.5156	3.9	20
1,2-Dibromo-3-Chloropropane	1	14.609	15.8375	8.1	20
Camphor	1	178.9637	178.3426	0.35	20
Hexachlorobutadiene	1	15.9692	14.4394	10	20
1,2,4-Trichlorobenzene	1	20.2036	19.5493	3.3	20
1,2,3-Trichlorobenzene	1	19.7533	18.5173	6.5	20
Naphthalene	1	25.065	24.8907	0.7	20

* - Indicates outside of limits

NA - Both concentrations=0... no result can be calculated

Form1

ORGANICS SEMIVOLATILE REPORT

Sample Number: WMB62293
Client Id:
Data File: 5M101113.D
Analysis Date: 09/21/17 14:34
Date Rec/Extracted: NA-09/21/17
Column: DB-5MS 30M 0.250mm ID 0.25um film

Method: EPA 8270D
Matrix: Aqueous
Initial Vol: 1000ml
Final Vol: 0.5ml
Dilution: 1
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
123-91-1	1,4-Dioxane	0.12	U				

Worksheet #: 438597

Total Target Concentration 0

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS SEMIVOLATILE REPORT

Sample Number: AD00135-001
Client Id: MW-4
Data File: 5M101117.D
Analysis Date: 09/21/17 16:51
Date Rec/Extracted: 09/20/17-09/21/17
Column: DB-5MS 30M 0.250mm ID 0.25um film

Method: EPA 8270D
Matrix: Aqueous
Initial Vol: 1000ml
Final Vol: 0.5ml
Dilution: 1
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
123-91-1	1,4-Dioxane	0.12	U				

Worksheet #: 438597

Total Target Concentration 0

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS SEMIVOLATILE REPORT

Sample Number: AD00135-002
Client Id: MW-6A
Data File: 5M101118.D
Analysis Date: 09/21/17 17:14
Date Rec/Extracted: 09/20/17-09/21/17
Column: DB-5MS 30M 0.250mm ID 0.25um film

Method: EPA 8270D
Matrix: Aqueous
Initial Vol: 930ml
Final Vol: 0.5ml
Dilution: 1
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
123-91-1	1,4-Dioxane	0.13	U				

Worksheet #: 438597

Total Target Concentration 0

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS SEMIVOLATILE REPORT

Sample Number: AD00135-003
Client Id: MW-6B
Data File: 5M101114.D
Analysis Date: 09/21/17 15:41
Date Rec/Extracted: 09/20/17-09/21/17
Column: DB-5MS 30M 0.250mm ID 0.25um film

Method: EPA 8270D
Matrix: Aqueous
Initial Vol: 950ml
Final Vol: 0.5ml
Dilution: 1
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
123-91-1	1,4-Dioxane	0.13	U				

Worksheet #: 438597

Total Target Concentration 0

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS SEMIVOLATILE REPORT

Sample Number: AD00135-004(MS:AD00
Client Id: MW-6B-MS
Data File: 5M101115.D
Analysis Date: 09/21/17 16:04
Date Rec/Extracted: 09/20/17-09/21/17
Column: DB-5MS 30M 0.250mm ID 0.25um film

Method: EPA 8270D
Matrix: Aqueous
Initial Vol: 950ml
Final Vol: 0.5ml
Dilution: 1
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
123-91-1	1,4-Dioxane	0.13	26				

Worksheet #: 438597

Total Target Concentration 26

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS SEMIVOLATILE REPORT

Sample Number: AD00135-005(MSD:AD
Client Id: MW-6B-MSD
Data File: 5M101116.D
Analysis Date: 09/21/17 16:27
Date Rec/Extracted: 09/20/17-09/21/17
Column: DB-5MS 30M 0.250mm ID 0.25um film

Method: EPA 8270D
Matrix: Aqueous
Initial Vol: 950ml
Final Vol: 0.5ml
Dilution: 1
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
123-91-1	**1,4-Dioxane**	**0.13**	**32**				

Worksheet #: 438597 *Total Target Concentration* 32 ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration used
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS SEMIVOLATILE REPORT

Sample Number: AD00135-006
Client Id: MW-23S
Data File: 5M101119.D
Analysis Date: 09/21/17 17:38
Date Rec/Extracted: 09/20/17-09/21/17
Column: DB-5MS 30M 0.250mm ID 0.25um film

Method: EPA 8270D
Matrix: Aqueous
Initial Vol: 1000ml
Final Vol: 0.5ml
Dilution: 1
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
123-91-1	1,4-Dioxane	0.12	U				

Worksheet #: 438597

Total Target Concentration 0

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea

Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS SEMIVOLATILE REPORT

Sample Number: AD00135-007
Client Id: MW-23D
Data File: 5M101120.D
Analysis Date: 09/21/17 18:01
Date Rec/Extracted: 09/20/17-09/21/17
Column: DB-5MS 30M 0.250mm ID 0.25um film

Method: EPA 8270D
Matrix: Aqueous
Initial Vol: 1000ml
Final Vol: 0.5ml
Dilution: 1
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
123-91-1	**1,4-Dioxane**	**0.12**	**0.99**				

Worksheet #: 438597

Total Target Concentration 0.99

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form3
Recovery Data Laboratory Limits
QC Batch: WMB62293

Data File	Sample ID:	Analysis Date
Spike or Dup: 5M101112.D	WMB62293(MS)	9/21/2017 2:10:00 PM
Non Spike(If applicable):		
Inst Blank(If applicable):		
Method: 8270D	Matrix: Aqueous	QC Type: MBS

Analyte:	Col	Spike Conc	Sample Conc	Expected Conc	Recovery	Lower Limit	Upper Limit
1,4-Dioxane	1	56.7825	0	100	57	20	160
Pyridine	1	56.7094	0	100	57	5	150
N-Nitrosodimethylamine	1	65.8306	0	100	66	50	150
Benzaldehyde	1	440.825	0	100	441*	20	150
Aniline	1	83.228	0	100	83	20	150
Pentachloroethane	1	62.6351	0	100	63	50	130
bis(2-Chloroethyl)ether	1	79.433	0	100	79	50	130
N-Decane	1	59.1357	0	100	59	40	130
1,3-Dichlorobenzene	1	78.0902	0	100	78	50	130
1,4-Dichlorobenzene	1	81.2999	0	100	81	50	130
1,2-Dichlorobenzene	1	83.2123	0	100	83	50	130
Benzyl alcohol	1	87.6408	0	100	88	70	130
bis(2-chloroisopropyl)ether	1	73.6598	0	100	74	40	130
Acetophenone	1	90.5678	0	100	91	50	130
Hexachloroethane	1	80.9167	0	100	81	50	130
N-Nitroso-di-n-propylamine	1	84.5051	0	100	85	50	130
Nitrobenzene	1	86.5552	0	100	87	70	130
Isophorone	1	86.4411	0	100	86	70	130
Benzoic Acid	1	25.114	0	100	25	20	130
bis(2-Chloroethoxy)methane	1	84.1755	0	100	84	70	130
1,2,4-Trichlorobenzene	1	83.6464	0	100	84	50	130
Naphthalene	1	85.5239	0	100	86	70	130
4-Chloroaniline	1	106.2187	0	100	106	50	150
Hexachlorobutadiene	1	82.1178	0	100	82	70	130
Caprolactam	1	47.4467	0	100	47	20	130
2-Methylnaphthalene	1	85.0345	0	100	85	70	130
1-Methylnaphthalene	1	83.7985	0	100	84	70	130
1,1'-Biphenyl	1	79.6757	0	100	80	70	130
1,2,4,5-Tetrachlorobenzene	1	91.0085	0	100	91	70	130
Hexachlorocyclopentadiene	1	89.6863	0	100	90	20	130
2-Chloronaphthalene	1	88.8739	0	100	89	70	130
1,4-Dimethylnaphthalene	1	77.367	0	100	77	70	130
Diphenyl Ether	1	92.86	0	100	93	70	130
2-Nitroaniline	1	101.384	0	100	101	50	150
Coumarin	1	73.3769	0	100	73	70	130
Acenaphthylene	1	90.0456	0	100	90	70	130
Dimethylphthalate	1	89.1116	0	100	89	70	130
2,6-Dinitrotoluene	1	91.8758	0	100	92	70	130
Acenaphthene	1	88.0443	0	100	88	70	130
3-Nitroaniline	1	114.4735	0	100	114	50	150
Dibenzofuran	1	94.9241	0	100	95	70	130
2,4-Dinitrotoluene	1	88.6672	0	100	89	40	130
Fluorene	1	88.5743	0	100	89	70	130
4-Chlorophenyl-phenylether	1	87.2555	0	100	87	70	130
Diethylphthalate	1	92.3583	0	100	92	50	130
4-Nitroaniline	1	99.1599	0	100	99	50	150
Atrazine	1	133.7074	0	100	134*	50	130
n-Nitrosodiphenylamine	1	77.1836	0	100	77	50	130
1,2-Diphenylhydrazine	1	98.5962	0	100	99	70	130
4-Bromophenyl-phenylether	1	89.7125	0	100	90	70	130
Hexachlorobenzene	1	91.8642	0	100	92	70	130
N-Octadecane	1	95.633	0	100	96	70	130
Phenanthrene	1	87.9697	0	100	88	70	130
Anthracene	1	89.1576	0	100	89	70	130
Carbazole	1	91.1773	0	100	91	70	130
Di-n-butylphthalate	1	100.001	0	100	100	70	130
Fluoranthene	1	90.7418	0	100	91	70	130
Pyrene	1	93.1013	0	100	93	70	130
Benzidine	1	27.8922	0	100	28	1	130
Butylbenzylphthalate	1	100.9826	0	100	101	50	130
3,3'-Dichlorobenzidine	1	118.8485	0	100	119	1	150

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3

Recovery Data Laboratory Limits

QC Batch: WMB62293

Benzo[a]anthracene	1	91.7508	0	100	92	70	130
Chrysene	1	92.8105	0	100	93	50	130
bis(2-Ethylhexyl)phthalate	1	99.5564	0	100	100	70	130
Di-n-octylphthalate	1	99.8782	0	100	100	70	130
Benzo[b]fluoranthene	1	94.4009	0	100	94	70	130
Benzo[k]fluoranthene	1	97.101	0	100	97	70	130
Benzo[a]pyrene	1	87.0195	0	100	87	70	130
Indeno[1,2,3-cd]pyrene	1	96.4724	0	100	96	70	130
Dibenzo[a,h]anthracene	1	94.4366	0	100	94	70	130
Benzo[g,h,i]perylene	1	91.3838	0	100	91	70	130

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: WMB62293

	Data File	Sample ID:	Analysis Date
Spike or Dup:	5M101115.D	AD00135-004(MS:AD00135-003	9/21/2017 4:04:00 PM
Non Spike(If applicable):	5M101114.D	AD00135-003	9/21/2017 3:41:00 PM
Inst Blank(If applicable):			

Method: 8270D | Matrix: Aqueous | QC Type: MS

Analyte:	Col	Spike Conc	Sample Conc	Expected Conc	Recovery	Lower Limit	Upper Limit
1,4-Dioxane	1	49.4257	0	100	49	20	160
Pyridine	1	45.9951	0	100	46	5	150
N-Nitrosodimethylamine	1	59.459	0	100	59	50	150
Benzaldehyde	1	401.2213	0	100	401*	20	150
Aniline	1	81.5653	0	100	82	20	150
Pentachloroethane	1	56.116	0	100	56	50	130
bis(2-Chloroethyl)ether	1	75.3954	0	100	75	50	130
N-Decane	1	55.1533	0	100	55	40	130
1,3-Dichlorobenzene	1	74.1904	0	100	74	50	130
1,4-Dichlorobenzene	1	78.5199	0	100	79	50	130
1,2-Dichlorobenzene	1	78.6705	0	100	79	50	130
Benzyl alcohol	1	84.4835	0	100	84	70	130
bis(2-chloroisopropyl)ether	1	69.7537	0	100	70	40	130
Acetophenone	1	82.4464	0	100	82	50	130
Hexachloroethane	1	78.317	0	100	78	50	130
N-Nitroso-di-n-propylamine	1	81.7073	0	100	82	50	130
Nitrobenzene	1	82.4717	0	100	82	70	130
Isophorone	1	80.4625	0	100	80	70	130
Benzoic Acid	1	22.5585	0	100	23	20	130
bis(2-Chloroethoxy)methane	1	80.5862	0	100	81	70	130
1,2,4-Trichlorobenzene	1	77.639	0	100	78	50	130
Naphthalene	1	80.4562	0	100	80	70	130
4-Chloroaniline	1	106.491	0	100	106	50	150
Hexachlorobutadiene	1	77.7929	0	100	78	70	130
Caprolactam	1	40.4096	0	100	40	20	130
2-Methylnaphthalene	1	79.8358	0	100	80	70	130
1-Methylnaphthalene	1	77.1568	0	100	77	70	130
1,1'-Biphenyl	1	70.7459	0	100	71	70	130
1,2,4,5-Tetrachlorobenzene	1	80.0778	0	100	80	70	130
Hexachlorocyclopentadiene	1	79.7815	0	100	80	20	130
2-Chloronaphthalene	1	81.1353	0	100	81	70	130
1,4-Dimethylnaphthalene	1	69.4671	0	100	69*	70	130
Diphenyl Ether	1	82.3792	0	100	82	70	130
2-Nitroaniline	1	91.1796	0	100	91	50	150
Coumarin	1	65.7779	0	100	66*	70	130
Acenaphthylene	1	84.0826	0	100	84	70	130
Dimethylphthalate	1	84.6795	0	100	85	70	130
2,6-Dinitrotoluene	1	86.7179	0	100	87	70	130
Acenaphthene	1	82.4384	0	100	82	70	130
3-Nitroaniline	1	104.6845	0	100	105	50	150
Dibenzofuran	1	88.3117	0	100	88	70	130
2,4-Dinitrotoluene	1	83.965	0	100	84	40	130
Fluorene	1	82.5782	0	100	83	70	130
4-Chlorophenyl-phenylether	1	80.9654	0	100	81	70	130
Diethylphthalate	1	86.0444	0	100	86	50	130
4-Nitroaniline	1	91.7219	0	100	92	50	150
Atrazine	1	119.3071	0	100	119	50	130
n-Nitrosodiphenylamine	1	73.0092	0	100	73	50	130
1,2-Diphenylhydrazine	1	85.2794	0	100	85	70	130
4-Bromophenyl-phenylether	1	83.9453	0	100	84	70	130
Hexachlorobenzene	1	83.2836	0	100	83	70	130
N-Octadecane	1	86.8592	0	100	87	70	130
Phenanthrene	1	82.5652	0	100	83	70	130
Anthracene	1	82.9098	0	100	83	70	130
Carbazole	1	83.4182	0	100	83	70	130
Di-n-butylphthalate	1	95.8207	0	100	96	70	130
Fluoranthene	1	85.3136	0	100	85	70	130
Pyrene	1	81.9611	0	100	82	70	130
Benzidine	1	18.7567	0	100	19	1	130
Butylbenzylphthalate	1	91.9912	0	100	92	50	130
3,3'-Dichlorobenzidine	1	104.3603	0	100	104	1	150

