QUARTERLY EXTRACTION WELL REPORT
3rd Quarter 2019

BAIRD & McGUIRE SUPERFUND SITE
775 South Street
Holbrook, Massachusetts

MassDEP Site Support Number: 101908
RTN No. 4-3000333
CHES Job No.: EO8683573

Prepared for:
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1.0 INTRODUCTION

Clean Harbors Environmental Services, Inc. (Clean Harbors) has prepared this Quarterly Extraction Well Sampling Report for the Baird & McGuire Superfund Site located at 775 South Street in Holbrook, Massachusetts (Figure 1). This report documents the August 23, 2019 comprehensive gauging event, and the August 22, 2019 field-screening and sample collection from seven extraction wells at the site. This report also evaluates influent water entering the Groundwater Treatment Facility (GWTF), evaluates groundwater elevations, and aids in the overall evaluation of treatment and other measures to restore groundwater quality at the site. The locations of the GWTF building, extraction and monitoring wells, piezometers, and infiltration basins are shown in Figure 2.

The evaluation presented is based on analytical data obtained from sampling the extraction wells; groundwater elevation data; measurements of light non-aqueous phase liquid (LNAPL), and information obtained from on-site personnel, including influent flow rates, volume of LNAPL recovered, and the compliance status of the GWTF with respect to the discharge criteria for water quality and removal of contaminants.

2.0 HYDROGEOLOGIC ASSESSMENT

The geology and hydrology of the site have been described in previous studies. In general, the site shallow soils consist of glacially deposited, stratified materials composed primarily

of sands and silt with minor amounts of gravel and cobbles. These materials are underlain by a sandy, unstratified glacial till, which is underlain by bedrock (fractured and weathered). The groundwater monitoring well network consists of numerous wells with screened sections installed at various depths to characterize the shallow overburden conditions and the deeper bedrock conditions. Table 1 summarizes overburden and bedrock wells.

2.1 Water Level Measurements

The depths to groundwater under pumping conditions were measured in 10 extraction wells (seven were pumping at the time of gauging), 81 monitoring wells, and five piezometers on August 23, 2019. As summarized in Table 2, water levels were gauged in overburden and bedrock monitoring wells throughout the site. Overburden well and piezometer groundwater gauging data were used to generate an overburden groundwater contour map (Figure 3) using Surfer 11.0 (Golden Software, Inc.). This map excludes water levels in extraction wells that were pumping (EW-3, EW-4A, EW-6A, EW-7, EW-8, EW-9 and EW-10).

As shown in Figure 3, groundwater along the western side of the site flows in an east direction, and groundwater in the southeast portion of the site flows to the north. Drawdown effects exist around several active extraction wells. As shown, the 117.4-foot contour extents over a larger portion of the site than we have seen in recent past, which encompasses six active extraction wells (EW-3, EW-4A, EW-6A, EW-7, EW-8, and EW-10). Additionally, EW-9 is also shown to be encompassed by a localized depression of the groundwater table that abuts the larger 117.4-foot contour. Several more localized flow patterns exist at the site. Bedrock groundwater contours have remained stable over time and generally show flow patterns like those observed in the overburden contours, without the effects of the extraction wells.

The groundwater vertical gradients for portions of the site were assessed by comparing groundwater elevation measurements at 16 monitoring well clusters and all 5 piezometers. At monitoring wells, the vertical hydraulic gradients were calculated by dividing the difference in head by the vertical distance from the midpoints of the wetted screens. The signage was then reversed to follow convention that indicates positive as upward movement. At the piezometers, the vertical hydraulic gradients were calculated by dividing the difference in head (i.e. difference between groundwater and surface water depth) by the vertical distance from the sediment surface to the mid-point of the screen (i.e. *dl*). A measurement of the surface water elevation was made at each piezometer by measuring the depth to the river surface on the outside of the piezometer, and the groundwater elevation was determined by measuring the depth to groundwater on the inside of the piezometer. Table 3 summarizes the vertical gradients observed during this reporting period.

The vertical gradients for monitoring wells and piezometers ranged from -0.1413 (downward) to +0.7143 (upward) at the observed locations. An upward gradient was observed at four of the five piezometers (P15-01, P15-02, P15-04, and P15-05), and at 9 of the 16 monitoring well clusters (M-6, M-8, M-12, MW97-7/8, MW97-8/9, MW97-13/14, 910, MW97-11/12, and MW97-22). A downward gradient was observed at 6 well clusters

(906, 911, 913, M-4, M-7 [Bedrock], and M-11). No gradient was observed at monitoring well M-7 [Overburden] and piezometer P15-03. The positive (upward) and negative (downward) gradients observed in the overburden wells are depicted on Figure 3. Given the proximity, the positive (upward) gradient at the MW97-7/8 and MW97-8/9 wells are represented by one "+" sign.

2.2 LNAPL Thickness

Historically, Clean Harbors has measured, by gauging with an interface probe, the thickness of LNAPL generally on a weekly basis in extraction/monitoring wells EW-6A, EW-8, MW97-1, MW97-3, and MW98-1. The frequency decreased from daily gauging to weekly gauging after the Massachusetts Department of Environmental Protection (Department) approved of the change in a February 2017 status meeting. This decreased frequency of LNAPL measurement was initiated due to the lack of any significant LNAPL occurrence within these wells. LNAPL is gauged to determine if enough LNAPL is present to warrant a recovery effort.

As presented in Table 4, EW-6A had an observed LNAPL thickness ranging from 0.01 foot to 0.03 foot; only a skim of LNAPL was observed in EW-8 and MW97-3; and no LNAPL was observed in MW97-1 or MW98-1. LNAPL recovery did not occur during this reporting period.

Additionally, 19 wells (including the wells gauged weekly) are measured for LNAPL monthly. The 19 locations and the corresponding LNAPL measurements recorded are summarized in Table 5. During the July, August, and September gauging events, LNAPL was observed in EW-6 (0.01 foot in July); EW-6A (0.02 foot in July and 0.01 foot in August); and EW-8 (a skim in September). LNAPL was not observed in the other gauged wells.

2.3 LNAPL Recovery

The LNAPL recovery system was constructed in 1999. The LNAPL system consisted of one extraction well (EW-8) equipped with a submersible total fluid pump (compressed air driven pump) and two monitoring wells (MW97-1 and MW98-1) also equipped with submersible total fluid pumps. The system was designed to pump LNAPL to the oil/water separator. However, due to the lack of LNAPL in these wells, the LNAPL system has not operated since March 2009. Based on site conditions observed over the past decade, it is unlikely that the LNAPL system will ever be returned to operation at the site. Facility personnel indicate that the total fluids pumps within each of the 3 wells were historically removed.

LNAPL was not removed from any of the wells during this reporting period. Historically, LNAPL recovery at EW-6 was initiated after one and one-half feet of LNAPL accumulated in the extraction well and occurred via an inertial pumping system (Waterra Hydrolift). As documented in the respective quarterly reports, a cumulative volume of approximately 41 gallons of LNAPL were recovered during eight recovery attempts from the Fall of 2011 to the Spring of 2015. A similar recovery effort will occur if greater than one and one-half feet of apparent LNAPL is observed in any of the site wells.

3.0 EXTRACTION WELL PERFORMANCE

The extraction wells pump groundwater through separate pipelines to the Extraction Well Control Building (EWCB) where flow is then conveyed into the GWTF through dual header pipes equipped with two flow gauges (FT1 and FT1A). These flow gauges were historically used to determine total influent into the GWTF until December 2015 when one of the gauges (FT1) was observed to not register an increase in flow after EW-6A was placed on-line. Individual well gauges have since been used to report total flows. Extraction wells EW-3, EW-4A, and EW-7 combine into the header pipe that is gauged by FT1 and EW-6A, EW-8, EW-9, and EW-10 combine into the header pipe that is gauged by FT1A.

Pumping rates have historically been obtained from daily XL Reporter printouts from the SCADA system, manually subtracted from the prior day, and entered by plant staff into the OPS32 database. Clean Harbors has created a spreadsheet to convert the electronic data files into a monthly flow data spreadsheet prior to entry into the OPS32 system. This new process will mitigate calculation and transcription errors that were previously made in the manual process, and makes flow reporting a task that can be completed more quickly.