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3

Recovery Data Laboratory Limits

QC Batch: WMB62293

Benzo[a]anthracene	1	83.1878	0	100	83	70	130
Chrysene	1	83.575	0	100	84	50	130
bis(2-Ethylhexyl)phthalate	1	87.7296	0	100	88	70	130
Di-n-octylphthalate	1	87.2659	0	100	87	70	130
Benzo[b]fluoranthene	1	86.4458	0	100	86	70	130
Benzo[k]fluoranthene	1	84.5923	0	100	85	70	130
Benzo[a]pyrene	1	76.6694	0	100	77	70	130
Indeno[1,2,3-cd]pyrene	1	87.3599	0	100	87	70	130
Dibenzo[a,h]anthracene	1	86.0159	0	100	86	70	130
Benzo[g,h,i]perylene	1	83.3289	0	100	83	70	130

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: WMB62293

Data File	Sample ID:	Analysis Date
Spike or Dup: 5M101116.D	AD00135-005(MSD:AD00135-0	9/21/2017 4:27:00 PM
Non Spike(If applicable): 5M101114.D	AD00135-003	9/21/2017 3:41:00 PM
Inst Blank(If applicable):		

Method: 8270D | Matrix: Aqueous | QC Type: MSD

Analyte:	Col	Spike Conc	Sample Conc	Expected Conc	Recovery	Lower Limit	Upper Limit
1,4-Dioxane	1	60.7736	0	100	61	20	160
Pyridine	1	61.7535	0	100	62	5	150
N-Nitrosodimethylamine	1	67.5563	0	100	68	50	150
Benzaldehyde	1	474.8253	0	100	475*	20	150
Aniline	1	96.247	0	100	96	20	150
Pentachloroethane	1	66.3195	0	100	66	50	130
bis(2-Chloroethyl)ether	1	83.8041	0	100	84	50	130
N-Decane	1	64.751	0	100	65	40	130
1,3-Dichlorobenzene	1	84.5628	0	100	85	50	130
1,4-Dichlorobenzene	1	87.2345	0	100	87	50	130
1,2-Dichlorobenzene	1	87.6376	0	100	88	50	130
Benzyl alcohol	1	92.0507	0	100	92	70	130
bis(2-chloroisopropyl)ether	1	76.6487	0	100	77	40	130
Acetophenone	1	94.0337	0	100	94	50	130
Hexachloroethane	1	88.0835	0	100	88	50	130
N-Nitroso-di-n-propylamine	1	91.8938	0	100	92	50	130
Nitrobenzene	1	93.5481	0	100	94	70	130
Isophorone	1	91.5883	0	100	92	70	130
Benzoic Acid	1	25.8182	0	100	26	20	130
bis(2-Chloroethoxy)methane	1	91.4281	0	100	91	70	130
1,2,4-Trichlorobenzene	1	88.6687	0	100	89	50	130
Naphthalene	1	91.3012	0	100	91	70	130
4-Chloroaniline	1	122.6689	0	100	123	50	150
Hexachlorobutadiene	1	90.2136	0	100	90	70	130
Caprolactam	1	47.946	0	100	48	20	130
2-Methylnaphthalene	1	93.0899	0	100	93	70	130
1-Methylnaphthalene	1	88.8843	0	100	89	70	130
1,1'-Biphenyl	1	83.2977	0	100	83	70	130
1,2,4,5-Tetrachlorobenzene	1	91.9744	0	100	92	70	130
Hexachlorocyclopentadiene	1	90.4567	0	100	90	20	130
2-Chloronaphthalene	1	93.3175	0	100	93	70	130
1,4-Dimethylnaphthalene	1	79.8741	0	100	80	70	130
Diphenyl Ether	1	95.0838	0	100	95	70	130
2-Nitroaniline	1	106.012	0	100	106	50	150
Coumarin	1	76.3232	0	100	76	70	130
Acenaphthylene	1	96.9934	0	100	97	70	130
Dimethylphthalate	1	94.3332	0	100	94	70	130
2,6-Dinitrotoluene	1	98.9111	0	100	99	70	130
Acenaphthene	1	94.1456	0	100	94	70	130
3-Nitroaniline	1	121.5964	0	100	122	50	150
Dibenzofuran	1	103.6953	0	100	104	70	130
2,4-Dinitrotoluene	1	94.4554	0	100	94	40	130
Fluorene	1	95.3287	0	100	95	70	130
4-Chlorophenyl-phenylether	1	92.2103	0	100	92	70	130
Diethylphthalate	1	96.4717	0	100	96	50	130
4-Nitroaniline	1	104.7279	0	100	105	50	150
Atrazine	1	141.7171	0	100	142*	50	130
n-Nitrosodiphenylamine	1	80.8346	0	100	81	50	130
1,2-Diphenylhydrazine	1	97.2077	0	100	97	70	130
4-Bromophenyl-phenylether	1	94.98	0	100	95	70	130
Hexachlorobenzene	1	95.3172	0	100	95	70	130
N-Octadecane	1	99.753	0	100	100	70	130
Phenanthrene	1	92.4138	0	100	92	70	130
Anthracene	1	92.358	0	100	92	70	130
Carbazole	1	96.3547	0	100	96	70	130
Di-n-butylphthalate	1	105.9014	0	100	106	70	130
Fluoranthene	1	96.5442	0	100	97	70	130
Pyrene	1	94.3651	0	100	94	70	130
Benzidine	1	21.8681	0	100	22	1	130
Butylbenzylphthalate	1	105.0656	0	100	105	50	130
3,3'-Dichlorobenzidine	1	128.8967	0	100	129	1	150

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3

Recovery Data Laboratory Limits

QC Batch: WMB62293

Benzo[a]anthracene	1	96.3761	0	100	96	70	130
Chrysene	1	93.3838	0	100	93	50	130
bis(2-Ethylhexyl)phthalate	1	102.2205	0	100	102	70	130
Di-n-octylphthalate	1	101.6578	0	100	102	70	130
Benzo[b]fluoranthene	1	100.5764	0	100	101	70	130
Benzo[k]fluoranthene	1	97.2107	0	100	97	70	130
Benzo[a]pyrene	1	92.3503	0	100	92	70	130
Indeno[1,2,3-cd]pyrene	1	102.36	0	100	102	70	130
Dibenzo[a,h]anthracene	1	101.1049	0	100	101	70	130
Benzo[g,h,i]perylene	1	97.2972	0	100	97	70	130

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
RPD Data Laboratory Limits
QC Batch: WMB62293

	Data File	Sample ID:	Analysis Date
Spike or Dup:	5M101116.D	AD00135-005(MSD:AD00135-0	9/21/2017 4:27:00 PM
Duplicate(If applicable):	5M101115.D	AD00135-004(MS:AD00135-003	9/21/2017 4:04:00 PM
Inst Blank(If applicable):			

Method: 8270D Matrix: Aqueous QC Type: MSD

Analyte:	Column	Dup/MSD/MBSD Conc	Sample/MS/MBS Conc	RPD	Limit
1,4-Dioxane	1	60.7736	49.4257	21*	20
Pyridine	1	61.7535	45.9951	29	40
N-Nitrosodimethylamine	1	67.5563	59.459	13	20
Benzaldehyde	1	474.8253	401.2213	17	20
Aniline	1	96.247	81.5653	17	20
Pentachloroethane	1	66.3195	56.116	17	20
bis(2-Chloroethyl)ether	1	83.8041	75.3954	11	20
N-Decane	1	64.751	55.1533	16	20
1,3-Dichlorobenzene	1	84.5628	74.1904	13	20
1,4-Dichlorobenzene	1	87.2345	78.5199	11	40
1,2-Dichlorobenzene	1	87.6376	78.6705	11	20
Benzyl alcohol	1	92.0507	84.4835	8.6	20
bis(2-chloroisopropyl)ether	1	76.6487	69.7537	9.4	20
Acetophenone	1	94.0337	82.4464	13	20
Hexachloroethane	1	88.0835	78.317	12	40
N-Nitroso-di-n-propylamine	1	91.8938	81.7073	12	40
Nitrobenzene	1	93.5481	82.4717	13	40
Isophorone	1	91.5883	80.4625	13	20
Benzoic Acid	1	25.8182	22.5585	13	20
bis(2-Chloroethoxy)methane	1	91.4281	80.5862	13	20
1,2,4-Trichlorobenzene	1	88.6687	77.639	13	40
Naphthalene	1	91.3012	80.4562	13	40
4-Chloroaniline	1	122.6689	106.491	14	20
Hexachlorobutadiene	1	90.2136	77.7929	15	40
Caprolactam	1	47.946	40.4096	17	20
2-Methylnaphthalene	1	93.0899	79.8358	15	20
1-Methylnaphthalene	1	88.8843	77.1568	14	20
1,1'-Biphenyl	1	83.2977	70.7459	16	20
1,2,4,5-Tetrachlorobenzene	1	91.9744	80.0778	14	20
Hexachlorocyclopentadiene	1	90.4567	79.7815	13	20
2-Chloronaphthalene	1	93.3175	81.1353	14	20
1,4-Dimethylnaphthalene	1	79.8741	69.4671	14	20
Diphenyl Ether	1	95.0838	82.3792	14	20
2-Nitroaniline	1	106.012	91.1796	15	20
Coumarin	1	76.3232	65.7779	15	20
Acenaphthylene	1	96.9934	84.0826	14	20
Dimethylphthalate	1	94.3332	84.6795	11	20
2,6-Dinitrotoluene	1	98.9111	86.7179	13	20
Acenaphthene	1	94.1456	82.4384	13	40
3-Nitroaniline	1	121.5964	104.6845	15	20
Dibenzofuran	1	103.6953	88.3117	16	20
2,4-Dinitrotoluene	1	94.4554	83.965	12	40
Fluorene	1	95.3287	82.5782	14	40
4-Chlorophenyl-phenylether	1	92.2103	80.9654	13	20
Diethylphthalate	1	96.4717	86.0444	11	20
4-Nitroaniline	1	104.7279	91.7219	13	20
Atrazine	1	141.7171	119.3071	17	20
n-Nitrosodiphenylamine	1	80.8346	73.0092	10	20
1,2-Diphenylhydrazine	1	97.2077	85.2794	13	20
4-Bromophenyl-phenylether	1	94.98	83.9453	12	20
Hexachlorobenzene	1	95.3172	83.2836	13	40
N-Octadecane	1	99.753	86.8592	14	20
Phenanthrene	1	92.4138	82.5652	11	20
Anthracene	1	92.358	82.9098	11	20
Carbazole	1	96.3547	83.4182	14	20
Di-n-butylphthalate	1	105.9014	95.8207	10	20
Fluoranthene	1	96.5442	85.3136	12	20
Pyrene	1	94.3651	81.9611	14	40
Benzidine	1	21.8681	18.7567	15	20
Butylbenzylphthalate	1	105.0656	91.9912	13	40
3,3'-Dichlorobenzidine	1	128.8967	104.3603	21*	20
Benzo[a]anthracene	1	96.3761	83.1878	15	20
Chrysene	1	93.3838	83.575	11	20

Form3
RPD Data Laboratory Limits
QC Batch: WMB62293

bis(2-Ethylhexyl)phthalate	1	102.2205	87.7296	15	20
Di-n-octylphthalate	1	101.6578	87.2659	15	20
Benzo[b]fluoranthene	1	100.5764	86.4458	15	20
Benzo[k]fluoranthene	1	97.2107	84.5923	14	20
Benzo[a]pyrene	1	92.3503	76.6694	19	20
Indeno[1,2,3-cd]pyrene	1	102.36	87.3599	16	20
Dibenzo[a,h]anthracene	1	101.1049	86.0159	16	20
Benzo[g,h,i]perylene	1	97.2972	83.3289	15	20

* - Indicates outside of limits

NA - Both concentrations=0... no result can be calculated

Subcontracted Data

This is the last page of the data generated by Hampton-Clarke.
The following pages were submitted to HC by subcontracted laboratories.

FINAL LAB REPORT

7092010

31700847

04-Oct-2017

Prepared by

SGS NORTH AMERICA

Prepared for

Hampton-Clarke, Inc.

Sherree Baker

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This report is approved by

Amy Boehm

amy.boehm@sgs.com

Project Manager

SGS CERTIFICATIONS

Arkansas	88-0682
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-17-00055
DoD	2726.01
Florida (Primary NELAP)	E87634
ISO 17025/IEC	2726.01
Louisiana DEQ	4115
Louisiana DOH	LA170030
Maine	2016028
Massachusetts	M-NC919
Minnesota (Primary NELAP For Method 23)	1179213
Mississippi	Reciprocity
Nebraska	NE-OS-33-17
New Hampshire	208317
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Virginia	8914
Washington	C913
West Virginia	293

Rev. 04-Aug-2017

Laboratory Qualifiers

Report Definitions

DL	Method, Instrument, or Estimated Detection Limit per Analytical Method
CL	Control Limits for the recovery result of a parameter
LOQ	Reporting Limit
DF	Dilution Factor
RPD	Relative Percent Difference
LCS(D)	Laboratory Control Spike (Duplicate)
MS(D)	Matrix Spike (Duplicate)
MB	Method Blank

Qualifier Definitions

*	Recovery or RPD outside of control limits
B	Analyte was detected in the Lab Method Blank at a level above the LOQ
U	Undetected (Reported as ND or < DL)
J	Estimated Concentration.
E	Amount detected is greater than the Upper Calibration Limit
TIC	Tentatively Identified Compound
ND	Not Detected
P	RPD > 40% between results of dual columns
D	Spike or surrogate was diluted out in order to achieve a parameter result within instrument calibration range

Samples requiring manual integrations for various congeners and/or standards are marked and dated by the analyst. A code definition is provided below:

M1	Mis-identified peak
M2	Software did not integrate peak
M3	Incorrect baseline construction (i.e. not all of peak included; two peaks integrated as one)
M4	Pattern integration required (i.e. DRO, GRO, PCB, Toxaphene and Technical Chlordane)
M5	Other - Explained in case narrative

Note Results pages that include a value for "Solids (%)" have been adjusted for moisture content.

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
AD00135-001	31700847001	09/19/2017 13:00	09/22/2017 11:41	Water
AD00135-002	31700847002	09/19/2017 17:30	09/22/2017 11:41	Water
AD00135-003	31700847003	09/19/2017 11:00	09/22/2017 11:41	Water
AD00135-006	31700847006	09/19/2017 19:00	09/22/2017 11:41	Water
AD00135-007	31700847007	09/19/2017 20:00	09/22/2017 11:41	Water

Case Narrative

SGS Client: **Hampton-Clarke, Inc.**
SGS Project: **31700847**
Project Name/Site: **7092010**

Surrogate standard d5-NEtFOSAA shows poor extraction efficiency in all samples and associated QC samples. No additional sample volume was received and available for re-work. Associated analyte results may be estimated.