3.1 Pumping Rates

The groundwater pumping system includes seven active extraction wells (EW-3, EW-4A, EW-6A, EW-7, EW-8, EW-9, and EW-10). Each of the extraction well pumps are controlled by a manually input gallon per minute set point and a variable frequency drive (VFD) installed to conserve electrical demands on the pump motors. Extraction well EW-2 had screen failure on July 27, 2006; EW-5 had screen failure on June 30, 2010, EW-6 may have been showing signs of screen failure and was replaced by EW-6A on December 29, 2015. Extraction well EW-10 was off-line at the beginning of the reporting period. A new pump and motor were installed in the EW-10 well, and the well resumed operation on July 31, 2019. Total gallons of groundwater recovered at the site fluctuate based on plant maintenance and the seasonal water table elevation across the site. The extraction well system and GWTF were shut down on September 30, 2019, for the Parsons Engineering site investigations.

As mentioned in previous reporting, a decrease in flow occurred at EW-6A. The pump and motor were replaced on November 6; however, no discernable increase in the flow rate occurred. On November 7, the elbow, piping and check valve connections within the EW-6 vault (the vault that the EW-6A conveyance lines were connected through) were cleaned and replaced. On January 2, 2019, the clogged hard-hose, cam-lock fittings, and stainless-steel check valve on the EW 6A line within the EW-6 vault were removed and replaced with a shorter length of hose to create less flow resistance.

Additionally, on November 8, 2018, the EW-6A flow meter and SCADA system stopped recording flow at EW-6A, despite the well yielding water. It is unclear how much flow occurred from EW-6A since November 8, 2018. XL Reporter/SCADA are currently reporting no flow; however, facility personnel are subtracting the EW-8, EW-9, and EW-10 flows from the FT-1A totalizer flow data to obtain daily flows at EW-6A. Currently,

this appears to be the most accurate way to track flow at EW-6A. Further assessment on the EW-6A flow rate is being considered.

Appendix A presents extraction well pumping rate data and a graphic representation of monthly average pumping rates for each extraction well for the quarter. Based on readings from the individual well flow gauges, groundwater was pumped into the treatment plant at an average rate of approximately 69 gpm in July, 67 gpm in August, and 69 gpm in September 2019. The monthly average single-well pumping rates for active wells ranged from generally 0.5 gpm in EW-10 (September) to 23.13 gpm in EW-4A (September), as based on individual extraction well gauges. Presented in Appendix A is a graphical representation of the total influent flow rate over time (July 2007 to present).

As previously reported, the XL Reporter program, which prints SCADA data (including flows) daily, inexplicably reset to lower values in April 2018; temporarily stopped recording flow at EW-8 (April – June 2018); locked up and reported the same values for several days (July 2018); and beginning in November 2018, SCADA/XL Reporter stopped recording EW-6A flows, which has continued into and through this reporting period. Facility personnel are subtracting the EW-8, EW-9, and EW-10 flows from the FT-1A totalizer flow data to obtain daily flows at EW-6A. Currently, this appears to be the most accurate way to track flow at EW-6A. This data is then manually entered into the OPS32 database.

At the time of the sampling event on August 22, 2019, the total influent flow (approximately 70 gpm) included contributions from EW-3 (19.5 gpm), EW-4A (23.3 gpm), EW-6A (2.4gpm), EW-7 (15.6 gpm), EW-8 (7.8 gpm), EW-9 (1.0 gpm), and EW-10 (0.5 gpm).

3.2 Site Groundwater Gauging and Extraction Well Sampling

Quarterly gauging was conducted on August 23, 2019, and field-screening and extraction well sampling were conducted on August 22, 2019. The event included the gauging of 81 groundwater monitoring wells, 5 piezometers, and 10 extraction wells, and the field-screening and the collection of groundwater samples from seven operational extraction wells.

Extraction well samples for field-screening and laboratory analysis were each collected directly from the individual extraction well sample ports at the Extraction Well Control Building on August 22, 2019. Extraction wells EW-2, EW-5, and EW-6 are out of service and therefore are not sampled.

On August 22, 2019, samples were field-screened for pH, conductivity, turbidity, and temperature using a YSI meter and a turbidity water quality meter. As discussed with the Department, dissolved oxygen was not recorded due to oxygen saturation in groundwater samples collected from the sample ports. The field-screening results are tabularized in Table 6.

Following field-screening, samples were then collected for laboratory analysis. The samples were stored in a cooler with ice, transferred to the on-site sample refrigerator, and

transported via a courier to ESS Laboratories in Cranston, Rhode Island. The samples were analyzed for volatile organic compounds (VOCs by EPA Method 8260B), semi-volatile organic compounds (SVOCs by EPA Method 8270D SIM), pesticides (EPA Method 8081B), and arsenic (EPA Method 6010C).

Historical data tables presented only those concentrations exceeding Massachusetts Contingency Plan (MCP) Method 1 GW-1 Standards; whereas, laboratory results collected since September 2007, including the extraction well sampling data collected during this reporting period, are summarized in Table 7 with the Maximum Contaminant Level (MCL) Standards as referenced in the Record-of-Decision (ROD). When no MCL Standard exists for a compound, the MCP Method 1 GW-1 Risk Standard (310 CMR 40.0974[2]), which apply to current or potential future sources of drinking water, is listed. Due to the nature of the site being classified under the Superfund Program, the MCP does not necessarily apply. These standards are used for preliminary nature and extent evaluation only and are not assumed to be the appropriate cleanup goals for the site. These standards will be presented with the data for general comparative purposes until the US Environmental Protection Agency (EPA) establishes cleanup standards in a 5-year review, as referenced in the ROD. Subsequent laboratory data will be compiled and presented in this table. The table includes Contaminants of Concern (COC) and additional detected compounds with the detected concentrations. The laboratory report is presented in Appendix B.

Exceedances of the 1989 MCL Standards or the most recent MCP Method 1 GW-1 Standards (as discussed above) are as follows:

Metals
Total arsenic concentrations in all seven extraction wells sampled (EW-3, EW-4A, EW-6A, EW-7, EW-8, EW-9, and EW-10) exceeded the 1989 MCL (0.05 milligrams per liter [mg/l]) and the MCP GW-1 Risk Standard (0.01 mg/l). The concentrations ranged from 0.138 mg/l (EW-6A) to 0.906 mg/l (EW-10), excluding the 14.8 mg/l detected in EW-9. Once the total arsenic concentrations decrease, dissolved arsenic will also be analyzed, as discussed with the Department.

Pesticides
The sample collected at EW-8 contained the pesticide compound 4,4-DDD (0.326 ug/l), and dieldrin (0.104 ug/l) at concentrations that exceed the MCP Method 1 GW-1 standard of 0.2 ug/l and 0.1 ug/l, respectively. The sample collected at EW-10 also contained the compound dieldrin (0.426 ug/l), which exceeded the MCP Method 1 GW-1 standard of 0.1 ug/l.

Although 4,4-DDE, aldrin, chlordane, and endrin have been previously detected above the 1989 MCL or the MCP Method 1 GW-1 Standard at the site, these compounds were not found to exceed standards during this reporting period.

SVOCs
Samples from extraction wells EW-3, EW-4A, EW-6A, and EW-8 exceed the MCP Method 1 GW-1 Standard of 10 ug/l for 2-methylnaphthalene (ranging from 11.9 ug/l to 543 ug/l), and exceed the MCP Method 1 GW-1 Standard of 20 ug/l for acenaphthene (ranging from 31.5 ug/l to 139 ug/l).

The samples from EW-4A, EW-6A, and EW-8 exceed the MCP Method 1 GW-1 Standard of 140 ug/l for naphthalene (ranging from 331 ug/l to 3,410 ug/l).

The sample from EW-6A (1.23 ug/l) exceeds the 1989 MCL Standard and the MCP Method 1 GW-1 Standard of 1 ug/l for pentachlorophenol.

The samples from extraction wells EW-3 and EW-8 exceed the MCP Method 1 GW-1 Standard of 30 ug/l for fluorene (of 36.0 ug/l and 58.2 ug/l).

The sample from EW-8 (54.9 ug/l) exceed the MCP Method 1 GW-1 Standard of 40 ug/l for phenanthrene.