Detectable Results Summary

Client Sample ID: **AD00135-001**
Lab Sample ID: 31700847001-A
EPA 537 v1.1

Parameter	Result	Units	
PFBA	7.09	ng/L	
PFPeA	17.9	ng/L	
PFHxA	16.8	ng/L	
PFHpA	7.50	ng/L	
PFOA	11.4	ng/L	
PFNA	4.76	ng/L	
PFDA	0.810	ng/L	J
PFBS	1.80	ng/L	J
PFHxS	3.55	ng/L	
PFHpS	0.265	ng/L	J
PFOS	10.4	ng/L	

Client Sample ID: **AD00135-002**
Lab Sample ID: 31700847002-A
EPA 537 v1.1

Parameter	Result	Units	
PFBA	3.94	ng/L	
PFPeA	7.57	ng/L	
PFHxA	13.0	ng/L	
PFHpA	21.6	ng/L	
PFOA	83.1	ng/L	
PFNA	8.96	ng/L	
PFDA	2.23	ng/L	
PFuNA	0.369	ng/L	J
PFBS	8.55	ng/L	
PFHxS	20.3	ng/L	
PFHpS	5.12	ng/L	
PFOS	150	ng/L	
NMeFOSAA	16.7	ng/L	
6:2 FTS	3.90	ng/L	

Client Sample ID: **AD00135-003**
Lab Sample ID: 31700847003-A
EPA 537 v1.1

Parameter	Result	Units	
PFBA	5.71	ng/L	
PFPeA	14.6	ng/L	
PFHxA	10.3	ng/L	
PFHpA	3.93	ng/L	
PFOA	10.1	ng/L	
PFNA	1.77	ng/L	J
PFDA	0.816	ng/L	J
PFBS	1.20	ng/L	J
PFHxS	2.48	ng/L	
PFHpS	0.314	ng/L	J
PFOS	11.1	ng/L	
6:2 FTS	0.704	ng/L	J

Detectable Results Summary

Client Sample ID: **AD00135-006**
Lab Sample ID: 31700847006-A
EPA 537 v1.1

Parameter	Result	Units	
PFBA	7.94	ng/L	
PFPeA	6.43	ng/L	
PFHxA	8.29	ng/L	
PFHpA	4.55	ng/L	
PFOA	16.9	ng/L	
PFNA	1.53	ng/L	J
PFDA	0.441	ng/L	J
PFBS	1.69	ng/L	J
PFHxS	8.79	ng/L	
PFHpS	1.00	ng/L	J
PFOS	32.2	ng/L	

Client Sample ID: **AD00135-007**
Lab Sample ID: 31700847007-A
EPA 537 v1.1

Parameter	Result	Units	
PFBA	4.16	ng/L	
PFPeA	4.56	ng/L	
PFHxA	4.59	ng/L	
PFHpA	2.54	ng/L	
PFOA	9.40	ng/L	
PFNA	2.12	ng/L	
PFDA	0.852	ng/L	J
PFBS	1.44	ng/L	J
PFHxS	3.97	ng/L	
PFHpS	0.416	ng/L	J
PFOS	30.0	ng/L	

Quality Control Samples

Client Sample ID: **MB for HBN 141151 [HXX/2057]**
Lab Sample ID: 212850
EPA 537 v1.1

Parameter	Result	Units	
PFOA	0.203	ng/L	J

Results of **AD00135-001**

Client Sample ID: **AD00135-001**
Client Project ID: **7092010**
Lab Sample ID: 31700847001-A
Lab Project ID: 31700847

Collection Date: 09/19/2017 13:00
Received Date: 09/22/2017 11:41
Matrix: Water

Results by **EPA 537 v1.1**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
PFBA	**7.09**		0.205	2.05	ng/L	1	09/28/2017 20:28
PFPeA	**17.9**		0.205	2.05	ng/L	1	09/28/2017 20:28
PFHxA	**16.8**		0.205	2.05	ng/L	1	09/28/2017 20:28
PFHpA	**7.50**		0.205	2.05	ng/L	1	09/28/2017 20:28
PFOA	**11.4**		0.205	2.05	ng/L	1	09/28/2017 20:28
PFNA	**4.76**		0.205	2.05	ng/L	1	09/28/2017 20:28
PFDA	**0.810**	J	0.205	2.05	ng/L	1	09/28/2017 20:28
PFuNA	ND	U	0.205	2.05	ng/L	1	09/28/2017 20:28
PFDoA	ND	U	0.205	2.05	ng/L	1	09/28/2017 20:28
PFTriA	ND	U	0.205	2.05	ng/L	1	09/28/2017 20:28
PFTreA	ND	U	0.205	2.05	ng/L	1	09/28/2017 20:28
PFBS	**1.80**	J	0.205	2.05	ng/L	1	09/28/2017 20:28
PFHxS	**3.55**		0.205	2.05	ng/L	1	09/28/2017 20:28
PFHpS	**0.265**	J	0.205	2.05	ng/L	1	09/28/2017 20:28
PFOS	**10.4**		0.205	2.05	ng/L	1	09/28/2017 20:28
PFDS	ND	U	0.205	2.05	ng/L	1	09/28/2017 20:28
NMeFOSAA	ND	U	0.512	2.05	ng/L	1	09/28/2017 20:28
NetFOSAA	ND	U	0.512	2.05	ng/L	1	09/28/2017 20:28
6:2 FTS	ND	U	0.512	2.05	ng/L	1	09/28/2017 20:28
8:2 FTS	ND	U	0.205	2.05	ng/L	1	09/28/2017 20:28
Surrogates							
13C2-PFHxA	79.4			70.0-130	%	1	09/28/2017 20:28
13C2-PFDA	68.4*			70.0-130	%	1	09/28/2017 20:28
d5-NEtFOSAA	50.0*			70.0-130	%	1	09/28/2017 20:28

Batch Information

Analytical Batch: **XLC1071**
Analytical Method: **EPA 537 v1.1**
Instrument: **TQS1**
Analyst: **ADM**

Prep Batch: **HXX2057**
Prep Method: **EPA 537 1.1 PREP**
Prep Date/Time: **09/28/2017 15:27**
Prep Initial Wt./Vol.: **244.22 mL**
Prep Extract Vol: **1 mL**

Print Date: 10/04/2017

N.C. Certification # 481

Results of **AD00135-002**

Client Sample ID: **AD00135-002**
Client Project ID: **7092010**
Lab Sample ID: 31700847002-A
Lab Project ID: 31700847

Collection Date: 09/19/2017 17:30
Received Date: 09/22/2017 11:41
Matrix: Water

Results by **EPA 537 v1.1**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
PFBA	**3.94**		0.204	2.04	ng/L	1	09/28/2017 20:58
PFPeA	**7.57**		0.204	2.04	ng/L	1	09/28/2017 20:58
PFHxA	**13.0**		0.204	2.04	ng/L	1	09/28/2017 20:58
PFHpA	**21.6**		0.204	2.04	ng/L	1	09/28/2017 20:58
PFOA	**83.1**		0.204	2.04	ng/L	1	09/28/2017 20:58
PFNA	**8.96**		0.204	2.04	ng/L	1	09/28/2017 20:58
PFDA	**2.23**		0.204	2.04	ng/L	1	09/28/2017 20:58
PFuNA	**0.369**	J	0.204	2.04	ng/L	1	09/28/2017 20:58
PFDoA	ND	U	0.204	2.04	ng/L	1	09/28/2017 20:58
PFTriA	ND	U	0.204	2.04	ng/L	1	09/28/2017 20:58
PFTreA	ND	U	0.204	2.04	ng/L	1	09/28/2017 20:58
PFBS	**8.55**		0.204	2.04	ng/L	1	09/28/2017 20:58
PFHxS	**20.3**		0.204	2.04	ng/L	1	09/28/2017 20:58
PFHpS	**5.12**		0.204	2.04	ng/L	1	09/28/2017 20:58
PFOS	**150**		0.204	2.04	ng/L	1	09/28/2017 20:58
PFDS	ND	U	0.204	2.04	ng/L	1	09/28/2017 20:58
NMeFOSAA	**16.7**		0.509	2.04	ng/L	1	09/28/2017 20:58
NetFOSAA	ND	U	0.509	2.04	ng/L	1	09/28/2017 20:58
6:2 FTS	**3.90**		0.509	2.04	ng/L	1	09/28/2017 20:58
8:2 FTS	ND	U	0.204	2.04	ng/L	1	09/28/2017 20:58
Surrogates							
13C2-PFHxA	84.2			70.0-130	%	1	09/28/2017 20:58
13C2-PFDA	79.3			70.0-130	%	1	09/28/2017 20:58
d5-NEtFOSAA	46.0*			70.0-130	%	1	09/28/2017 20:58

Batch Information

Analytical Batch: **XLC1071**
Analytical Method: **EPA 537 v1.1**
Instrument: **TQS1**
Analyst: **ADM**

Prep Batch: **HXX2057**
Prep Method: **EPA 537 1.1 PREP**
Prep Date/Time: **09/28/2017 15:27**
Prep Initial Wt./Vol.: **245.57 mL**
Prep Extract Vol: **1 mL**

Print Date: 10/04/2017

N.C. Certification # 481

Results of **AD00135-003**

Client Sample ID: **AD00135-003**
Client Project ID: **7092010**
Lab Sample ID: 31700847003-A
Lab Project ID: 31700847

Collection Date: 09/19/2017 11:00
Received Date: 09/22/2017 11:41
Matrix: Water

Results by **EPA 537 v1.1**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
PFBA	**5.71**		0.198	1.98	ng/L	1	09/28/2017 21:29
PFPeA	**14.6**		0.198	1.98	ng/L	1	09/28/2017 21:29
PFHxA	**10.3**		0.198	1.98	ng/L	1	09/28/2017 21:29
PFHpA	**3.93**		0.198	1.98	ng/L	1	09/28/2017 21:29
PFOA	**10.1**		0.198	1.98	ng/L	1	09/28/2017 21:29
PFNA	**1.77**	J	0.198	1.98	ng/L	1	09/28/2017 21:29
PFDA	**0.816**	J	0.198	1.98	ng/L	1	09/28/2017 21:29
PFuNA	ND	U	0.198	1.98	ng/L	1	09/28/2017 21:29
PFDoA	ND	U	0.198	1.98	ng/L	1	09/28/2017 21:29
PFTriA	ND	U	0.198	1.98	ng/L	1	09/28/2017 21:29
PFTreA	ND	U	0.198	1.98	ng/L	1	09/28/2017 21:29
PFBS	**1.20**	J	0.198	1.98	ng/L	1	09/28/2017 21:29
PFHxS	**2.48**		0.198	1.98	ng/L	1	09/28/2017 21:29
PFHpS	**0.314**	J	0.198	1.98	ng/L	1	09/28/2017 21:29
PFOS	**11.1**		0.198	1.98	ng/L	1	09/28/2017 21:29
PFDS	ND	U	0.198	1.98	ng/L	1	09/28/2017 21:29
NMeFOSAA	ND	U	0.496	1.98	ng/L	1	09/28/2017 21:29
NetFOSAA	ND	U	0.496	1.98	ng/L	1	09/28/2017 21:29
6:2 FTS	**0.704**	J	0.496	1.98	ng/L	1	09/28/2017 21:29
8:2 FTS	ND	U	0.198	1.98	ng/L	1	09/28/2017 21:29
Surrogates							
13C2-PFHxA	93.4			70.0-130	%	1	09/28/2017 21:29
13C2-PFDA	74.3			70.0-130	%	1	09/28/2017 21:29
d5-NEtFOSAA	49.7*			70.0-130	%	1	09/28/2017 21:29

Batch Information

Analytical Batch: **XLC1071**
Analytical Method: **EPA 537 v1.1**
Instrument: **TQS1**
Analyst: **ADM**

Prep Batch: **HXX2057**
Prep Method: **EPA 537 1.1 PREP**
Prep Date/Time: **09/28/2017 15:27**
Prep Initial Wt./Vol.: **251.98 mL**
Prep Extract Vol: **1 mL**

Print Date: 10/04/2017

N.C. Certification # 481

Results of **AD00135-006**

Client Sample ID: **AD00135-006**
Client Project ID: **7092010**
Lab Sample ID: 31700847006-A
Lab Project ID: 31700847

Collection Date: 09/19/2017 19:00
Received Date: 09/22/2017 11:41
Matrix: Water

Results by **EPA 537 v1.1**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
PFBA	**7.94**		0.210	2.10	ng/L	1	09/28/2017 23:01
PFPeA	**6.43**		0.210	2.10	ng/L	1	09/28/2017 23:01
PFHxA	**8.29**		0.210	2.10	ng/L	1	09/28/2017 23:01
PFHpA	**4.55**		0.210	2.10	ng/L	1	09/28/2017 23:01
PFOA	**16.9**		0.210	2.10	ng/L	1	09/28/2017 23:01
PFNA	**1.53**	J	0.210	2.10	ng/L	1	09/28/2017 23:01
PFDA	**0.441**	J	0.210	2.10	ng/L	1	09/28/2017 23:01
PFuNA	ND	U	0.210	2.10	ng/L	1	09/28/2017 23:01
PFDoA	ND	U	0.210	2.10	ng/L	1	09/28/2017 23:01
PFTriA	ND	U	0.210	2.10	ng/L	1	09/28/2017 23:01
PFTreA	ND	U	0.210	2.10	ng/L	1	09/28/2017 23:01
PFBS	**1.69**	J	0.210	2.10	ng/L	1	09/28/2017 23:01
PFHxS	**8.79**		0.210	2.10	ng/L	1	09/28/2017 23:01
PFHpS	**1.00**	J	0.210	2.10	ng/L	1	09/28/2017 23:01
PFOS	**32.2**		0.210	2.10	ng/L	1	09/28/2017 23:01
PFDS	ND	U	0.210	2.10	ng/L	1	09/28/2017 23:01
NMeFOSAA	ND	U	0.525	2.10	ng/L	1	09/28/2017 23:01
NetFOSAA	ND	U	0.525	2.10	ng/L	1	09/28/2017 23:01
6:2 FTS	ND	U	0.525	2.10	ng/L	1	09/28/2017 23:01
8:2 FTS	ND	U	0.210	2.10	ng/L	1	09/28/2017 23:01
Surrogates							
13C2-PFHxA	88.9			70.0-130	%	1	09/28/2017 23:01
13C2-PFDA	84.9			70.0-130	%	1	09/28/2017 23:01
d5-NEtFOSAA	52.5*			70.0-130	%	1	09/28/2017 23:01

Batch Information

Analytical Batch: **XLC1071**
Analytical Method: **EPA 537 v1.1**
Instrument: **TQS1**
Analyst: **ADM**

Prep Batch: **HXX2057**
Prep Method: **EPA 537 1.1 PREP**
Prep Date/Time: **09/28/2017 15:27**
Prep Initial Wt./Vol.: **238.01 mL**
Prep Extract Vol: **1 mL**

Print Date: 10/04/2017

N.C. Certification # 481

Results of **AD00135-007**

Client Sample ID: **AD00135-007**
Client Project ID: **7092010**
Lab Sample ID: 31700847007-A
Lab Project ID: 31700847