The sample from extraction well EW-10 (22.8 ug/l) exceeds the 1989 MCL Standard and the MCP Method 1 GW-1 Standard of 6 ug/l for bis-(2-ethylhexyl)phthalate.

Although anthracene, benzo(a)anthracene, benzo(a)pyrene, 4-chloroaniline, and hexachloroethane have previously been detected above the 1989 MCL Standard/MCP Method 1 GW-1 Standard, these compounds were not found to exceed standards during this reporting period.

VOCs
Samples from extraction wells EW-3, EW-4A, EW-6A, and EW-8 exceed the MCP Method 1 GW-1 Standard of 140 ug/l for naphthalene (ranging from 524 ug/l to 5,740 ug/l). However, the most accurate reporting of naphthalene is found in the SVOC analysis because naphthalene is more soluble in the extraction fluids of the SVOC analysis than it is volatile via the purge and trap method associated with the VOC analysis.

3.3 Contaminant Mass Removal

Based on the data included in the monthly total flow reports, the total influent from July through September 2019 was 9,086,890 gallons of groundwater as calculated from the individual well gauges. Individual well concentrations combined with the individual well flows were used to calculate the removal rates. This resulted in the removal of approximately 35.98 pounds of arsenic, 0.012 pound of pesticides, 53.17 pounds of total SVOCs, and 24.91 pounds of VOCs in this time period. Appendix C provides detailed calculations of contaminant mass removal for each extraction well. To avoid double counting naphthalene (presented in both the SVOC and VOC analysis), it was included in the SVOC contaminant mass removal only.

3.4 Quality Assurance/Quality Control

In accordance with the Sampling and Analysis Plan (January 2013 revision) for the site, the quality assurance/quality control (QA/QC) laboratory analyses included one field duplicate sample analyzed for all parameters. As presented in Table 8, results from the duplicate sample were compared to the original extraction well sample when detections were observed in both analyses. The Relative Percent Difference (RPD) was 4% for arsenic; ranged from

2% to 52% in pesticides; ranged from 18% to 26% in SVOCs; and ranged from 1% to 25% in VOCs. Low RPD values indicate good agreement between primary and duplicate results.

The laboratory report presented as Appendix B is certified by ESS as Compendium of Analytical Methods (CAM) compliant. As confirmed by Clean Harbors, the laboratory report references the proper methods for the laboratory analysis and the required holding times were met. However, as indicated in the laboratory report, some QC performance standards and recommendations for the SVOC, VOC, and pesticide analyses were not achieved. This is further discussed in the project narrative provided in the laboratory report. Historical laboratory reports for this site note similar QC issues, likely due to co-eluted peaks and matrix interference, from multiple laboratories (e.g. Alpha Analytical Laboratories, Toxikon, and Geolabs).

A trip blank analyzed for VOCs revealed no detections.

4.0 ADDITIONAL SITE ACTIVITES

4.1 Groundwater Sampling for PFAS

At the recommendation of the EPA, the Department requested that Clean Harbors evaluate the site for the emerging contaminants known collectively as per- and polyfluoroalkyl substances (PFAS). These compounds are of particular concern because of their apparent toxicity at low levels, persistence in the environment, and their historically ubiquitous use in industrial processes and consumer products. As discussed in the 4th Quarter 2018 Quarterly Extraction Well Report, on December 22, 2018, six samples were collected from wells EW-3, EW-4A, EW-6A, EW-7, EW-8, and MW97-2 for PFAS laboratory analysis. Extraction well EW-9 and EW-10 were not sampled because they were not in operation at the time.

Similar to the sampling event that occurred in December 2018, groundwater from a sub-set of eight site wells were selected for sampling and PFAS laboratory analysis. On August 22 and 26, 2019, groundwater from active extraction wells (EW-3, EW-4A, EW-6A, EW-7, EW-8, EW-9, and EW-10) was collected from the sample ports within the EWCB, and groundwater from one monitoring well (MW97-2) was collected from the well via a modified low-flow sampling method using a peristaltic pump set at the lowest sustainable flow rate. Great care was used to limit potential cross-contamination from potential PFAS sources that are not associated with the groundwater.

The sampling event was coordinated with Maxxam Analytics of Mississauga, Ontario via ESS Laboratory (ESS) of Cranston, Rhode Island for modified EPA Method 537 analysis. Maxxam provided a trip blank, PFAS free water for collection of equipment/field blanks, and PFAS free containers and labels.

In conjunction with the well samples that were collected, Clean Harbors collected two blanks. An equipment blank (EB) was collected through new tubing used at monitoring well MW97-2 prior to the tubing being placed down the well. A field blank (FB) was collected within the EWCB at the end of the extraction well sampling. Also, a trip blank accompanied the cooler and was analyzed to assess shipment, storage, and the analytical laboratory for potential cross-contamination.

As shown in the laboratory report presented in Appendix B1, the three blanks (EB, FB, and Trip Blank) reveal no laboratory detections of PFAS. The other wells revealed PFAS compound concentrations that were generally higher than observed in the December 22, 2018 sampling event. The detections found during this sampling event are presented below and are separated into 3 categories: compounds that were also detected in December 22, 2018; additional compound detections; and "j-qualified" compound detections only.

compounds that were also detected in December 22, 2018:

- **EtFOSAA** detected at concentrations of 0.0076 ug/l (EW-6A) and 0.0019 ug/l (EW-8),
- **Perfluoro-n-Octanoic Acid (PFOA)** detected in all the samples at concentrations ranging from 0.0027 ug/l (EW-8) to 0.0062 ug/l (EW-9 and EW-10), and
- **Perfluorooctanesulfonic acid** (**PFOS)** detected in all the samples at concentrations ranging from 0.0029 ug/l (EW-8) to 0.0140 ug/l (EW-9).

additional compound detections:

- **Perfluorobutanoic acid** detected in all the samples at concentrations ranging from 0.00093 ug/l (EW-7) to 0.0045 ug/l (EW-8),
- **Perfluorohexanoic acid (PFHxA)** detected in all the samples at concentrations ranging from 0.00063 ug/l (MW97-2) to 0.0040 ug/l (EW-8),
- **Perfluoropentanoic acid (PFPeA)** detected in all the samples excluding EW-7 at concentrations ranging from 0.00063 ug/l (MW97-2) to 0.0026 ug/l (EW-6A),

"j-qualified" compound detections only:

- **Perfluoroheptanoic acid (PFHpA)** detected in all the samples at concentrations ranging from 0.00045 ug/l (EW-7) to 0.0014 ug/l (EW-9),
- **Perfluorobutanesulfonic acid** detected in all the samples at concentrations ranging from 0.00053 ug/l (EW-7) to 0.0018 ug/l (EW-6A), and
- **Perfluorohexanesulfonic acid (PFHxS)** detected in all the samples at concentrations ranging from 0.0013 ug/l (MW97-2 and EW-8) to 0.0019 ug/l (EW-6A and EW-9).

The laboratory noted sample interference for the sample collected from EW-8, which they report may increase variability for Perfluorohexanoic acid (PFHxA) and Perfluorobutane sulfonic acid results. Of mention, the EW-8 sample yielded the highest PFHxA detection which could be a result of the aforementioned variability. Only low "j-qualified" detections of Perfluorobutanesulfonic acid were observed at the site. No other issues with the data or the associated QA/QC was noted by the laboratory.

For reference, the EPA has set a lifetime health advisory of 70 parts per trillion (ppt or ng/l) or 0.07 parts per billion (ppb or ug/l) for PFOA and PFOS (individual or combined concentrations). Similar to the December 2018 sampling event, the detections of PFOA and PFOS found in site groundwater during the August 2019 sampling event are well below this human health advisory.

More recently in October 2020, the Department issued an Interim Guidance Policy that identified a drinking water standard of 20 ng/l or ppt (i.e. 0.020 ug/l) for the sum of six PFAS compounds (Perfluoro-n-Octanoic Acid [PFOA], Perfluorooctanesulfonic acid [PFOS], Perfluoroheptanoic acid [PFHpA], Perfluorohexanesulfonic acid [PFHxS], Perfluorononanoic acid [PFNA], and Perfluorodecanoic acid [PFDA]), known as PFAS6. Using j-qualified data (although inherently not precise), and half of the reporting limit when no detection is noted, the results for total PFAS6 in the August 2019 samples are as follows: EW-3 (9.9 ng/l), EW-4A (13.1 ng/l), EW-6A (12.4 ng/l), EW-7 (9.8 ng/l), EW-8 (7.7 ng/l), EW-9 (23.8 ng/l), EW-10 (20.6 ng/l), and MW97-2 (13.2 ng/l). It is standard practice to use half the reporting limit when no compound is reported. The only samples with total PFAS6 concentrations above the Department's standard of 20 ng/l were from EW-9 and EW-10.

Additionally, the December 2018 data was similarly compared to the newly promulgated PFAS6 standard of 20 ng/l. In review, only the EW-7 sample was below the standard of 20 ng/l, and samples from EW-3, EW-4, EW-6A, EW-8, and MW97-2 were above the standard. However, it should be noted that the December 2018 data may be bias high due to the higher reporting limits used by the laboratory, which increased the value used when there was no detection reported (i.e. half the reporting limit).

Summary tables for both the December 2018 and August 2019 data are presented with the August 2019 laboratory report in Appendix B1.

TABLE 1
Monitoring Wells Used to Determine
Groundwater Elevations in Overburden and Bedrock
Baird & McGuire Superfund Site
3rd Quarter 2019

Well ID	Type	Well ID	Type	Well ID	Type	Well ID	Type
901A	O	BM-31B	O	M-12T/WB	O	MW97-23	O
906	B	M-2SD	O	MW97-1	O	MW97-24	O
906A	O	M-3SD	O	MW97-2	O	MW97-25	O
906B	O	M-4BR	B	MW97-3	O	MW97-28	O
910A	O	M-4T/WB	O	MW97-4	B	MW97-29	O
910B	O	M-5SD	O	MW97-5	B	MW97-30	O
911A	O	M-6BR	B	MW97-6	B	MW97-31	O
911B	O	M-6T/WB	O	MW97-7	B	MW97-32	O
913	B	M-7BR	B	MW97-8	O	MW04-01	O
913A	O	M-7SD	O	MW97-9	O	MW04-02	O
917	O	M- 7T/WB	O	MW97-10	O	T-2	O
919	O	M-8BR	B	MW97-11	O	TW-3D	O
BM-7	O	M-8SD	O	MW97-12	O	TW-3S	O
BM-8	O	M-8T/WB	O	MW97-13	O	MW14-01	O
BM-9	O	M-9T	O	MW97-14	O	MW14-02	O
BM-13B	O	M-10T/WB	O	MW97-15	O	P15-01	P
BM-15B	O	M-10BR	B	MW97-17	O	P15-02	P
BM-17	O	M-11BR	B	MW97-18	O	P15-03	P
BM-18R	O	M-11SD	O	MW97-19	O	P15-04	P
BM-20R	O	M-11T/WB	O	MW97-20	O	P15-05	P
BM-21	O	M-12BR	B	MW97-21	O		
BM-23R	O	M-12SD	O	MW97-22	O		

NOTES:
O = Overburden B = Bedrock P = Piezometer
The wells in this table were compiled from Table 5.6 in the January 2007 Sampling and Analysis Plan (SAP), and also include more recently installed wells.
Determination of overburden versus bedrock was derived from Table 5.6 in the SAP or from available boring logs.
To maintain consistency with previous SAIC, Engineering, Inc. reports, overburden wells included those set in stratified drift, till, and till and weathered bedrock.

TABLE 2
GROUNDWATER ELEVATION MEASUREMENTS
BAIRD & MCGUIRE SUPERFUND SITE
3rd Quarter 2019

Well ID	Well Type	Reference Elevation Source: 2015 Grady Consulting (NAVD'88)	Top of Screen Depth	Bottom of Screen Depth	DATE (2019)	DEPTH TO WATER (feet)	ELEVATION OF WATER	COMMENTS
901A	**SD**	121.06	**80**	**75**	8/23	3.40	117.66	Road Box
906	**BR**	125.76	**45**	**42**	8/23	3.17	122.59	
906A	**T**	125.55	**72**	**67**	8/23	2.90	122.65	
906B		125.40	**116**	**77**	8/23	2.60	122.80	
910A	**T**	120.59	**98**	**93**	8/23	2.88	117.71	
910B	**SD**	120.51	**112**	**102**	8/23	2.90	117.61	
911A	**T**	125.96	**no data**	**no data**	8/23	8.37	117.59	
911B	**SD**	125.78	**114**	**94**	8/23	8.03	117.75	
913	**BR**	128.16	**95**	**90**	8/23	7.49	120.67	
913A	**SD**	129.20	**125**	**110**	8/23	8.37	120.83	Marked 0301,Broken Lock - replaced DEC2019
917	**BR**	123.17	**113**	**103**	8/23	4.28	118.89	Road Box
919		124.77	**115**	**105**	8/23	8.02	116.75	
BM-7		121.45	**114**	**105**	8/23	3.90	117.55	In Marsh
BM-8	**SD**	122.46	**101**	**91**	8/23	4.80	117.66	
BM-9	**SD**	124.71	**110**	**100**	8/23	7.77	116.94	
BM-13B	**SD**	122.41	**103.5**	**93.5**	8/23	4.88	117.53	
BM-15B	**T**	121.00	**110**	**90**	8/23	1.80	119.20	In Marsh
BM-17	**SD**	124.48	**106**	**96**	8/23	6.90	117.58	
BM-18R	**SD**	122.61	**103**	**93**	8/23	5.03	117.58	
BM-20R	**SD**	127.19	**98**	**88**	8/23	9.47	117.72	
BM-21	**SD**	122.91	**no data**	**no data**	8/23	0.10	122.81	Road Box
BM-23R	**SD**	124.14	**110**	**100**	8/23	6.32	117.82	Road Box
M-2SD	**SD**	127.45	**107**	**97**	8/23	9.96	117.49	
M-3SD	**SD**	132.04	**102**	**92**	8/23	15.16	116.88	
M-4T/WB	**T/WB**	130.58	**58**	**48**	8/23	13.23	117.35	
M-4BR	**BR**	**130.96**	**40**	**20**	8/23	13.58	117.38	
M-5SD	**SD**	127.12	**103**	**93**	8/23	9.75	117.37	
M-6T/WB	**T/WB**	130.71	**125**	**115**	8/23	10.04	120.67	
M-6BR	**BR**	130.24	**118**	**88**	8/23	9.18	121.06	
M-7SD	**SD**	128.54	**108**	**98**	8/23	10.50	118.04	
M-7T/WB	**T/WB**	128.04	**97**	**87**	8/23	10.00	118.04	
M-7BR	**BR**	127.59	**83**	**63**	8/23	10.11	117.48	
M-8SD	**SD**	126.25	**106**	**96**	8/23	8.28	117.97	Marked 03 04
M-8T/WB	**T/WB**	125.98	**86**	**76**	8/23	7.78	118.20	Marked 03 03
M-8BR	**BR**	125.13	**74**	**54**	8/23	6.91	118.22	
M-9T	**T**	162.55	**141**	**131**	8/23	29.81	132.74	
M-10T/WB	**T/WB**	126.22	**74**	**64**	8/23	8.49	117.73	
M-10BR	**BR**	125.62	**60**	**40**	8/23	7.83	117.79	
M-11SD	**SD**	123.93	**109**	**99**	8/23	4.89	119.04	
M-11TWB	**T/WB**	124.00	**94**	**90**	8/23	4.98	119.02	
M-11BR	**BR**	124.53	**no screen**	**no screen**	8/23	5.55	118.98	
M-12SD	**SD**	123.92	**99**	**89**	8/23	3.68	120.24	
M-12TWB	**T/WB**	124.41	**84**	**74**	8/23	4.28	120.13	
M-12BR	**BR**	123.38	**78**	**57**	8/23	2.98	120.40	
MW04-01	**SD**	134.26	**123**	**78**	8/23	17.19	117.07	
MW04-02	**SD**	125.93	**116**	**96**	8/23	9.25	116.68	
MW97-1		148.01	**128**	**107**	8/23	35.00	113.01	
MW97-2	**SD**	128.55	**120**	**96**	8/23	11.94	116.61	
MW97-3	**SD**	153.53	**114**	**104**	8/23	37.20	116.33	
MW97-4	**BR**	154.05	**131**	**121**	8/23	20.51	133.54	
MW97-5	**BR**	135.51	**114**	**109**	8/23	4.75	130.76	
MW97-6	**BR**	125.53	**68**	**58**	8/23	7.81	117.72	
MW97-7	**BR**	119.87	**41**	**30**	8/23	1.80	118.07	
MW97-8	**SD**	120.67	**88**	**73**	8/23	2.70	117.97	
MW97-9	**SD**	120.74	**110**	**95**	8/23	2.89	117.85	
MW97-10	**T**	120.21	**76**	**71**	8/23	2.83	117.38	Lock broken - purchased & locked in DEC2019
MW97-11	**T**	120.24	**100**	**80**	8/23	3.05	117.19	Lock broken - purchased & locked in DEC2019
MW97-12	**SD**	120.04	**115**	**105**	8/23	3.10	116.94	Lock broken - purchased & locked in DEC2019
MW97-13	**T**	125.30	**66**	**61**	8/23	7.82	117.48	
MW97-14	**SD**	125.14	**95**	**75**	8/23	7.70	117.44	
MW97-15	**T/WB**	130.68	**79**	**74**	8/23	13.07	117.61	
MW97-17		140.61	**127**	**113**	8/23	23.22	117.39	
MW97-18	**SD**	136.26	**132**	**117**	8/23	18.85	117.41	
MW97-19	**SD**	127.05	**107**	**97**	8/23	9.01	118.04	
MW97-20	**SD**	123.99	**122**	**107**	8/23	7.07	116.92	
MW97-21	**SD**	123.35	**112**	**102**	8/23	6.12	117.23	