Collection Date: 09/19/2017 20:00
Received Date: 09/22/2017 11:41
Matrix: Water

Results by **EPA 537 v1.1**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
PFBA	**4.16**		0.195	1.95	ng/L	1	09/28/2017 23:32
PFPeA	**4.56**		0.195	1.95	ng/L	1	09/28/2017 23:32
PFHxA	**4.59**		0.195	1.95	ng/L	1	09/28/2017 23:32
PFHpA	**2.54**		0.195	1.95	ng/L	1	09/28/2017 23:32
PFOA	**9.40**		0.195	1.95	ng/L	1	09/28/2017 23:32
PFNA	**2.12**		0.195	1.95	ng/L	1	09/28/2017 23:32
PFDA	**0.852**	J	0.195	1.95	ng/L	1	09/28/2017 23:32
PFuNA	ND	U	0.195	1.95	ng/L	1	09/28/2017 23:32
PFDoA	ND	U	0.195	1.95	ng/L	1	09/28/2017 23:32
PFTriA	ND	U	0.195	1.95	ng/L	1	09/28/2017 23:32
PFTreA	ND	U	0.195	1.95	ng/L	1	09/28/2017 23:32
PFBS	**1.44**	J	0.195	1.95	ng/L	1	09/28/2017 23:32
PFHxS	**3.97**		0.195	1.95	ng/L	1	09/28/2017 23:32
PFHpS	**0.416**	J	0.195	1.95	ng/L	1	09/28/2017 23:32
PFOS	**30.0**		0.195	1.95	ng/L	1	09/28/2017 23:32
PFDS	ND	U	0.195	1.95	ng/L	1	09/28/2017 23:32
NMeFOSAA	ND	U	0.487	1.95	ng/L	1	09/28/2017 23:32
NetFOSAA	ND	U	0.487	1.95	ng/L	1	09/28/2017 23:32
6:2 FTS	ND	U	0.487	1.95	ng/L	1	09/28/2017 23:32
8:2 FTS	ND	U	0.195	1.95	ng/L	1	09/28/2017 23:32
Surrogates							
13C2-PFHxA	86.7			70.0-130	%	1	09/28/2017 23:32
13C2-PFDA	63.3*			70.0-130	%	1	09/28/2017 23:32
d5-NEtFOSAA	24.8*			70.0-130	%	1	09/28/2017 23:32

Batch Information

Analytical Batch: **XLC1071**
Analytical Method: **EPA 537 v1.1**
Instrument: **TQS1**
Analyst: **ADM**

Prep Batch: **HXX2057**
Prep Method: **EPA 537 1.1 PREP**
Prep Date/Time: **09/28/2017 15:27**
Prep Initial Wt./Vol.: **256.87 mL**
Prep Extract Vol: **1 mL**

Print Date: 10/04/2017

N.C. Certification # 481

Batch Summary

Analytical Method: EPA 537 v1.1

Prep Method: EPA 537 1.1 PREP
Prep Batch: HXX2057
Prep Date: 09/28/2017 15:27

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 141151 [HXX/2057]	212850	09/28/2017 19:24	XLC1071	TQS1	ADM
LCS for HBN 141151 [HXX/2057]	212851	09/28/2017 19:57	XLC1071	TQS1	ADM
AD00135-001	31700847001	09/28/2017 20:28	XLC1071	TQS1	ADM
AD00135-002	31700847002	09/28/2017 20:58	XLC1071	TQS1	ADM
AD00135-003	31700847003	09/28/2017 21:29	XLC1071	TQS1	ADM
AD00135-004	31700847004	09/28/2017 22:00	XLC1071	TQS1	ADM
AD00135-005	31700847005	09/28/2017 22:30	XLC1071	TQS1	ADM
AD00135-006	31700847006	09/28/2017 23:01	XLC1071	TQS1	ADM
AD00135-007	31700847007	09/28/2017 23:32	XLC1071	TQS1	ADM

Method Blank

Blank ID: MB for HBN 141151 [HXX/2057]
Matrix: Water
Blank Lab ID: 212850
QC for Samples:
31700847001, 31700847002, 31700847003, 31700847006, 31700847007

Results by **EPA 537 v1.1**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
6:2 FTS	ND	U	0.500	2.00	ng/L	1
8:2 FTS	ND	U	0.200	2.00	ng/L	1
NetFOSAA	ND	U	0.500	2.00	ng/L	1
NMeFOSAA	ND	U	0.500	2.00	ng/L	1
PFBA	ND	U	0.200	2.00	ng/L	1
PFBS	ND	U	0.200	2.00	ng/L	1
PFDA	ND	U	0.200	2.00	ng/L	1
PFDoA	ND	U	0.200	2.00	ng/L	1
PFDS	ND	U	0.200	2.00	ng/L	1
PFHpA	ND	U	0.200	2.00	ng/L	1
PFHpS	ND	U	0.200	2.00	ng/L	1
PFHxA	ND	U	0.200	2.00	ng/L	1
PFHxS	ND	U	0.200	2.00	ng/L	1
PFNA	ND	U	0.200	2.00	ng/L	1
PFOA	**0.203**	J	0.200	2.00	ng/L	1
PFOS	ND	U	0.200	2.00	ng/L	1
PFPeA	ND	U	0.200	2.00	ng/L	1
PFTreA	ND	U	0.200	2.00	ng/L	1
PFTriA	ND	U	0.200	2.00	ng/L	1
PFuNA	ND	U	0.200	2.00	ng/L	1
Surrogates						
13C2-PFDA	78.4			70.0-130	%	1
13C2-PFHxA	82.0			70.0-130	%	1
d5-NEtFOSAA	53.6*			70.0-130	%	1

Batch Information

Analytical Batch: XLC1071
Analytical Method: EPA 537 v1.1
Instrument: TQS1
Analyst: ADM

Prep Batch: HXX2057
Prep Method: EPA 537 1.1 PREP
Prep Date/Time: 9/28/2017 3:27:48PM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 141151 [HXX/2057]
Blank Spike Lab ID: 212851
Date Analyzed: 09/28/2017 19:57

Matrix: Water

QC for Samples: 31700847001, 31700847002, 31700847003, 31700847006, 31700847007

Results by **EPA 537 v1.1**

Blank Spike (ng/L)

Parameter	Spike	Result	Rec (%)	CL
6:2 FTS	100	102	102	70.0-130
8:2 FTS	100	95.9	95.9	70.0-130
NetFOSAA	100	107	107	70.0-130
NMeFOSAA	100	131	**131***	70.0-130
PFBA	100	104	104	70.0-130
PFBS	100	102	102	70.0-130
PFDA	100	110	110	70.0-130
PFDoA	100	103	103	70.0-130
PFDS	100	135	**135***	70.0-130
PFHpA	100	102	102	70.0-130
PFHpS	100	113	113	70.0-130
PFHxA	100	107	107	70.0-130
PFHxS	100	97.7	97.7	70.0-130
PFNA	100	115	115	70.0-130
PFOA	100	102	102	70.0-130
PFOS	100	108	108	70.0-130
PFPeA	100	102	102	70.0-130
PFTreA	100	123	123	70.0-130
PFTriA	100	137	**137***	70.0-130
PFuNA	100	143	**143***	70.0-130
Surrogates				
13C2-PFDA			87.9	70.0-130
13C2-PFHxA			89.7	70.0-130
d5-NEtFOSAA			**57.9***	70.0-130

Batch Information

Analytical Batch: **XLC1071**
Analytical Method: **EPA 537 v1.1**
Instrument: **TQS1**
Analyst: **ADM**

Prep Batch: **HXX2057**
Prep Method: **EPA 537 1.1 PREP**
Prep Date/Time: **09/28/2017 15:27**
Spike Init Wt./Vol.: **250 mL** Extract Vol: **1 mL**
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 10/04/2017

N.C. Certification # 481

Matrix Spike Summary

Original Sample ID: 31700847003 (AD00135-003)
MS Sample ID: 31700847004
MSD Sample ID: 31700847005

Analysis Date: 09/28/2017 21:29
Analysis Date: 09/28/2017 22:00
Analysis Date: 09/28/2017 22:30
Matrix: Water

QC for Samples: 31700847001, 31700847002, 31700847003, 31700847006, 31700847007

Results by **EPA 537 v1.1**

		Matrix Spike (ng/L)			Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
PFBA	5.71	99.2	102	97.4	104	110	100	70.0-130	7.5	30.00
PFPeA	14.6	99.2	117	103	104	123	104	70.0-130	5.0	30.00
PFHxA	10.3	99.2	116	107	104	119	105	70.0-130	2.5	30.00
PFHpA	3.93	99.2	100	97.2	104	107	99.2	70.0-130	6.8	30.00
PFOA	10.1	99.2	103	93.4	104	106	92.6	70.0-130	2.9	30.00
PFNA	1.77	99.2	109	110	104	120	116	70.0-130	9.6	30.00
PFDA	0.816	99.2	109	110	104	115	111	70.0-130	5.4	30.00
PFuNA	ND	99.2	145	147 *	104	150	145 *	70.0-130	3.4	30.00
PFDoA	ND	99.2	105	106	104	108	104	70.0-130	2.8	30.00
PFTriA	ND	99.2	149	151 *	104	154	148 *	70.0-130	3.3	30.00
PFTreA	ND	99.2	146	147 *	104	151	146 *	70.0-130	3.4	30.00
PFBS	1.20	99.2	115	115	104	111	107	70.0-130	3.5	30.00
PFHxS	2.48	99.2	111	109	104	108	101	70.0-130	2.7	30.00
PFHpS	0.314	99.2	123	124	104	130	125	70.0-130	5.5	30.00
PFOS	11.1	99.2	132	122	104	137	121	70.0-130	3.7	30.00
PFDS	ND	99.2	154	155 *	104	161	155 *	70.0-130	4.4	30.00
NMeFOSAA	ND	99.2	138	140 *	104	145	139 *	70.0-130	5.0	30.00
NetFOSAA	ND	99.2	104	105	104	112	108	70.0-130	7.4	30.00
6:2 FTS	0.704	99.2	121	122	104	114	110	70.0-130	6.0	30.00
8:2 FTS	ND	99.2	110	110	104	104	100	70.0-130	5.6	30.00
Surrogates										
13C2-PFHxA				72.7			81.3	70.0-130		
13C2-PFDA				71			72.1	70.0-130		
d5-NEtFOSAA				42.2 *			44.7 *	70.0-130		

Batch Information

Analytical Batch: **XLC1071**
Analytical Method: **EPA 537 v1.1**
Instrument: **TQS1**
Analyst: **ADM**

Prep Batch: **HXX2057**
Prep Method: **EPA 537 1.1 PREP**
Prep Date/Time: **09/28/2017 15:27**
MS Init Wt./Vol.: **251.93 mL** Extract Vol.: **1 mL**
MSD Init Wt./Vol.: **240.69 mL** Extract Vol.: **1 mL**

Print Date: 10/04/2017

N.C. Certification # 481

CHAIN OF CUSTODY RECORD

Hampton-Clarke, Inc.
175 US Hwy 46 West
Fairfield, New Jersey, 07004
Ph:800-426-9992 Fax:973-439-1458

31700847

Report To:	Invoice To:	Project #:	CocID#:
Hampton-Clarke, Inc.:	Hampton-Clarke, Inc.:	7092010	5543
Attn:Reporting	Attn:Accounting		
175 Route 46 West	175 Route 46 West		
Fairfield, New Jersey 07004	Fairfield, New Jersey 07004		

FINAL RESULTS TO: subresults@hcvlab.com
PRELIM/VERBAL RESULTS TO: subresults@hcvlab.com

EDD: NEW JERSEY HAZRESULT OR EQUIS EZEDD REQUIRED FOR ALL DATA SUBMITTALS!

Turn Around Time: Standard **Preliminary Due Date:** 10/6/2017
Report Type: NYDOH-CatA (STAND **Hard Copy Due Date:** 10/13/2017

Sample Number:	Client ID	Matrix:	Date Collected:	Time Collected:	Analysis Requested
AD00135-001	MW-4	Aqueous	9/19/2017	1:00:00 PM	PFAs EPA537 Mod 20 compounds:(Analysis Method:EPA 537 mod)
AD00135-002	MW-6A	Aqueous	9/19/2017	5:30:00 PM	PFAs EPA537 Mod 20 compounds:(Analysis Method:EPA 537 mod)
AD00135-003	MW-6B	Aqueous	9/19/2017	11:00:00 AM	PFAs EPA537 Mod 20 compounds:(Analysis Method:EPA 537 mod)
AD00135-004	MW-6B-MS	Aqueous	9/19/2017	11:05:00 AM	PFAs EPA537 Mod 20 compounds:(Analysis Method:EPA 537 mod)
AD00135-005	MW-6B-MSD	Aqueous	9/19/2017	11:10:00 AM	PFAs EPA537 Mod 20 compounds:(Analysis Method:EPA 537 mod)
AD00135-006	MW-23S	Aqueous	9/19/2017	7:00:00 PM	PFAs EPA537 Mod 20 compounds:(Analysis Method:EPA 537 mod)
AD00135-007	MW-23D	Aqueous	9/19/2017	8:00:00 PM	PFAs EPA537 Mod 20 compounds:(Analysis Method:EPA 537 mod)

cs 9/21

Relinquished By:	Accepted By:	Date:	Time:	Comments, Notes, Special Requirements, HAZARDS
	UPS	9/21/17	1700	
UPS	Ashley Ortmann SGS	9/22/17	11:41	
			Temp:	Cooler Temp: 0.3°C

QC-FHC Lab Use Only: Subcontracted Lab Id and Contact: SGS-LAB, Richard Sutler (910) 350-1903, LabID: H, 5500 Business Drive, , Wilmington, NC, 28405 shipped UPS and Contact

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **Hampton-Clarke, Inc.** Work Order No.: **31700847**

1. [x] Shipped
   [ ] Hand Delivered

2. [x] COC Present on Receipt
   [ ] No COC
   [ ] Additional Transmittal Forms

3. [ ] Custody Tape on Container
   [x] No Custody Tape

4. [x] Samples Intact
   [ ] Samples Broken / Leaking

5. [x] Chilled on Receipt Actual Temp.(s) in °C: 0.3 Thermometer ID#: IR3
   [ ] Ambient on Receipt
   [ ] Walk-in on Ice; Coming down to temp.
   [ ] Temperature Blank Present
   [ ] WV samples-proxy not allowed

6. [x] Sufficient Sample Submitted
   [ ] Insufficient Sample Submitted

7. [ ] Chlorine absent
   [ ] HNO3 < 2
   [ ] HCL < 2
   [x] Additional Preservatives verified (see notes) — Trizma

8. [x] Received Within Holding Time
   [ ] Not Received Within Holding Time

9. [x] No Discrepancies Noted
   [ ] Discrepancies Noted
   [ ] NCDENR notified of Discrepancies*

10. [ ] No Headspace present in VOC vials — N/A
    [ ] Headspace present in VOC vials >6mm

Notes:

Comments:

Inspected and Logged in by: AMO
Date: 9/22/2017

*NCDENR must be notified when collection, holding time or preservation requirements are not met. MI_11.11

Hampton-Clarke
Analytical & Field Services

175 ROUTE 46 WEST, UNIT D · FAIRFIELD, NJ 07004
2 MADISON ROAD, FAIRFIELD, NJ 07004
800-426-9992 · 973-244-9770
FAX: 973-244-9787
WWW.HCVLAB.COM

Project: Multi G Servall

Client PO: 77415, line 1 Proj#60277021

Report To: AECOM
100 Red School House Rd.
Suite B-1
Chestnut Ridge, NY 10977

Attn: Paul Kareth

Received Date: 9/29/2017

Report Date: 10/26/2017

Deliverables: NYDOH-CatA

Lab ID: AD00342

Lab Project No: 7092933

Robin Cousineau - Quality Assurance Director OR **Jean Revolus - Laboratory Director**

NJ (07071) NY (ELAP11408) CT (PH-0671)
PA (68-00463) KY (90124)

Hampton-Clarke
Analytical & Field Services

THIS CATEGORY “A” REPORT
IS NUMBERED FROM
1 to 20

(Subcontracted data is numbered as attached)

HC Case Narrative

Client: AECOM
Project: Multi G Servall

HC Project: 7092933

Hampton-Clarke (HC) received the following samples on 09/29/2017:

Client ID	HC Sample ID	Matrix	Analysis
MW-3A	AD00342-001	Aqueous	PFAs (EPA 537)*
MW-13	AD00342-002	Aqueous	VO (8260C)

* - Indicates analysis was performed by a subcontracted laboratory.

This case narrative is in the form of an exception report. Method specific and/or QA/QC anomalies related to this report only are detailed below.

Volatile Organic Analysis:

The Method Blank Spike, MS/MSD RPD, Matrix Spike and/or Matrix Spike Duplicate for batch 64329 had recoveries outside QC limits. Please refer to the applicable Form 3 for the recoveries.

Subcontracted Analysis:

Please refer to attached subcontracted laboratory report. Sample AD00342-001 was submitted to SGS Laboratories for PFAs EPA537 compounds analysis.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Robin Cousineau
Quality Assurance Director

Or

Jean Revolus
Laboratory Director

10/26/2017
Date

7092933 0002

Hampton-Clarke, Inc. (WBE/DBE/SBE)

175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054
Ph (Service Center): 856-780-6057 Fax: 856-780-6056

Hampton-Clarke WBE/DBE/SBE 800-426-9992

A Women-Owned, Disadvantaged, Small Business Enterprise

NELAC/NJ #07071 | PA #68-00463 | NY #11408 | CT #PH-0671 | KY #90124 | DE HSCA Approved

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 7092933

Page 1 of 1

3) Reporting Requirements (Please Circle)

Turnaround	Report Type	Electronic Data Deliv.
When Available:	Summary	NJ Hazsite
1 Business Day (100%)*	Results + QC (Waste)	Excel Reg. NJ / NY / PA
2 Business Days (75%)*	Reduced:	EnviroData
3 Business Days (50%)*	[ ] NJ [ ] NY	EQuIS:
4 Business Days (35%)*	[ ] PA [ ] Other___	[ ] 4-File [ ] EZ
5 Business Days (25%)	NJ Full / NY ASP CatB	[ ] NYDEC
8 Business Days (Stand.)	NY ASP CatA	[ ] Region 2 or 5
Other: Standard		Other:

* Expedited TAT Not Always Available. Please Check with Lab.

Customer Information

1a) Customer: AECOM
Address: 100 Red School House Road STE-chestnut Ridge, NY 10977-6713
1b) Email/Cell/Fax/Ph: 845-425-4980 ext 13
1c) Send Invoice to: Paul.Kareth@aecom.com
1d) Send Report to: Paul.Kareth@aecom.com

Project Information

2a) Project: D00444-14 Stenvall
2b) Project Mgr: Paul
2c) Project Location (City/State): 8 Drayton Ave. Bayshore, NY
2d) Quote/PO # (If Applicable):

FOR LAB USE ONLY ↓

Batch # A600342

===> Check If Contingent ===>

Matrix Codes
DW - Drinking Water S - Soil A - Air
GW - Ground Water SL - Sludge
WW - Waste Water OL - Oil
OT - Other (please specify under item 9, Comments)

7) Analysis (specify methods & parameter lists)

<=== Check If Contingent <===

Lab Sample #	4) Customer Sample ID	5) Matrix	6) Sample Date	6) Sample Time	Sample Type: Composite (C)	Sample Type: Grab (G)	TCL VOCs	PFAS	8) # of Bottles: None	MeOH	En Core	NaOH	HCl	H2SO4	HNO3	Other: Trizma	9) Comments
001	MW-3A	GW	9/28/17	1000		X		X								X	1-250 ml Plastic bottle
002	MW-13	GW	9/28/17	1250		X	X						X				3-40ml vial

10) Relinquished by:

Relinquished by:	Accepted by:	Date	Time
		9/29/17	12:16
		9/29/17	4:45

11) Sampler (print name): Date:

Additional Notes

Comments, Notes, Special Requirements, HAZARDS

Indicate if low-level methods required to meet current groundwater standards (SPLP for soil):
- [ ] BN or BNA (8270D SIM)
- [ ] VOC (8260C SIM or 8011)
- [ ] SPLP (BN, BNA, Metals)
- [ ] 1,4 Dioxane

For NJ LSRP projects, indicate which standards need to be met:
- [ ] NJDEP GWQS
- [ ] NJDEP SRS
- [ ] NJDEP SPLP
- [ ] Other (specify):

Check if applicable:
- [ ] Project-Specific Reporting Limits
- [ ] High Contaminant Concentrations
- [ ] NJ LSRP Project (also check boxes above/right)

Cooler Temperature: 2 & 4

Please note NUMBERED items. If not completed your analytical work may be delayed.
A fee of $5/sample will be assessed for storage should sample not be activated for any analysis.

Internal use: sampling plan (check box) HC [ ] or client [ ] FSP#

CONDITION UPON RECEIPT

Batch Number AD00342 Entered By: frantz

Date Entered 9/29/2017 5:23:00 PM

1	Yes	Is there a corresponding COC included with the samples?
2	Yes	Are the samples in a container such as a cooler or Ice chest?
3	NO	Are the COC seals intact?
4	T0056	<--- Thermometer ID. Please specify the Temperature inside the container (in degC). 2.4
5	Yes	Are the samples refrigerated (where required)/have they arrived on ice?
6	Yes	Are the samples within the holding times for the parameters listed on the COC? IF no, list parameters and samples:
7	Yes	Are all of the sample bottles intact? If no, specify sample numbers broken/leaking
8	Yes	Are all of the sample labels or numbers legible? If no specify:
9	Yes	Do the contents match the COC? If no, specify
10	Yes	Is there enough sample sent for the analyses listed on the COC? If no, specify:
11	Yes	Are samples preserved correctly?
12	Yes	Was temperature blank present (Place comment below if not)? If not was temperature of samples verified?
13	NA	Other comments ...Specify
14	NA	Corrective actions (Specify item number and corrective action taken).

PRESERVATION DOCUMENT

Batch Number AD00342 Entered By: frantz

Date Entered 9/29/2017 5:23:00 PM

Lab#:	Container Size	Container/Vial Check	Parameter	Preservative	Preservative Lot#	PH	pH Lot#
AD00342-001	NA	NA	NA	NA	NA	NA	NA
AD00342-002	40ml	G	VO	HCL	169353	1	HC693124

Internal Chain of Custody

Lab#:	DateTime:	Loc or User	Bot Nu	A/M	Analysis
AD00342-001	09/29/17 16:45	FRAN	0	M	Received
AD00342-001	09/29/17 17:23	FRAN	0	M	Login
AD00342-002	09/29/17 16:45	FRAN	0	M	Received
AD00342-002	09/29/17 17:23	FRAN	0	M	Login
AD00342-002	10/02/17 08:58	R31	1	A	NONE
AD00342-002	10/02/17 08:58	R31	2	A	NONE
AD00342-002	10/03/17 09:13	SG	2	A	VOA
AD00342-002	10/02/17 08:58	R31	3	A	NONE

Lab#:	DateTime:	Loc or User	Bot Nu	A/M	Analysis

Samples marked as received are stored in coolers or refrigerator R12, or R24 at 4 deg C until Login

Laboratory Chronicle

Client: AECOM
Project: Multi G Servall

HC Project #: 7092933

Lab#: AD00342-001 **Sample ID: MW-3A**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
PFAs EPA537 Mod 20 compounds	SolidPhase			EPA 537 mod	10/6/17 18:13	SGS Accutest

Lab#: AD00342-002 **Sample ID: MW-13**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
Volatile Organics (no search) 8260	EPA5030/5035			EPA 8260C	10/3/17 17:58	SG

HC Reporting Limit Definitions/Data Qualifiers

REPORTING DEFINITIONS

DF = Dilution Factor

MDL = Method Detection Limit

RL* = Reporting Limit

ND = Not Detected

RT = Retention Time

NA = Not Applicable

**Samples with elevated Reporting Limits (RLs) as a result of a dilution may not achieve client reporting limits in some cases. The elevated RLs are unavoidable consequences of sample dilution required to quantitate target analytes that exceed the calibration range of the instrument.*

DATA QUALIFIERS

A- Indicates that the Tentatively Identified Compound (TIC) is suspected to be an aldol-condensation product. These compounds are by-products of acetone and methylene chloride used in the extraction process.

B- Indicates analyte was present in the Method Blank and sample.

d- For Pesticide and PCB analysis, the concentration between primary and secondary columns is greater than 40%. The lower concentration is generally reported.

E- Indicates the concentration exceeded the upper calibration range of the instrument.

J- Indicates the value is estimated because it is either a Tentatively Identified Compound (TIC) or the reported concentration is greater than the MDL but less than the RL. For samples results between the MDL and RL there is a possibility of false positives or misidentification at the quantitation levels. Additionally, the acceptance criteria for QC samples may not be met.

R- Retention Time is out.

Y- Indicates a contaminant found in the blank at less than 10% of the concentration of a contaminant found in the sample.

HC Report of Analysis

Client: AECOM
Project: Multi G Servall

HC Project #: 7092933

Sample ID: MW-3A
Lab#: AD00342-001
Matrix: Aqueous

Collection Date: 9/28/2017
Receipt Date: 9/29/2017

PFAs EPA537 Mod 20 compounds

Analyte	DF	Units	RL	Result
Perfluoro-n-undeconoic acid	1			Attached

Sample ID: MW-13
Lab#: AD00342-002
Matrix: Aqueous

Collection Date: 9/28/2017
Receipt Date: 9/29/2017

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	1.0	ND
1,1,2,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	1.0	ND
1,1,2-Trichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethene	1	ug/l	1.0	ND
1,2,3-Trichlorobenzene	1	ug/l	1.0	ND
1,2,4-Trichlorobenzene	1	ug/l	1.0	ND
1,2-Dibromo-3-chloropropane	1	ug/l	1.0	ND
1,2-Dibromoethane	1	ug/l	1.0	ND
1,2-Dichlorobenzene	1	ug/l	1.0	ND
1,2-Dichloroethane	1	ug/l	0.50	ND
1,2-Dichloropropane	1	ug/l	1.0	ND
1,3-Dichlorobenzene	1	ug/l	1.0	ND
1,4-Dichlorobenzene	1	ug/l	1.0	ND
2-Butanone	1	ug/l	1.0	ND
2-Hexanone	1	ug/l	1.0	ND
4-Methyl-2-pentanone	1	ug/l	1.0	ND
Acetone	1	ug/l	5.0	ND
Benzene	1	ug/l	0.50	ND
Bromochloromethane	1	ug/l	1.0	ND
Bromodichloromethane	1	ug/l	1.0	ND
Bromoform	1	ug/l	1.0	ND
Bromomethane	1	ug/l	1.0	ND
Carbon disulfide	1	ug/l	1.0	ND
Carbon tetrachloride	1	ug/l	1.0	ND
Chlorobenzene	1	ug/l	1.0	ND
Chloroethane	1	ug/l	1.0	ND
Chloroform	1	ug/l	1.0	ND
Chloromethane	1	ug/l	1.0	ND
cis-1,2-Dichloroethene	1	ug/l	1.0	ND
cis-1,3-Dichloropropene	1	ug/l	1.0	ND
Cyclohexane	1	ug/l	1.0	ND
Dibromochloromethane	1	ug/l	1.0	ND
Dichlorodifluoromethane	1	ug/l	1.0	ND
Ethylbenzene	1	ug/l	1.0	ND
Isopropylbenzene	1	ug/l	1.0	ND
m&p-Xylenes	1	ug/l	1.0	ND
Methyl Acetate	1	ug/l	1.0	ND
Methylcyclohexane	1	ug/l	1.0	ND
Methylene chloride	1	ug/l	1.0	ND
Methyl-t-butyl ether	1	ug/l	0.50	ND
o-Xylene	1	ug/l	1.0	ND
Styrene	1	ug/l	1.0	ND
Tetrachloroethene	**1**	**ug/l**	**1.0**	**1.3**
Toluene	1	ug/l	1.0	ND
trans-1,2-Dichloroethene	1	ug/l	1.0	ND
trans-1,3-Dichloropropene	1	ug/l	1.0	ND
Trichloroethene	1	ug/l	1.0	ND
Trichlorofluoromethane	1	ug/l	1.0	ND
Vinyl chloride	1	ug/l	1.0	ND
Xylenes (Total)	1	ug/l	1.0	ND

Form1

ORGANICS VOLATILE REPORT

Sample Number: DAILY BLANK
Client Id:
Data File: 2M117553.D
Analysis Date: 10/03/17 08:43
Date Rec/Extracted:
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
71-55-6	1,1,1-Trichloroethane	1.0	U	108-90-7	Chlorobenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	75-00-3	Chloroethane	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluor	1.0	U	67-66-3	Chloroform	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U	74-87-3	Chloromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U	156-59-2	cis-1,2-Dichloroethene	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U	10061-01-5	cis-1,3-Dichloropropene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U	110-82-7	Cyclohexane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U	124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropa	1.0	U	75-71-8	Dichlorodifluoromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U	100-41-4	Ethylbenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U	98-82-8	Isopropylbenzene	1.0	U
107-06-2	1,2-Dichloroethane	0.50	U	79601-23-1	m&p-Xylenes	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U	79-20-9	Methyl Acetate	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U	108-87-2	Methylcyclohexane	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U	75-09-2	Methylene Chloride	1.0	U
78-93-3	2-Butanone	1.0	U	1634-04-4	Methyl-t-butyl ether	0.50	U
591-78-6	2-Hexanone	1.0	U	95-47-6	o-Xylene	1.0	U
108-10-1	4-Methyl-2-Pentanone	1.0	U	100-42-5	Styrene	1.0	U
67-64-1	Acetone	5.0	U	127-18-4	Tetrachloroethene	1.0	U
71-43-2	Benzene	0.50	U	108-88-3	Toluene	1.0	U
74-97-5	Bromochloromethane	1.0	U	156-60-5	trans-1,2-Dichloroethene	1.0	U
75-27-4	Bromodichloromethane	1.0	U	10061-02-6	trans-1,3-Dichloropropene	1.0	U
75-25-2	Bromoform	1.0	U	79-01-6	Trichloroethene	1.0	U
74-83-9	Bromomethane	1.0	U	75-69-4	Trichlorofluoromethane	1.0	U
75-15-0	Carbon Disulfide	1.0	U	75-01-4	Vinyl Chloride	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U				

Worksheet #: 439470

Total Target Concentration 0

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form1

ORGANICS VOLATILE REPORT

Sample Number: AD00342-002
Client Id: MW-13
Data File: 2M117586.D
Analysis Date: 10/03/17 17:58
Date Rec/Extracted: 09/29/17-NA
Column: DB-624 25M 0.200mm ID 1.12um film

Method: EPA 8260C
Matrix: Aqueous
Initial Vol: 5ml
Final Vol: NA
Dilution: 1.00
Solids: 0

Units: ug/L

Cas #	Compound	RL	Conc	Cas #	Compound	RL	Conc
71-55-6	1,1,1-Trichloroethane	1.0	U	108-90-7	Chlorobenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	75-00-3	Chloroethane	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluor	1.0	U	67-66-3	Chloroform	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U	74-87-3	Chloromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U	156-59-2	cis-1,2-Dichloroethene	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U	10061-01-5	cis-1,3-Dichloropropene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U	110-82-7	Cyclohexane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U	124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropa	1.0	U	75-71-8	Dichlorodifluoromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U	100-41-4	Ethylbenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U	98-82-8	Isopropylbenzene	1.0	U
107-06-2	1,2-Dichloroethane	0.50	U	79601-23-1	m&p-Xylenes	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U	79-20-9	Methyl Acetate	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U	108-87-2	Methylcyclohexane	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U	75-09-2	Methylene Chloride	1.0	U
78-93-3	2-Butanone	1.0	U	1634-04-4	Methyl-t-butyl ether	0.50	U
591-78-6	2-Hexanone	1.0	U	95-47-6	o-Xylene	1.0	U
108-10-1	4-Methyl-2-Pentanone	1.0	U	100-42-5	Styrene	1.0	U
67-64-1	Acetone	5.0	U	**127-18-4**	**Tetrachloroethene**	**1.0**	**1.3**
71-43-2	Benzene	0.50	U	108-88-3	Toluene	1.0	U
74-97-5	Bromochloromethane	1.0	U	156-60-5	trans-1,2-Dichloroethene	1.0	U
75-27-4	Bromodichloromethane	1.0	U	10061-02-6	trans-1,3-Dichloropropene	1.0	U
75-25-2	Bromoform	1.0	U	79-01-6	Trichloroethene	1.0	U
74-83-9	Bromomethane	1.0	U	75-69-4	Trichlorofluoromethane	1.0	U
75-15-0	Carbon Disulfide	1.0	U	75-01-4	Vinyl Chloride	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U	1330-20-7	Xylenes (Total)	1.0	U

Worksheet #: 439470

Total Target Concentration 1.3

ColumnID: (^) Indicates results from 2nd column

U - Indicates the compound was analyzed but not detected.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.
R - Retention Time Out
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
d - Pesticide %Diff>40% between columns due to coelution. Lower concentration usea
Chlordane (Total) is sum of a-Chlordane and y-Chlordane.