TABLE 2
GROUNDWATER ELEVATION MEASUREMENTS
BAIRD & MCGUIRE SUPERFUND SITE
3rd Quarter 2019

Well ID	Well Type	Reference Elevation Source: 2015 Grady Consulting (NAVD'88)	Top of Screen Depth	Bottom of Screen Depth	DATE (2019)	DEPTH TO WATER (feet)	ELEVATION OF WATER	COMMENTS
MW97-22	**SD**	122.61	**89**	**84**	8/23	5.37	117.24	
MW97-23	**SD**	135.49	**129**	**114**	8/23	18.34	117.15	
MW97-24	**SD**	127.54	**124**	**109**	8/23	10.12	117.42	
MW97-25	**SD**	121.10	**91**	**81**	8/23	4.84	116.26	
MW97-28	**SD**	136.06	**127**	**112**	8/23	18.91	117.15	
MW97-29	**SD**	132.49	**131**	**116**	8/23	13.96	118.53	
MW97-30	**SD**	146.83	**128**	**113**	8/23	29.49	117.34	
MW97-31	**SD**	148.60	**134**	**119**	8/23	24.63	123.97	
MW97-32		160.86	**137**	**122**	8/23	36.36	124.50	
MW98-1		148.30	**126**	**101**	8/23	34.96	113.34	
MW14-01	**SD**	122.76	**116**	**96**	8/23	5.12	117.64	
MW14-02	**SD**	121.48	**116**	**96**	8/23	4.50	116.98	
T-2		139.92	**100**	**90**	8/23	21.66	118.26	
TW-3S		130.14	**no data**	**no data**	8/23	7.34	122.80	
TW-3D		130.43	**no data**	**no data**	8/23	7.74	122.69	
EW 2*		**124.71**	**108**	**98**	8/23	7.21	117.50	
EW 3*		**130.57**	**105**	**95**	8/23	34.95	95.62	
EW 4A*		**132.02**	**125**	**80**	8/23	18.20	113.82	
EW 5*		**125.51**	**106**	**96**	8/23	8.16	117.35	
EW 6*		**134.93**	**124**	**104**	8/23	17.80	117.13	handle missing
EW 6A		134.30	**117.8**	**97.8**	8/23	17.37	116.93	no lock - purchased & locked in DEC2019
EW 7*		**124.80**	**114**	**89**	8/23	12.66	112.14	
EW 8*		**151.94**	**129**	**102**	8/23	53.62	98.32	
EW 9*		**125.10**	**118**	**98**	8/23	13.60	111.50	no lock - purchased & locked in DEC2019
EW-10	**SD**	127.65	**122**	**97**	8/23	18.76	108.89	
P15-01 GW	**SD**	118.44	**112.86**	**112.44**	8/23	1.00	117.44	
P15-01 SW	**SW**	118.44	**112.86**	**112.44**	8/23	1.55	116.89	
P15-02 GW	**SD**	119.30	**113.72**	**113.30**	8/23	2.23	117.07	
P15-02 SW	**SW**	119.30	**113.72**	**113.30**	8/23	2.33	116.97	
P15-03 GW	**SD**	119.18	**113.60**	**113.18**	8/23	2.27	116.91	no cap - to be replaced in DEC2019
P15-03 SW	**SW**	119.18	**113.60**	**113.18**	8/23	2.27	116.91	no cap - to be replaced in DEC2019
P15-04 GW	**SD**	117.93	**112.35**	**111.93**	8/23	0.99	116.94	
P15-04 SW	**SW**	117.93	**112.35**	**111.93**	8/23	1.03	116.90	
P15-05 GW	**SD**	118.42	**112.84**	**112.42**	8/23	1.33	117.09	
P15-05 SW	**SW**	118.42	**112.84**	**112.42**	8/23	1.53	116.89	

Notes:
All reference elevations and field gauging points are to the top of the PVC/Steel well, excluding those locations where the top of the well is inaccessible.
The inaccessible wells (reference elevations are in BOLD) are limited to M-4BR (top of well is 2.77 feet below top of outer well casing); and vaulted EW-2, EW-3, EW-4A, EW-5, EW-6, EW-7, EW-8, and EW-9 (measurements are to the top of the inner vault HDPE ring).
water elevations referenced have not been adjusted to account for LNAPL when present
* = reference elevation is to the top of HDPE
SD: stratified drift
T: till
BR: bedrock
T/WB: till and weathered bedrock
SW: surface water
--- = no data collected
0.17 inches of rain fell on August 22, 2019, and from August 18 to August 20, 2019, 0.06 inches of rain fell, as referenced by weather station: Stoughton 1.2 E, MA US US1MANF0031 via the NOAA Record of Climatological Observations; https://www.ncdc.noaa.gov/cdo-web/search.

Table 3

Summary of Groundwater Vertical Gradient Assessment

Baird & McGuire Superfund Site
3rd Quarter 2019

Well ID	Well Type	Reference Elevation Source: 2015 Grady Consulting (NAVD'88)	Top of Screen (below grade)	Screen Length	Bottom of Screen (below grade)	Midpoint of Wetted Screen (below grade)	Depth to H_2O August 23, 2019	H_2O Elevation	Vertical Gradient
M-4 T/WB	T/WB	130.58	73	10.00	83	78.00	13.23	117.35	
M-4 BR	BR	128.19	85	20.00	105	95.00	13.58	114.61	-0.1413
M-6TWB	T/WB	130.71	6	10.00	16	13.02	10.04	120.67	
M-6BR	BR	130.24	12.15	30.10	42.25	27.20	9.18	121.06	0.0266
M-7TWB	T/WB	128.04	31	10.00	41	36.00	10.00	118.04	
M-7BR	BR	127.59	45	20.00	65	55.00	10.11	117.48	-0.0288
M-7SD	SD	128.54	20	10.00	30	25.00	10.50	118.04	
M-7TWB	T/WB	128.04	31	10.00	41	36.00	10.00	118.04	0.0000
M-8SD	SD	126.25	20	10.00	30	25.00	8.28	117.97	
M-8TWB	T/WB	125.98	43	10.00	53	48.00	7.78	118.20	0.0099
M-11SD	SD	123.93	15	10.00	25	20.00	4.89	119.04	
M-11BR	BR	124.53	40	20.00	60	50.00	5.55	118.98	-0.0020
M-12SD*	SD	123.92	25	10.00	35	30.00	3.68	120.24	
M-12BR*	BR	123.38	46.3	20.50	66.8	56.55	2.98	120.40	0.0059
MW97-8	SD	120.67	32	15.00	47	39.50	2.70	117.97	
MW97-7	BR	119.87	79	11.00	90	84.50	1.80	118.07	0.0022
MW97-9	SD	120.74	10	15.00	25	17.50	2.89	117.85	
MW97-8	SD	120.67	32	15.00	47	39.50	2.70	117.97	0.0054
MW97-14	SD	125.14	30.00	20.00	50.00	40.00	7.70	117.44	
MW97-13	T	125.30	59.00	5.00	64.00	61.50	7.82	117.48	0.0019
910B	SD	120.51	8	10.00	18	13.00	2.90	117.61	
910A	T	120.59	23	5.00	28	25.50	2.88	117.71	0.0081
911B	SD	125.78	8	20.00	28	18.02	8.03	117.75	
911A	T	125.96	59.4	5.00	64.4	61.90	8.37	117.59	-0.0037
913A	SD	129.20	4	15.00	19	13.69	8.37	120.83	
913	BR	128.16	33	5.00	38	35.50	7.49	120.67	-0.0070
906A	T	125.55	53.8	5.00	58.8	56.30	2.90	122.65	
906	BR	125.76	80.8	3.00	83.8	82.30	3.17	122.59	-0.0023