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64329

Data File	Sample ID:	Analysis Date
Spike or Dup: 2M117558.D	MBS64329	10/3/2017 10:07:00 AM
Non Spike(If applicable):		
Inst Blank(If applicable):		
Method: 8260C	Matrix: Aqueous	QC Type: MBS

Analyte:	Col	Spike Conc	Sample Conc	Expected Conc	Recovery	Lower Limit	Upper Limit
Chlorodifluoromethane	1	23.6753	0	20	118	50	150
Dichlorodifluoromethane	1	6.2914	0	20	31*	50	150
Chloromethane	1	10.3234	0	20	52	50	150
Bromomethane	1	17.393	0	20	87	50	150
Vinyl Chloride	1	12.7872	0	20	64	50	150
Chloroethane	1	14.5039	0	20	73	50	150
Trichlorofluoromethane	1	16.776	0	20	84	50	150
Ethyl ether	1	15.2021	0	20	76	50	150
Furan	1	14.1151	0	20	71	50	150
1,1,2-Trichloro-1,2,2-trifluoroethane	1	18.8831	0	20	94	50	150
Methylene Chloride	1	17.8552	0	20	89	70	130
Acrolein	1	47.8381	0	100	48*	50	150
Acrylonitrile	1	19.8314	0	20	99	50	150
Iodomethane	1	18.874	0	20	94	50	150
Acetone	1	120.0187	0	100	120	50	150
Carbon Disulfide	1	20.2145	0	20	101	50	150
t-Butyl Alcohol	1	83.6545	0	100	84	50	150
n-Hexane	1	16.5059	0	20	83	70	130
Di-isopropyl-ether	1	16.8663	0	20	84	70	130
1,1-Dichloroethene	1	16.1635	0	20	81	70	130
Methyl Acetate	1	17.8516	0	20	89	50	150
Methyl-t-butyl ether	1	14.4131	0	20	72	70	130
1,1-Dichloroethane	1	17.1458	0	20	86	70	130
trans-1,2-Dichloroethene	1	17.8385	0	20	89	70	130
Ethyl-t-butyl ether	1	15.807	0	20	79	70	130
cis-1,2-Dichloroethene	1	18.8465	0	20	94	70	130
Bromochloromethane	1	19.9622	0	20	100	70	130
2,2-Dichloropropane	1	18.0122	0	20	90	70	130
Ethyl acetate	1	20.946	0	20	105	50	130
1,4-Dioxane	1	2079.466	0	1000	208*	50	150
1,1-Dichloropropene	1	17.6864	0	20	88	70	130
Chloroform	1	19.6256	0	20	98	70	130
Cyclohexane	1	15.9266	0	20	80	70	130
1,2-Dichloroethane	1	19.8748	0	20	99	70	130
2-Butanone	1	16.0286	0	20	80	50	150
1,1,1-Trichloroethane	1	18.7855	0	20	94	70	130
Carbon Tetrachloride	1	20.9264	0	20	105	50	150
Vinyl Acetate	1	19.3607	0	20	97	50	150
Bromodichloromethane	1	18.2751	0	20	91	70	130
Methylcyclohexane	1	18.826	0	20	94	70	130
Dibromomethane	1	18.2821	0	20	91	70	130
1,2-Dichloropropane	1	18.6741	0	20	93	70	130
Trichloroethene	1	19.2924	0	20	96	70	130
Benzene	1	17.6483	0	20	88	70	130
tert-Amyl methyl ether	1	14.1577	0	20	71	70	130
Iso-propylacetate	1	19.2705	0	20	96	70	130
Methyl methacrylate	1	15.2445	0	20	76	70	130
Dibromochloromethane	1	22.1214	0	20	111	70	130
2-Chloroethylvinylether	1	14.5312	0	20	73	70	130
cis-1,3-Dichloropropene	1	15.0826	0	20	75	70	130
trans-1,3-Dichloropropene	1	17.4177	0	20	87	70	130
Ethyl methacrylate	1	15.0246	0	20	75	70	130
1,1,2-Trichloroethane	1	18.824	0	20	94	70	130
1,2-Dibromoethane	1	18.0564	0	20	90	70	130
1,3-Dichloropropane	1	17.6788	0	20	88	70	130
4-Methyl-2-Pentanone	1	15.5554	0	20	78	50	150
2-Hexanone	1	17.3808	0	20	87	50	150
Tetrachloroethene	1	17.5912	0	20	88	50	130
Toluene	1	16.7662	0	20	84	70	130
1,1,1,2-Tetrachloroethane	1	17.9105	0	20	90	70	130
Chlorobenzene	1	16.4868	0	20	82	70	130

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3

Recovery Data Laboratory Limits

QC Batch: MBS64329

n-Butyl acrylate	1	12.8485	0	20	64*	70	130
n-Amyl acetate	1	14.9695	0	20	75	70	130
Bromoform	1	18.822	0	20	94	70	130
Ethylbenzene	1	20.1835	0	20	101	70	130
1,1,2,2-Tetrachloroethane	1	18.3073	0	20	92	70	130
Styrene	1	18.1821	0	20	91	70	130
m&p-Xylenes	1	35.9541	0	40	90	70	130
o-Xylene	1	19.8026	0	20	99	70	130
trans-1,4-Dichloro-2-butene	1	18.3777	0	20	92	50	150
1,3-Dichlorobenzene	1	17.8814	0	20	89	70	130
1,4-Dichlorobenzene	1	16.8442	0	20	84	70	130
1,2-Dichlorobenzene	1	18.1915	0	20	91	70	130
Isopropylbenzene	1	18.7811	0	20	94	70	130
Cyclohexanone	1	90.2948	0	100	90	50	150
Camphene	1	18.603	0	20	93	70	130
1,2,3-Trichloropropane	1	19.2944	0	20	96	70	130
2-Chlorotoluene	1	20.4593	0	20	102	70	130
p-Ethyltoluene	1	17.2734	0	20	86	70	130
4-Chlorotoluene	1	19.5066	0	20	98	70	130
n-Propylbenzene	1	18.3427	0	20	92	70	130
Bromobenzene	1	18.8778	0	20	94	70	130
1,3,5-Trimethylbenzene	1	20.3839	0	20	102	70	130
Butyl methacrylate	1	16.0832	0	20	80	70	130
t-Butylbenzene	1	17.7294	0	20	89	70	130
1,2,4-Trimethylbenzene	1	18.8629	0	20	94	70	130
sec-Butylbenzene	1	18.127	0	20	91	70	130
4-Isopropyltoluene	1	17.6883	0	20	88	70	130
n-Butylbenzene	1	19.3067	0	20	97	70	130
p-Diethylbenzene	1	18.6972	0	20	93	70	130
1,2,4,5-Tetramethylbenzene	1	18.0148	0	20	90	70	130
1,2-Dibromo-3-Chloropropane	1	20.6975	0	20	103	50	150
Camphor	1	291.3738	0	200	146	50	150
Hexachlorobutadiene	1	14.8364	0	20	74	50	150
1,2,4-Trichlorobenzene	1	17.8098	0	20	89	70	130
1,2,3-Trichlorobenzene	1	18.03	0	20	90	70	130
Naphthalene	1	24.4132	0	20	122	50	150

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64329

Data File	Sample ID:	Analysis Date
Spike or Dup: 2M117576.D	AD00337-001(MS)	10/3/2017 3:10:00 PM
Non Spike(If applicable): 2M117570.D	AD00337-001	10/3/2017 1:30:00 PM
Inst Blank(If applicable):		

Method: 8260C | Matrix: Aqueous | QC Type: MS

Analyte:	Col	Spike Conc	Sample Conc	Expected Conc	Recovery	Lower Limit	Upper Limit
Chlorodifluoromethane	1	24.068	0	20	120	50	150
Dichlorodifluoromethane	1	22.5003	0	20	113	50	150
Chloromethane	1	17.8928	0	20	89	50	150
Bromomethane	1	21.2838	0	20	106	50	150
Vinyl Chloride	1	19.4699	0	20	97	50	150
Chloroethane	1	21.8229	0	20	109	50	150
Trichlorofluoromethane	1	20.7021	0	20	104	50	150
Ethyl ether	1	19.7752	0	20	99	50	150
Furan	1	18.5928	0	20	93	50	150
1,1,2-Trichloro-1,2,2-trifluoroethane	1	24.1754	0	20	121	50	150
Methylene Chloride	1	19.2627	0	20	96	70	130
Acrolein	1	88.1409	0	100	88	50	150
Acrylonitrile	1	18.1215	0	20	91	50	150
Iodomethane	1	24.7092	0	20	124	50	150
Acetone	1	100.035	0	100	100	50	150
Carbon Disulfide	1	25.7493	0	20	129	50	150
t-Butyl Alcohol	1	103.7319	0	100	104	50	150
n-Hexane	1	19.4684	0	20	97	70	130
Di-isopropyl-ether	1	17.3953	0	20	87	70	130
1,1-Dichloroethene	1	20.789	0	20	104	70	130
Methyl Acetate	1	17.6743	0	20	88	50	150
Methyl-t-butyl ether	1	15.0501	0	20	75	70	130
1,1-Dichloroethane	1	19.1082	0	20	96	70	130
trans-1,2-Dichloroethene	1	20.9066	0	20	105	70	130
Ethyl-t-butyl ether	1	18.5012	0	20	93	70	130
cis-1,2-Dichloroethene	1	22.8052	0	20	114	70	130
Bromochloromethane	1	22.5989	0	20	113	70	130
2,2-Dichloropropane	1	19.9189	0	20	100	70	130
Ethyl acetate	1	18.2064	0	20	91	50	130
1,4-Dioxane	1	1278.336	0	1000	128	50	150
1,1-Dichloropropene	1	20.0879	0	20	100	70	130
Chloroform	1	20.9668	0	20	105	70	130
Cyclohexane	1	19.3065	0	20	97	70	130
1,2-Dichloroethane	1	21.4326	0	20	107	70	130
2-Butanone	1	19.8367	0	20	99	50	150
1,1,1-Trichloroethane	1	21.3614	0	20	107	70	130
Carbon Tetrachloride	1	24.3232	0	20	122	50	150
Vinyl Acetate	1	20.9204	0	20	105	50	150
Bromodichloromethane	1	20.5622	0	20	103	70	130
Methylcyclohexane	1	19.4796	0	20	97	70	130
Dibromomethane	1	20.6523	0	20	103	70	130
1,2-Dichloropropane	1	19.1416	0	20	96	70	130
Trichloroethene	1	20.7808	0	20	104	70	130
Benzene	1	19.6937	0	20	98	70	130
tert-Amyl methyl ether	1	15.0546	0	20	75	70	130
Iso-propylacetate	1	18.2149	0	20	91	70	130
Methyl methacrylate	1	19.3587	0	20	97	70	130
Dibromochloromethane	1	23.3143	0	20	117	70	130
2-Chloroethylvinylether	1	0	0	20	0*	70	130
cis-1,3-Dichloropropene	1	18.6111	0	20	93	70	130
trans-1,3-Dichloropropene	1	17.5169	0	20	88	70	130
Ethyl methacrylate	1	19.6003	0	20	98	70	130
1,1,2-Trichloroethane	1	18.341	0	20	92	70	130
1,2-Dibromoethane	1	19.3807	0	20	97	70	130
1,3-Dichloropropane	1	20.8703	0	20	104	70	130
4-Methyl-2-Pentanone	1	14.6289	0	20	73	50	150
2-Hexanone	1	13.795	0	20	69	50	150
Tetrachloroethene	1	18.6277	0	20	93	50	130
Toluene	1	19.7087	0	20	99	70	130
1,1,1,2-Tetrachloroethane	1	21.8814	0	20	109	70	130
Chlorobenzene	1	19.3294	0	20	97	70	130

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64329

n-Butyl acrylate	1	13.8892	0	20	69*	70	130
n-Amyl acetate	1	14.8337	0	20	74	70	130
Bromoform	1	19.5931	0	20	98	70	130
Ethylbenzene	1	24.5099	0	20	123	70	130
1,1,2,2-Tetrachloroethane	1	19.3907	0	20	97	70	130
Styrene	1	19.6362	0	20	98	70	130
m&p-Xylenes	1	42.5799	0	40	106	70	130
o-Xylene	1	21.6917	0	20	108	70	130
trans-1,4-Dichloro-2-butene	1	17.4813	0	20	87	50	150
1,3-Dichlorobenzene	1	17.3987	0	20	87	70	130
1,4-Dichlorobenzene	1	18.9486	0	20	95	70	130
1,2-Dichlorobenzene	1	18.8177	0	20	94	70	130
Isopropylbenzene	1	21.1012	0	20	106	70	130
Cyclohexanone	1	85.3856	0	100	85	50	150
Camphene	1	14.1219	0	20	71	70	130
1,2,3-Trichloropropane	1	20.4701	0	20	102	70	130
2-Chlorotoluene	1	19.8031	0	20	99	70	130
p-Ethyltoluene	1	21.761	0	20	109	70	130
4-Chlorotoluene	1	23.3399	0	20	117	70	130
n-Propylbenzene	1	21.3345	0	20	107	70	130
Bromobenzene	1	19.4814	0	20	97	70	130
1,3,5-Trimethylbenzene	1	21.3172	0	20	107	70	130
Butyl methacrylate	1	17.648	0	20	88	70	130
t-Butylbenzene	1	18.8421	0	20	94	70	130
1,2,4-Trimethylbenzene	1	20.393	0	20	102	70	130
sec-Butylbenzene	1	19.866	0	20	99	70	130
4-Isopropyltoluene	1	20.1445	0	20	101	70	130
n-Butylbenzene	1	20.5457	0	20	103	70	130
p-Diethylbenzene	1	20.0574	0	20	100	70	130
1,2,4,5-Tetramethylbenzene	1	19.2533	0	20	96	70	130
1,2-Dibromo-3-Chloropropane	1	12.035	0	20	60	50	150
Camphor	1	133.7872	0	200	67	50	150
Hexachlorobutadiene	1	12.8424	0	20	64	50	150
1,2,4-Trichlorobenzene	1	14.0437	0	20	70	70	130
1,2,3-Trichlorobenzene	1	13.5956	0	20	68*	70	130
Naphthalene	1	211.1753	0	20	1060*	50	150

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64329

Data File	Sample ID:	Analysis Date
Spike or Dup: 2M117577.D	AD00337-001(MSD)	10/3/2017 3:27:00 PM
Non Spike(If applicable): 2M117570.D	AD00337-001	10/3/2017 1:30:00 PM
Inst Blank(If applicable):		

Method: 8260C | Matrix: Aqueous | QC Type: MSD

Analyte:	Col	Spike Conc	Sample Conc	Expected Conc	Recovery	Lower Limit	Upper Limit
Chlorodifluoromethane	1	23.3583	0	20	117	50	150
Dichlorodifluoromethane	1	21.0638	0	20	105	50	150
Chloromethane	1	19.0628	0	20	95	50	150
Bromomethane	1	21.2908	0	20	106	50	150
Vinyl Chloride	1	19.7193	0	20	99	50	150
Chloroethane	1	22.2227	0	20	111	50	150
Trichlorofluoromethane	1	20.2758	0	20	101	50	150
Ethyl ether	1	16.3953	0	20	82	50	150
Furan	1	19.5728	0	20	98	50	150
1,1,2-Trichloro-1,2,2-trifluoroethane	1	23.4053	0	20	117	50	150
Methylene Chloride	1	19.5281	0	20	98	70	130
Acrolein	1	82.0965	0	100	82	50	150
Acrylonitrile	1	22.1506	0	20	111	50	150
Iodomethane	1	23.4662	0	20	117	50	150
Acetone	1	98.3748	0	100	98	50	150
Carbon Disulfide	1	23.1524	0	20	116	50	150
t-Butyl Alcohol	1	90.6727	0	100	91	50	150
n-Hexane	1	21.5435	0	20	108	70	130
Di-isopropyl-ether	1	17.863	0	20	89	70	130
1,1-Dichloroethene	1	20.7162	0	20	104	70	130
Methyl Acetate	1	16.8459	0	20	84	50	150
Methyl-t-butyl ether	1	17.0036	0	20	85	70	130
1,1-Dichloroethane	1	18.8852	0	20	94	70	130
trans-1,2-Dichloroethene	1	21.5272	0	20	108	70	130
Ethyl-t-butyl ether	1	18.6866	0	20	93	70	130
cis-1,2-Dichloroethene	1	20.3355	0	20	102	70	130
Bromochloromethane	1	19.8783	0	20	99	70	130
2,2-Dichloropropane	1	20.4115	0	20	102	70	130
Ethyl acetate	1	21.448	0	20	107	50	130
1,4-Dioxane	1	2532.252	0	1000	253*	50	150
1,1-Dichloropropene	1	20.007	0	20	100	70	130
Chloroform	1	19.8565	0	20	99	70	130
Cyclohexane	1	18.7157	0	20	94	70	130
1,2-Dichloroethane	1	22.482	0	20	112	70	130
2-Butanone	1	19.985	0	20	100	50	150
1,1,1-Trichloroethane	1	21.0364	0	20	105	70	130
Carbon Tetrachloride	1	23.1105	0	20	116	50	150
Vinyl Acetate	1	19.8824	0	20	99	50	150
Bromodichloromethane	1	20.4912	0	20	102	70	130
Methylcyclohexane	1	20.9371	0	20	105	70	130
Dibromomethane	1	21.0409	0	20	105	70	130
1,2-Dichloropropane	1	20.4117	0	20	102	70	130
Trichloroethene	1	21.437	0	20	107	70	130
Benzene	1	18.9413	0	20	95	70	130
tert-Amyl methyl ether	1	15.7882	0	20	79	70	130
Iso-propylacetate	1	18.248	0	20	91	70	130
Methyl methacrylate	1	17.1516	0	20	86	70	130
Dibromochloromethane	1	22.871	0	20	114	70	130
2-Chloroethylvinylether	1	0	0	20	0*	70	130
cis-1,3-Dichloropropene	1	18.5036	0	20	93	70	130
trans-1,3-Dichloropropene	1	19.4638	0	20	97	70	130
Ethyl methacrylate	1	19.4113	0	20	97	70	130
1,1,2-Trichloroethane	1	17.7522	0	20	89	70	130
1,2-Dibromoethane	1	22.1303	0	20	111	70	130
1,3-Dichloropropane	1	21.5528	0	20	108	70	130
4-Methyl-2-Pentanone	1	15.279	0	20	76	50	150
2-Hexanone	1	17.4214	0	20	87	50	150
Tetrachloroethene	1	20.1912	0	20	101	50	130
Toluene	1	19.8637	0	20	99	70	130
1,1,1,2-Tetrachloroethane	1	0	0	20	0*	70	130
Chlorobenzene	1	19.4182	0	20	97	70	130

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
Recovery Data Laboratory Limits
QC Batch: MBS64329

n-Butyl acrylate	1	14.1161	0	20	71	70	130
n-Amyl acetate	1	16.1343	0	20	81	70	130
Bromoform	1	19.1993	0	20	96	70	130
Ethylbenzene	1	23.3758	0	20	117	70	130
1,1,2,2-Tetrachloroethane	1	18.7525	0	20	94	70	130
Styrene	1	21.4133	0	20	107	70	130
m&p-Xylenes	1	43.2414	0	40	108	70	130
o-Xylene	1	22.605	0	20	113	70	130
trans-1,4-Dichloro-2-butene	1	16.6814	0	20	83	50	150
1,3-Dichlorobenzene	1	20.0568	0	20	100	70	130
1,4-Dichlorobenzene	1	20.0725	0	20	100	70	130
1,2-Dichlorobenzene	1	19.2933	0	20	96	70	130
Isopropylbenzene	1	23.6664	0	20	118	70	130
Cyclohexanone	1	92.7682	0	100	93	50	150
Camphene	1	12.1062	0	20	61*	70	130
1,2,3-Trichloropropane	1	23.8344	0	20	119	70	130
2-Chlorotoluene	1	22.987	0	20	115	70	130
p-Ethyltoluene	1	19.8507	0	20	99	70	130
4-Chlorotoluene	1	22.651	0	20	113	70	130
n-Propylbenzene	1	23.2008	0	20	116	70	130
Bromobenzene	1	21.3199	0	20	107	70	130
1,3,5-Trimethylbenzene	1	25.5439	0	20	128	70	130
Butyl methacrylate	1	20.9528	0	20	105	70	130
t-Butylbenzene	1	22.5636	0	20	113	70	130
1,2,4-Trimethylbenzene	1	21.3049	0	20	107	70	130
sec-Butylbenzene	1	21.6173	0	20	108	70	130
4-Isopropyltoluene	1	20.0131	0	20	100	70	130
n-Butylbenzene	1	23.8639	0	20	119	70	130
p-Diethylbenzene	1	23.0348	0	20	115	70	130
1,2,4,5-Tetramethylbenzene	1	21.4792	0	20	107	70	130
1,2-Dibromo-3-Chloropropane	1	24.0201	0	20	120	50	150
Camphor	1	327.2586	0	200	164*	50	150
Hexachlorobutadiene	1	15.1441	0	20	76	50	150
1,2,4-Trichlorobenzene	1	18.6658	0	20	93	70	130
1,2,3-Trichlorobenzene	1	21.7341	0	20	109	70	130
Naphthalene	1	70.0213	0	20	350*	50	150

* - Indicates outside of limits # - Indicates outside of standard limits but within method exceedance limits

Form3
RPD Data Laboratory Limits
QC Batch: MBS64329

	Data File	Sample ID:	Analysis Date
Spike or Dup:	2M117577.D	AD00337-001(MSD)	10/3/2017 3:27:00 PM
Duplicate(If applicable):	2M117576.D	AD00337-001(MS)	10/3/2017 3:10:00 PM
Inst Blank(If applicable):			

Method: 8260C | Matrix: Aqueous | QC Type: MSD

Analyte:	Column	Dup/MSD/MBSD Conc	Sample/MS/MBS Conc	RPD	Limit
Chlorodifluoromethane	1	23.3583	24.068	3	20
Dichlorodifluoromethane	1	21.0638	22.5003	6.6	20
Chloromethane	1	19.0628	17.8928	6.3	20
Bromomethane	1	21.2908	21.2838	0.03	20
Vinyl Chloride	1	19.7193	19.4699	1.3	40
Chloroethane	1	22.2227	21.8229	1.8	20
Trichlorofluoromethane	1	20.2758	20.7021	2.1	20
Ethyl ether	1	16.3953	19.7752	19	20
Furan	1	19.5728	18.5928	5.1	20
1,1,2-Trichloro-1,2,2-trifluoroethane	1	23.4053	24.1754	3.2	20
Methylene Chloride	1	19.5281	19.2627	1.4	20
Acrolein	1	82.0965	88.1409	7.1	20
Acrylonitrile	1	22.1506	18.1215	20	20
Iodomethane	1	23.4662	24.7092	5.2	20
Acetone	1	98.3748	100.035	1.7	20
Carbon Disulfide	1	23.1524	25.7493	11	20
t-Butyl Alcohol	1	90.6727	103.7319	13	20
n-Hexane	1	21.5435	19.4684	10	20
Di-isopropyl-ether	1	17.863	17.3953	2.7	20
1,1-Dichloroethene	1	20.7162	20.789	0.35	40
Methyl Acetate	1	16.8459	17.6743	4.8	20
Methyl-t-butyl ether	1	17.0036	15.0501	12	20
1,1-Dichloroethane	1	18.8852	19.1082	1.2	40
trans-1,2-Dichloroethene	1	21.5272	20.9066	2.9	20
Ethyl-t-butyl ether	1	18.6866	18.5012	1	20
cis-1,2-Dichloroethene	1	20.3355	22.8052	11	20
Bromochloromethane	1	19.8783	22.5989	13	20
2,2-Dichloropropane	1	20.4115	19.9189	2.4	20
Ethyl acetate	1	21.448	18.2064	16	20
1,4-Dioxane	1	2532.252	1278.336	66*	20
1,1-Dichloropropene	1	20.007	20.0879	0.4	20
Chloroform	1	19.8565	20.9668	5.4	40
Cyclohexane	1	18.7157	19.3065	3.1	20
1,2-Dichloroethane	1	22.482	21.4326	4.8	40
2-Butanone	1	19.985	19.8367	0.74	40
1,1,1-Trichloroethane	1	21.0364	21.3614	1.5	20
Carbon Tetrachloride	1	23.1105	24.3232	5.1	40
Vinyl Acetate	1	19.8824	20.9204	5.1	20
Bromodichloromethane	1	20.4912	20.5622	0.35	20
Methylcyclohexane	1	20.9371	19.4796	7.2	20
Dibromomethane	1	21.0409	20.6523	1.9	20
1,2-Dichloropropane	1	20.4117	19.1416	6.4	20
Trichloroethene	1	21.437	20.7808	3.1	40
Benzene	1	18.9413	19.6937	3.9	40
tert-Amyl methyl ether	1	15.7882	15.0546	4.8	20
Iso-propylacetate	1	18.248	18.2149	0.18	20
Methyl methacrylate	1	17.1516	19.3587	12	20
Dibromochloromethane	1	22.871	23.3143	1.9	20
2-Chloroethylvinylether	1	0	0	NA	20
cis-1,3-Dichloropropene	1	18.5036	18.6111	0.58	20
trans-1,3-Dichloropropene	1	19.4638	17.5169	11	20
Ethyl methacrylate	1	19.4113	19.6003	0.97	20
1,1,2-Trichloroethane	1	17.7522	18.341	3.3	20
1,2-Dibromoethane	1	22.1303	19.3807	13	20
1,3-Dichloropropane	1	21.5528	20.8703	3.2	20
4-Methyl-2-Pentanone	1	15.279	14.6289	4.3	20
2-Hexanone	1	17.4214	13.795	23*	20
Tetrachloroethene	1	20.1912	18.6277	8.1	40
Toluene	1	19.8637	19.7087	0.78	40
1,1,1,2-Tetrachloroethane	1	0	21.8814	200*	20
Chlorobenzene	1	19.4182	19.3294	0.46	40
n-Butyl acrylate	1	14.1161	13.8892	1.6	20
n-Amyl acetate	1	16.1343	14.8337	8.4	20

Form3
RPD Data Laboratory Limits
QC Batch: MBS64329

Bromoform	1	19.1993	19.5931	2	20
Ethylbenzene	1	23.3758	24.5099	4.7	20
1,1,2,2-Tetrachloroethane	1	18.7525	19.3907	3.3	20
Styrene	1	21.4133	19.6362	8.7	20
m&p-Xylenes	1	43.2414	42.5799	1.5	20
o-Xylene	1	22.605	21.6917	4.1	20
trans-1,4-Dichloro-2-butene	1	16.6814	17.4813	4.7	20
1,3-Dichlorobenzene	1	20.0568	17.3987	14	20
1,4-Dichlorobenzene	1	20.0725	18.9486	5.8	40
1,2-Dichlorobenzene	1	19.2933	18.8177	2.5	40
Isopropylbenzene	1	23.6664	21.1012	11	20
Cyclohexanone	1	92.7682	85.3856	8.3	20
Camphene	1	12.1062	14.1219	15	20
1,2,3-Trichloropropane	1	23.8344	20.4701	15	20
2-Chlorotoluene	1	22.987	19.8031	15	20
p-Ethyltoluene	1	19.8507	21.761	9.2	20
4-Chlorotoluene	1	22.651	23.3399	3	20
n-Propylbenzene	1	23.2008	21.3345	8.4	40
Bromobenzene	1	21.3199	19.4814	9	20
1,3,5-Trimethylbenzene	1	25.5439	21.3172	18	20
Butyl methacrylate	1	20.9528	17.648	17	20
t-Butylbenzene	1	22.5636	18.8421	18	20
1,2,4-Trimethylbenzene	1	21.3049	20.393	4.4	20
sec-Butylbenzene	1	21.6173	19.866	8.4	40
4-Isopropyltoluene	1	20.0131	20.1445	0.65	20
n-Butylbenzene	1	23.8639	20.5457	15	20
p-Diethylbenzene	1	23.0348	20.0574	14	20
1,2,4,5-Tetramethylbenzene	1	21.4792	19.2533	11	20
1,2-Dibromo-3-Chloropropane	1	24.0201	12.035	66*	20
Camphor	1	327.2586	133.7872	84*	20
Hexachlorobutadiene	1	15.1441	12.8424	16	20
1,2,4-Trichlorobenzene	1	18.6658	14.0437	28*	20
1,2,3-Trichlorobenzene	1	21.7341	13.5956	46*	20
Naphthalene	1	70.0213	211.1753	100*	20

* - Indicates outside of limits

NA - Both concentrations=0... no result can be calculated

Subcontracted Data

This is the last page of the data generated by Hampton-Clarke.
The following pages were submitted to HC by subcontracted laboratories.