Table 3

Summary of Groundwater Vertical Gradient Assessment

Baird & McGuire Superfund Site
3rd Quarter 2019

Well ID	Well Type	Reference Elevation Source: 2015 Grady Consulting (NAVD'88)	Top of Screen (below grade)	Screen Length	Bottom of Screen (below grade)	Midpoint of Wetted Screen (below grade)	Depth to H_2O August 23, 2019	H_2O Elevation	Vertical Gradient
MW97-12	SD	120.04	5	10.0	15.0	10.00	3.10	116.94	
MW97-11	T	120.24	20	20.0	40.0	30.00	3.05	117.19	0.0126
MW97-21	SD	123.35	11	10.0	21	16.00	6.12	117.23	
MW97-22	SD	122.61	33	5.0	38.0	35.5	5.37	117.24	0.0005

Piezometer Gauging ID	Well Type	Reference Elevation Source: 2015 Grady Consulting (NAVD'88)	Top of Screen (below river bottom)	Screen Length	Bottom of Screen (below river bottom)	Midpoint of Wetted Screen (below river bottom)	Depth to H2O August 23, 2019	H_2O Elevation	Vertical Gradient
P15-01 SW	SW	118.44					1.55	116.89	dl = 0.77
P15-01 GW	SD	118.44	3.07	0.417	3.49	3.28	1.00	117.44	0.7143
P15-02 SW	SW	119.30					2.33	116.97	dl = 0.31
P15-02 GW	SD	119.30	2.84	0.417	3.26	3.05	2.23	117.07	0.1299
P15-03 SW	SW	119.18					2.27	116.91	dl = 0.25
P15-03 GW	SD	119.18	2.56	0.417	2.98	2.77	2.27	116.91	0.0000
P15-04 SW	SW	117.93					1.03	116.90	dl = 1.97
P15-04 GW	SD	117.93	3.67	0.417	4.09	3.88	0.99	116.94	0.0519
P15-05 SW	SW	118.42					1.53	116.89	dl = 0.83
P15-05 GW	SD	118.42	3.10	0.42	3.52	3.31	1.33	117.09	0.2597

NOTES:
Reference elevation as presented in Table 2.
BR = bedrock
SD = stratified drift
T/WB = till/weathered bedrock
T = till
PZ = piezometer (piezometer Well Completion Reports may be found in Appendix D of the Quarterly Extraction Well Report - 4th Quarter 2015)
SW = Surface Water
positive results = upward gradient
negative results = downward gradient
dl = sediment surface to midpoint of screen

Table 4
Weekly LNAPL Measurements
Baird & McGuire Superfund Site
3rd Quarter 2019

	EW-8			MW97-3			MW97-1			MW98-1			EW-6A		
Date	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness
7/1/2019															
7/2/2019															
7/3/2019		47.00		36.10	36.10	skim		33.78			33.78		16.42	16.43	0.01
7/4/2019															
7/5/2019															
7/6/2019															
7/7/2019															
7/8/2019															
7/9/2019															
7/10/2019															
7/11/2019		47.38			36.34			33.99			34.03		16.66	16.69	0.03
7/12/2019															
7/13/2019															
7/14/2019															
7/15/2019															
7/16/2019															
7/17/2019		48.00			36.37			34.05			34.07		16.63	16.65	0.02
7/18/2019															
7/19/2019															
7/20/2019															
7/21/2019															
7/22/2019															
7/23/2019															
7/24/2019															
7/25/2019		47.33			36.05			34.00			33.86		16.31	16.32	0.01
7/26/2019															
7/27/2019															
7/28/2019															
7/29/2019															
7/30/2019		48.22			36.30			34.10			34.10		16.58	16.60	0.02
7/31/2019															
8/1/2019															
8/2/2019															
8/3/2019															
8/4/2019															
8/5/2019															
8/6/2019															
8/7/2019															
8/8/2019		49.00			36.55			34.40			34.25		16.70	16.71	0.01
8/9/2019															
8/10/2019															
8/11/2019															
8/12/2019															
8/13/2019															
8/14/2019															
8/15/2019															
8/16/2019		51.40			36.93			34.70			34.62		17.10	17.11	0.01
8/17/2019															
8/18/2019															
8/19/2019															
8/20/2019															
8/21/2019															
8/22/2019															
8/23/2019		53.62			37.20			35.00			34.96		17.36	17.37	0.01
8/24/2019															
8/25/2019															
8/26/2019															
8/27/2019		53.52			37.32			35.11			35.02		17.40	17.41	0.01
8/28/2019															
8/29/2019															
8/30/2019															
8/31/2019															
9/1/2019															
9/2/2019															
9/3/2019															
9/4/2019															
9/5/2019		53.60			38.20			34.96			34.91			17.19	
9/6/2019															
9/7/2019															
9/8/2019															
9/9/2019															
9/10/2019															
9/11/2019															
9/12/2019		53.60			37.28			34.85			35.05		17.36	17.37	0.01
9/13/2019															
9/14/2019															
9/15/2019															
9/16/2019															

Clean Harbors
3/11/2020

Table 4
Weekly LNAPL Measurements
Baird & McGuire Superfund Site
3rd Quarter 2019

	EW-8			MW97-3			MW97-1			MW98-1			EW-6A		
Date	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness
9/17/2019															
9/18/2019															
9/19/2019															
9/20/2019	54.70	54.70	skim	36.85			34.70			34.75			16.57		
9/21/2019															
9/22/2019															
9/23/2019															
9/24/2019															
9/25/2019															
9/26/2019															
9/27/2019		53.60		37.33			35.40			35.25			17.38	17.39	0.01
9/28/2019															
9/29/2019															
9/30/2019	PLANT SHUTDOWN														

Measurements recorded in feet.
--- = no detection noted
The recorded LNAPL thickness represents the amount of measurable LNAPL in the well casing. The thickness of LNAPL in a well is usually greater than the actual thickness of LNAPL in the aquifer. This exaggeration is greater in media with strong capillary action (fine-grained material). The discrepancy between true product thickness in the aquifer and measured free product in the monitoring well is affected by capillary pressure in the soil, density of the product, and volume of LNAPL.
shaded = detections of LNAPL noted

Table 5
Monthly LNAPL Measurements
Baird & McGuire Superfund Site
3rd Quarter 2019

DATE	July 30, 2019			August 23, 2019			September 20, 2019		
WELL ID	**DEPTH TO LNAPL**	**DEPTH TO WATER**	**LNAPL THICKNESS**	**DEPTH TO LNAPL**	**DEPTH TO WATER**	**LNAPL THICKNESS**	**DEPTH TO LNAPL**	**DEPTH TO WATER**	**LNAPL THICKNESS**
MW04-01		16.43			17.19			16.50	
MW97-1		34.10			35.00			34.70	
MW97-2		11.27			11.94			12.02	
MW97-3		36.30			37.20			36.85	
MW97-17		22.45			23.22			22.80	
MW97-18		18.15			18.85			18.90	
MW97-20		6.10			7.07			7.04	
MW97-23		17.61			18.34			17.89	
MW97-24		9.46			10.12			11.26	
MW97-28		18.13			18.91			18.77	
MW97-29		12.75			13.96			14.30	
MW97-30		28.67			29.49			29.77	
MW97-31		21.33			24.63			25.42	
MW98-1		34.10			34.96			34.75	
M3 SD		14.45			15.16			14.17	
EW 3		Not Obtained			34.95			12.80	
EW 4A		17.50			18.20			14.22	
EW 6	16.99	17.00	0.01		17.80			17.29	
EW 6A	16.58	16.60	0.02	17.36	17.37	0.01		16.57	
EW 8		48.22			53.62		54.70	54.70	skim

Notes:
All measurements in feet
LNAPL = Light Non Aqueous Phase Liquid
The recorded LNAPL thickness represents the amount of measurable LNAPL in the well casing.