FINAL LAB REPORT

7092933

31700900

13-Oct-2017

Prepared by

SGS NORTH AMERICA

Prepared for

Hampton-Clarke, Inc.

Sherree Baker

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This report is approved by

Amy Boehm

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Project Manager

SGS CERTIFICATIONS

Arkansas	88-0682
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-17-00055
DoD	2726.01
Florida (Primary NELAP)	E87634
ISO 17025/IEC	2726.01
Louisiana DEQ	4115
Louisiana DOH	LA170030
Maine	2016028
Massachusetts	M-NC919
Minnesota (Primary NELAP For Method 23)	1179213
Mississippi	Reciprocity
Nebraska	NE-OS-33-17
New Hampshire	208317
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Virginia	8914
Washington	C913
West Virginia	293

Rev. 04-Aug-2017

Laboratory Qualifiers

Report Definitions

DL	Method, Instrument, or Estimated Detection Limit per Analytical Method
CL	Control Limits for the recovery result of a parameter
LOQ	Reporting Limit
DF	Dilution Factor
RPD	Relative Percent Difference
LCS(D)	Laboratory Control Spike (Duplicate)
MS(D)	Matrix Spike (Duplicate)
MB	Method Blank

Qualifier Definitions

*	Recovery or RPD outside of control limits
B	Analyte was detected in the Lab Method Blank at a level above the LOQ
U	Undetected (Reported as ND or < DL)
J	Estimated Concentration.
E	Amount detected is greater than the Upper Calibration Limit
TIC	Tentatively Identified Compound
ND	Not Detected
P	RPD > 40% between results of dual columns
D	Spike or surrogate was diluted out in order to achieve a parameter result within instrument calibration range

Samples requiring manual integrations for various congeners and/or standards are marked and dated by the analyst. A code definition is provided below:

M1	Mis-identified peak
M2	Software did not integrate peak
M3	Incorrect baseline construction (i.e. not all of peak included; two peaks integrated as one)
M4	Pattern integration required (i.e. DRO, GRO, PCB, Toxaphene and Technical Chlordane)
M5	Other - Explained in case narrative

Note Results pages that include a value for "Solids (%)" have been adjusted for moisture content.

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
AD00342-001	31700900001	09/28/2017 10:00	10/03/2017 12:09	Water

Case Narrative

AD00342-001

PFC E537-A Low ES recoveries resulted in some analytes failing in the LCS/LCSD. Concentrations for those failing analytes in the samples were below the LOQ.
PFC E537-A There is no back-up for a re-extract.

LCS for HBN 141274 [HXX/2065]

PFC E537-A Low ES recoveries resulted in some analytes failing in the LCS/LCSD. Concentrations for those failing analytes in the samples were below the LOQ.

LCSD for HBN 141274 [HXX/2065]

PFC E537-A Low ES recoveries resulted in some analytes failing in the LCS/LCSD. Concentrations for those failing analytes in the samples were below the LOQ.

MB for HBN 141274 [HXX/2065]

PFC E537-A Low ES recoveries resulted in some analytes failing in the LCS/LCSD. Concentrations for those failing analytes in the samples were below the LOQ.

Detectable Results Summary

Client Sample ID: **AD00342-001**
Lab Sample ID: 31700900001-A
EPA 537 v1.1

Parameter	Result	Units	
PFBA	6.34	ng/L	
PFPeA	18.3	ng/L	
PFHxA	15.7	ng/L	
PFHpA	5.29	ng/L	
PFOA	10.7	ng/L	
PFNA	2.17	ng/L	
PFDA	0.939	ng/L	J
PFuNA	0.228	ng/L	J
PFTreA	0.219	ng/L	J
PFBS	1.58	ng/L	J
PFHxS	6.79	ng/L	
PFHpS	0.248	ng/L	J
PFOS	10.1	ng/L	
6:2 FTS	0.576	ng/L	J

Print Date: 10/13/2017

N.C. Certification # 481

Results of **AD00342-001**

Client Sample ID: **AD00342-001**
Client Project ID: **7092933**
Lab Sample ID: 31700900001-A
Lab Project ID: 31700900

Collection Date: 09/28/2017 10:00
Received Date: 10/03/2017 12:09
Matrix: Water

Results by **EPA 537 v1.1**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
PFBA	**6.34**		0.202	2.02	ng/L	1	10/6/2017 18:13
PFPeA	**18.3**		0.202	2.02	ng/L	1	10/6/2017 18:13
PFHxA	**15.7**		0.202	2.02	ng/L	1	10/6/2017 18:13
PFHpA	**5.29**		0.202	2.02	ng/L	1	10/6/2017 18:13
PFOA	**10.7**		0.202	2.02	ng/L	1	10/6/2017 18:13
PFNA	**2.17**		0.202	2.02	ng/L	1	10/6/2017 18:13
PFDA	**0.939**	J	0.202	2.02	ng/L	1	10/6/2017 18:13
PFuNA	**0.228**	J	0.202	2.02	ng/L	1	10/6/2017 18:13
PFDoA	ND	U	0.202	2.02	ng/L	1	10/6/2017 18:13
PFTriA	ND	U	0.202	2.02	ng/L	1	10/6/2017 18:13
PFTreA	**0.219**	J	0.202	2.02	ng/L	1	10/6/2017 18:13
PFBS	**1.58**	J	0.202	2.02	ng/L	1	10/6/2017 18:13
PFHxS	**6.79**		0.202	2.02	ng/L	1	10/6/2017 18:13
PFHpS	**0.248**	J	0.202	2.02	ng/L	1	10/6/2017 18:13
PFOS	**10.1**		0.202	2.02	ng/L	1	10/6/2017 18:13
PFDS	ND	U	0.202	2.02	ng/L	1	10/6/2017 18:13
NMeFOSAA	ND	U	0.505	2.02	ng/L	1	10/6/2017 18:13
NetFOSAA	ND	U	0.505	2.02	ng/L	1	10/6/2017 18:13
6:2 FTS	**0.576**	J	0.505	2.02	ng/L	1	10/6/2017 18:13
8:2 FTS	ND	U	0.202	2.02	ng/L	1	10/6/2017 18:13
MAP_ICAL Calc Placeholder	ND	U			n/a	1	10/6/2017 18:13
Surrogates							
13C2-PFHxA	84.8			70.0-130	%	1	10/6/2017 18:13
13C2-PFDA	92.1			70.0-130	%	1	10/6/2017 18:13
d5-NEtFOSAA	67.2*			70.0-130	%	1	10/6/2017 18:13

Batch Information

Analytical Batch: **XLC1076**
Analytical Method: **EPA 537 v1.1**
Instrument: **TQS1**
Analyst: **ADM**

Prep Batch: **HXX2065**
Prep Method: **EPA 537 1.1 PREP**
Prep Date/Time: **10/05/2017 19:02**
Prep Initial Wt./Vol.: **247.29 mL**
Prep Extract Vol: **1 mL**

Print Date: 10/13/2017

N.C. Certification # 481

Batch Summary

Analytical Method: EPA 537 v1.1

Prep Method: EPA 537 1.1 PREP
Prep Batch: HXX2065
Prep Date: 10/05/2017 19:02

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 141274 [HXX/2065]	213136	10/06/2017 15:09	XLC1076	TQS1	ADM
LCS for HBN 141274 [HXX/2065]	213137	10/06/2017 15:40	XLC1076	TQS1	ADM
LCSD for HBN 141274 [HXX/2065]	213138	10/06/2017 16:10	XLC1076	TQS1	ADM
AD00342-001	31700900001	10/06/2017 18:13	XLC1076	TQS1	ADM

Method Blank

Blank ID: MB for HBN 141274 [HXX/2065]
Blank Lab ID: 213136
QC for Samples:
31700900001

Matrix: Water

Results by **EPA 537 v1.1**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
PFBA	ND	U	0.200	2.00	ng/L	1
PFPeA	ND	U	0.200	2.00	ng/L	1
PFHxA	ND	U	0.200	2.00	ng/L	1
PFHpA	ND	U	0.200	2.00	ng/L	1
PFOA	ND	U	0.200	2.00	ng/L	1
PFNA	ND	U	0.200	2.00	ng/L	1
PFDA	ND	U	0.200	2.00	ng/L	1
PFuNA	ND	U	0.200	2.00	ng/L	1
PFDoA	ND	U	0.200	2.00	ng/L	1
PFTriA	ND	U	0.200	2.00	ng/L	1
PFTreA	ND	U	0.200	2.00	ng/L	1
PFBS	ND	U	0.200	2.00	ng/L	1
PFHxS	ND	U	0.200	2.00	ng/L	1
PFHpS	ND	U	0.200	2.00	ng/L	1
PFOS	ND	U	0.200	2.00	ng/L	1
PFDS	ND	U	0.200	2.00	ng/L	1
NMeFOSAA	ND	U	0.500	2.00	ng/L	1
NetFOSAA	ND	U	0.500	2.00	ng/L	1
6:2 FTS	ND	U	0.500	2.00	ng/L	1
8:2 FTS	ND	U	0.200	2.00	ng/L	1
Surrogates						
13C2-PFHxA	77.6			70.0-130	%	1
13C2-PFDA	92.4			70.0-130	%	1
d5-NEtFOSAA	69.5*			70.0-130	%	1

Batch Information

Analytical Batch: XLC1076
Analytical Method: EPA 537 v1.1
Instrument: TQS1
Analyst: ADM

Prep Batch: HXX2065
Prep Method: EPA 537 1.1 PREP
Prep Date/Time: 10/5/2017 7:02:03PM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 141274 [HXX/2065]
Blank Spike Lab ID: 213137
Date Analyzed: 10/06/2017 15:40

Spike Duplicate ID: LCSD for HBN 141274 [HXX/2065]
Spike Duplicate Lab ID: 213138
Date Analyzed: 10/06/2017 16:10
Matrix: Water

QC for Samples: 31700900001

Results by **EPA 537 v1.1**

	Blank Spike (ng/L)			Spike Duplicate (ng/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
PFBA	100	84.4	84.4	100	83.2	83.2	70.0-130	1.4	30.00
PFPeA	100	89.4	89.4	100	88.0	88	70.0-130	1.6	30.00
PFHxA	100	100	100	100	101	101	70.0-130	1.00	30.00
PFHpA	100	102	102	100	102	102	70.0-130	0.0	30.00
PFOA	100	110	110	100	113	113	70.0-130	2.7	30.00
PFNA	100	92.0	92	100	94.1	94.1	70.0-130	2.3	30.00
PFDA	100	104	104	100	102	102	70.0-130	1.9	30.00
PFuNA	100	151	**151***	100	142	**142***	70.0-130	6.1	30.00
PFDoA	100	110	110	100	108	108	70.0-130	1.8	30.00
PFTriA	100	162	**162***	100	148	**148***	70.0-130	9.0	30.00
PFTreA	100	152	**152***	100	138	**138***	70.0-130	9.7	30.00
PFBS	100	147	**147***	100	143	**143***	70.0-130	2.8	30.00
PFHxS	100	143	**143***	100	139	**139***	70.0-130	2.8	30.00
PFHpS	100	111	111	100	109	109	70.0-130	1.8	30.00
PFOS	100	110	110	100	106	106	70.0-130	3.7	30.00
PFDS	100	148	**148***	100	142	**142***	70.0-130	4.1	30.00
NMeFOSAA	100	102	102	100	102	102	70.0-130	0.0	30.00
NetFOSAA	100	102	102	100	101	101	70.0-130	0.98	30.00
6:2 FTS	100	169	**169***	100	159	**159***	70.0-130	6.1	30.00
8:2 FTS	100	169	**169***	100	158	**158***	70.0-130	6.7	30.00
Surrogates									
13C2-PFHxA			**64***			**65.8***	70.0-130		
13C2-PFDA			94.5			97.2	70.0-130		
d5-NEtFOSAA			**68.3***			**69.2***	70.0-130		

Batch Information

Analytical Batch: **XLC1076**
Analytical Method: **EPA 537 v1.1**
Instrument: **TQS1**
Analyst: **ADM**

Prep Batch: **HXX2065**
Prep Method: **EPA 537 1.1 PREP**
Prep Date/Time: **10/05/2017 19:02**
Spike Init Wt./Vol.: **250 mL** Extract Vol: **1 mL**
Dupe Init Wt./Vol.: **250 mL** Extract Vol: **1 mL**

Print Date: 10/13/2017

N.C. Certification # 481

CHAIN OF CUSTODY RECORD

Hampton-Clarke, Inc.
175 US Hwy 46 West
Fairfield, New Jersey, 07004
Ph:800-426-9992 Fax:973-439-1458

317009000

Report To:
Hampton-Clarke, Inc.:
Attn:Reporting
175 Route 46 West
Fairfield, New Jersey 07004

Invoice To:
Hampton-Clarke, Inc.:
Attn:Accounting
175 Route 46 West
Fairfield, New Jersey 07004

Project #: 7092933

CocID#: 5557

FINAL RESULTS TO: subresults@hcvlab.com
PRELIM/VERBAL RESULTS TO: subresults@hcvlab.com
EDD: NEW JERSEY HAZRESULT OR EQUIS EZEDD REQUIRED FOR ALL DATA SUBMITTALS!

Turn Around Time: Standard
Report Type: NYDOH-CatA (STAND
Preliminary Due Date: 10/17/2017
Hard Copy Due Date: 10/24/2017

Sample Number:	Client ID	Matrix:	Date Collected:	Time Collected:	Analysis Requested
AD00342-001	MW-3A	Aqueous	9/28/2017	10:00:00 AM	PFAs EPA537 Mod 20 compounds:(Analysis Method:EPA 537 mod)

Relinquished By:	Accepted By:	Date:	Time:	Comments, Notes, Special Requirements, HAZARDS
[signature]	UPS	10/2/17	1700	DB 10/2/17
	ashley owens	10/3/17	12:09	

HC Lab Use Only: 317009000 page 1 of 2

Subcontracted Lab Id and Contact: Richard Sutler, (910) 350-1903, LabID: H, 5500 Business Drive, , Wilmington, NC, 28405

Cooler Temp: 4.0°

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **Hampton-Clarke, Inc.** Work Order No.: **31700900**

Notes:

1. _x_ Shipped
   ___ Hand Delivered

2. _x_ COC Present on Receipt
   ___ No COC
   ___ Additional Transmittal Forms

3. ___ Custody Tape on Container
   _x_ No Custody Tape

4. _x_ Samples Intact
   ___ Samples Broken / Leaking

5. _x_ Chilled on Receipt — Actual Temp.(s) in °C: 4.0 — Thermometer ID#: IR3
   ___ Ambient on Receipt
   ___ Walk-in on Ice; Coming down to temp.
   ___ Temperature Blank Present
   ___ WV samples-proxy not allowed

6. _x_ Sufficient Sample Submitted
   ___ Insufficient Sample Submitted

7. ___ Chlorine absent
   ___ HNO3 < 2
   ___ HCL < 2
   _x_ Additional Preservatives verified (see notes) — Trizma

8. _x_ Received Within Holding Time
   ___ Not Received Within Holding Time

9. _x_ No Discrepancies Noted
   ___ Discrepancies Noted
   ___ NCDENR notified of Discrepancies*

10. ___ No Headspace present in VOC vials — N/A
    ___ Headspace present in VOC vials >6mm

Comments:

Inspected and Logged in by: AMO
Date: 10/3/2017

*NCDENR must be notified when collection, holding time or preservation requirements are not met.

MI_11.11