TABLE 6
EXTRACTION WELL FIELD-SCREENING PARAMETER SUMMARY
BAIRD & MCGUIRE SUPERFUND SITE
August 22, 2019

Well ID	pH	Conductivity (mS/cm)	Turbidity (NTU)*	Temp (Celsius)
EW-3	6.80	0.605	2.59	13.50
EW-4A	6.72	0.578	1.24	11.90
EW-6A	6.71	0.469	1.66	16.50
EW-7	6.88	0.539	3.94	13.20
EW-8	7.02	0.520	1.45	13.90
EW-9	6.06	0.383	77.0	17.60
EW-10	6.25	0.453	51.1	17.50
Averages of Sampled Wells	6.63	0.507	2.18	14.87

Notes:
mS/cm = microsiemens per centimeter
mg/l = milligram per liter
NTU = nephelometric turbidity unit
* EW-9 and EW-10 turbidity excluded from average

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-3	EW-3	DUP-1 (EW-3)	EW-3	DUP-1 (EW-3)	EW-3	DUP-1 (EW-3)	EW-3	DUP-1 (EW-3)	EW-3	DUP-1 (EW-3)	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3
Date Sampled			8/6/2007	9/28/2007	9/28/2007	12/18/2007	12/18/2007	3/18/2008	3/18/2008	6/25/2008	6/25/2008	9/16/2008	9/16/2008	12/22/2008	3/19/2009	6/11/2009	9/15/2009	12/17/2009	3/19/2010	6/10/2010	9/17/2010	12/21/2010	3/16/2011
METALS (mg/L)																						
ARSENIC (TOTAL)	0.05	0.01	**0.549**	**0.496**	**0.509**	**0.529**	**0.486**	**0.521**	**0.547**	**0.625**	**0.639**	**0.640**	**0.666**	**0.511**	**0.503**	**0.429**	**0.466**	**0.468**	**0.454**	**0.465**	**0.451**	**0.455**	**0.520**
PESTICIDES (ug/L)																						
4 4-DDD	NA	0.2	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
4 4'-DDE	NA	0.05	<0.050	**<0.0995**	**<0.101**	**<0.100**	**<0.104**	**<0.100**	**<0.100**	**<0.100**	**<0.100**	**<0.105**	**<0.108**	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
4 4'-DDT	NA	0.3	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
ALDRIN	NA	0.5	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
ALPHA-BHC	NA	NA	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
ALPHA-CHLORDANE	NA	NA	---	---	---	---	---	---	---	---	---	---	---	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
BETA-BHC	NA	NA	<0.050	0.254	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
CHLORDANE	2	2	<1.00	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.510	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
DELTA-BHC	NA	NA	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
DIELDRIN	NA	0.1	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
ENDOSULFAN I	NA	10	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
ENDOSULFAN II	NA	10	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
ENDRIN	2	2	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
ENDRIN KETONE	NA	NA	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
GAMMA-BHC	NA	NA	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
GAMMA-CHLORDANE	NA	NA	---	---	---	---	---	---	---	---	---	---	---	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
HEPTACHLOR	0.4	0.4	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
HEPTACHLOR EPOXIDE	0.2	0.2	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
HEXACHLOROBENZENE	1	1	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	---	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
METHOXYCHLOR	40	40	<0.050	<0.0995	<0.101	<0.100	<0.104	<0.100	<0.100	<0.100	<0.100	<0.105	<0.108	<0.0260	<0.100	<0.101	<0.100	<0.102	<0.103	<0.101	<0.105	<0.101	<0.102
TOXAPHENE	3	NA	<1.00	<1.99	<2.01	<2.00	<2.08	<2.00	<2.00	<2.00	<2.00	<2.11	<2.15	<2.55	<2.00	<2.02	<2.00	<2.04	<2.06	<2.02	<2.11	<2.02	<2.04
Total Pesticides			*ND*	*0.254*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
SEMI VOLATILES (ug/L)																						
2,4,6-TRICHLOROPHENOL	NA	10	**<100**	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
2,4-DICHLOROPHENOL	NA	10	**<100**	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
2,4-DIMETHYLPHENOL	NA	60	**<100**	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
2,4-DINITROPHENOL	NA	200	<100	<4.81	<4.90	<5.26	<5.49	<5.10	<5.10	<5.05	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.05	<5.10	<5.08	<5.13	<5.15	<5.05
2,4-DINITROTOLUENE	NA	30	**<100**	2.31	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
2-CHLORONAPHTHALENE	NA	NA	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	1.16	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
2-METHYLNAPHTHALENE	NA	10	**106**	**84.1**	**49.9**	**98.4**	**88.8**	**67.4**	**78.1**	**44.9**	**60.6**	**50.7**	**43.5**	**136**	**75.2**	**73.0**	**55.0**	**58.2**	**96.2**	**117**	**74.9**	**40.1**	**57.0**
2-METHYLPHENOL	NA	10	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	1.94	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
2-NITROANILINE	NA	NA	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
2-NITROPHENOL	NA	NA	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
3/4-METHYLPHENOL	NA	NA																					
3-NITROANILINE	NA	NA	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
4-CHLORO-3-METHYLPHENOL	NA	NA	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
4-CHLOROANILINE	NA	20	**<100**	**64.7**	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<2.50	<2.50	<2.53	<2.55	<2.54	<2.56	<2.58	<2.53
4-NITROANILINE	NA	NA	<100	2.43	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
4-NITROPHENOL	NA	NA	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
ACENAPHTHENE	NA	20	**<100**	**47.1**	**56.5**	**71.3**	**77.2**	**55.5**	**61.7**	**37.8**	**51.8**	**64.3**	**47.4**	**84.7**	**51.7**	**64.2**	**45.1**	**64.5**	**74.4**	**70.3**	**84.2**	**66.1**	**68.0**
ACENAPHTHYLENE	NA	30	<100	2.35	<0.980	<1.05	<1.10	2.23	2.48	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
ACETOPHENONE	NA	NA	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
ANTHRACENE	NA	60	<100	15.4	1.23	1.36	1.31	<1.02	<1.02	<1.01	<1.00	3.30	1.96	3.45	1.41	1.48	2.31	2.66	2.66	2.95	1.78	2.26	1.62
BENZO (A) ANTHRACENE	NA	1	**<100**	<0.0962	<0.0980	<0.105	<0.110	<0.102	<0.102	<0.101	<0.100	<0.100	<0.100	<0.100	0.490	<0.100	<0.100	<0.101	<0.102	<0.102	<0.103	<0.103	<0.101
BENZO (A) PYRENE	0.2	0.2	**<100**	<0.0962	<0.0980	<0.105	<0.110	<0.102	<0.102	<0.101	<0.100	<0.100	<0.100	<0.100	<0.101	<0.100	<0.100	<0.101	<0.102	<0.102	<0.103	<0.103	<0.101
BENZO (B) FLUORANTHENE	NA	1	**<100**	**<4.81**	**<4.90**	<0.526	<0.549	<0.510	<0.510	<0.505	<0.500	<0.500	<0.500	<0.500	<0.505	<0.100	<0.100	<0.101	<0.102	<0.102	<0.103	<0.103	<0.101
BENZO (K) FLUORANTHENE	NA	1	**<100**	**<4.81**	**<4.90**	<0.526	<0.549	<0.510	<0.510	<0.505	<0.500	<0.500	<0.500	<5.00	<0.505	<0.100	<0.100	<0.101	<0.102	<0.102	<0.103	<0.103	<0.101
BENZYL ALCOHOL	NA	NA	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
BIS(2-CHLOROETHYL)ETHER	NA	30	**<100**	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	**<100**	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
CARBAZOLE	NA	NA	<100	2.19	2.67	2.69	3.26	2.04	2.34	2.09	<1.00	1.96	1.40	3.62	2.45	2.20	2.96	3.12	3.22	3.92	3.36	2.49	3.35
CHRYSENE	NA	2	**<100**	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
DIBENZOFURAN	NA	NA	<100	13.7	17.2	23.7	26.2	13.7	14.9	11.4	15.6	13.3	10.6	22.8	14.7	14.0	9.92	13.5	17.4	17.6	18.4	12.9	14.8
DIETHYLPHTHALATE	NA	2000	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
FLUORANTHENE	NA	90	**<100**	1.82	1.94	2.84	3.10	1.44	1.61	1.60	2.24	1.52	1.07	3.33	1.96	2.29	1.85	2.56	3.62	2.85	2.87	2.69	3.43
FLUORENE	NA	30	<100	16.3	21.7	28.2	31.5	15.1	16.1	12.0	19.5	18.0	14.2	29.9	20.5	19.8	16.8	21.2	28.3	27.7	28.1	22.0	26.0
HEXACHLOROETHANE	NA	8	**<100**	**36.7**	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
INDENO (1,2,3-CD) PYRENE	NA	0.5	**<100**	<0.0962	<0.0980	<0.105	<0.110	<0.102	<0.102	<0.101	<0.100	<0.100	<0.100	<0.100	<0.101	<0.100	<0.100	<0.101	<0.102	<0.102	<0.103	<0.103	<0.101
NAPHTHALENE	NA	140	**733**	**262**	**332**	**709**	**655**	**555**	**659**	**728**	**399**	**375**	**346**	**943**	**379**	**481**	**356**	111	**631**	**741**	**394**	**289**	**364**
NITROBENZENE	NA	NA	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
PENTACHLOROPHENOL	1	1	**<100**	**3.16**	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	**3.09**	<1.00	<0.500	<1.00	<1.01	<1.02	<1.02	<2.56	<2.58	<1.01
PHENANTHRENE	NA	40	<100	15.1	18.3	24.3	25.9	16.1	18.4	13.6	20.4	18.6	13.6	31.1	18.5	17.1	17.0	19.3	23.5	22.5	25.6	17.3	19.2
PHENOL	NA	1000	<100	<0.962	<0.980	<1.05	<1.10	<1.02	<1.02	<1.01	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.03	<1.03	<1.01
PYRENE	NA	60	**<100**	1.01	1.15	1.44	1.59	<1.02	1.05	<1.01	1.22	1.68	1.25	1.40	1.45	1.08	1.49	<1.01	1.66	1.87	1.73	1.62	1.05
Total Semi Volatiles			*839*	*588*	*503*	*963*	*914*	*729*	*856*	*851*	*570*	*548*	*481*	*1,264*	*574*	*676*	*508*	*296*	*882*	*1,008*	*635*	*456*	*558*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-3	EW-3	DUP-1 (EW-3)	EW-3	DUP-1 (EW-3)	EW-3	DUP-1 (EW-3)	EW-3	DUP-1 (EW-3)	EW-3	DUP-1 (EW-3)	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3
Date Sampled			8/6/2007	9/28/2007	9/28/2007	12/18/2007	12/18/2007	3/18/2008	3/18/2008	6/25/2008	6/25/2008	9/16/2008	9/16/2008	12/22/2008	3/19/2009	6/11/2009	9/15/2009	12/17/2009	3/19/2010	6/10/2010	9/17/2010	12/21/2010	3/16/2011
VOC (ug/L)																						
1,2,3-TRICHLOROPROPANE		NA	---	<5.00	---	---	---	<5.00	<5.00	<20.0	<5.00	<5.00	<5.00	---	---	---	<2.00	---	---	---	---	---	<2.00
1,2,4-TRIMETHYLBENZENE	NA	NA	109	78.1	79.7	73.7	67.1	109	109	32.1	240	68.8	87.4	72.5	74.4	83.8	65.9	---	---	---	---	---	52.5
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	---	**<5.00**	---	---	---	**<5.00**	**<5.00**	**<20.0**	**<5.00**	**<5.00**	**<5.00**	---	---	---	**<2.00**	---	---	---	---	---	**10.7**
1,2-DICHLOROBENZENE		600	---	<5.00	---	---	---	<5.00	<5.00	<20.0	<5.00	<5.00	<5.00	---	---	---	<2.00	---	---	---	---	---	<2.00
1,3,5-TRIMETHYLBENZENE	NA	NA	26.5	23.7	24.6	22.0	19.4	28.5	28.5	<50.0	71.4	15.5	17.5	17.8	20.2	20.5	17.4	---	---	---	---	---	7.40
2-CHLOROTOLUENE	NA	NA	<5.0	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00
4-CHLOROTOLUENE	NA	NA	<5.0	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00
4-ISOPROPYLTOLUENE	NA	NA	26.8	27.9	36.7	8.69	5.80	32.2	33.1	<50.0	20.9	<5.00	<5.00	19.8	24.2	<5.00	<2.00	---	---	---	---	---	<2.00
4-METHYL-2-PENTANONE	NA	NA	<25	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	---	---	---	---	---	<5.00
BENZENE	5	5	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00
CARBON DISULFIDE	NA	NA	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00
CHLOROBENZENE	100	100	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00
CIS-1,2-DICHLOROETHENE	70	70	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00
ETHYLBENZENE	700	700	70.0	48.3	50.1	41.1	35.4	88.8	87.6	19.6	140	25.8	27.7	35.7	49.8	29.0	28.2	---	---	---	---	---	17.6
ISOPROPYLBENZENE	NA	NA	11.4	10.1	10.4	9.64	9.79	14.1	13.7	<50.0	31.5	<5.00	<5.00	7.44	9.12	9.49	7.32	---	---	---	---	---	6.92
MTBE	NA	70	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	2.83
NAPHTHALENE	NA	140	**1,520**	---	---	**222**	**261**	**1,800**	**2,190**	**488**	**649**	**1,110**	**593**	**272**	**998**	**689**	**806**	---	---	---	---	---	**458**
n-BUTYLBENZENE	NA	NA	<5.0	<5.0	<5.0	<5.00	5.81	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00
n-PROPLYBENZENE	NA	NA	7.60	7.80	7.80	7.48	6.92	9.81	9.19	<50.0	21.5	<5.00	<5.00	<5.00	6.67	6.92	5.40	---	---	---	---	---	5.26
sec-BUTYLBENZENE	NA	NA	---	<5.00	---	---	---	<5.00	<5.00	<20.0	<5.00	<5.00	<5.00	---	---	<5.00	<2.00	---	---	---	---	---	<2.00
STYRENE	100	100	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00
TERT-BUTYLBENZENE	NA	NA	<5.0	8.01	7.81	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	7.01
TETRACHLOROETHENE	5	5	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00
TOLUENE	1,000	1,000	15.8	7.98	8.19	6.92	6.30	23.9	22.8	17.5	22.0	<5.00	<5.00	<5.00	9.06	<5.00	3.12	---	---	---	---	---	<2.00
TRANS-1,2-DICHLOROETHENE	100	100	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00
TOTAL XYLENES	10,000	10,000	225	141	144	112	97.6	305	302	62.1	412	78.4	92.0	104	139	81.1	75.0	---	---	---	---	---	36.0
Total Volatiles			*2,012*	*353*	*369*	*504*	*515*	*2,411*	*2,796*	*619*	*1,608*	*1,299*	*818*	*529*	*1,330*	*920*	*1,008*	---	---	---	---	---	604

Shaded = Compound detected in the laboratory analysis
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mg/L = milligram per liter
ug/L = mircrogram per liter
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--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-3 (FD-1)	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3
Date Sampled			3/16/2011	6/16/2011	9/15/2011	12/23/2011	3/15/2012	6/18/2012	9/25/2012	12/18/2012	3/20/2013	6/14/2013	9/24/2013	12/12/2013	3/20/2014	6/16/2014	9/18/2014	12/9/2014	4/1/2015	6/17/2015	9/1//2015	12/10/2015	3/28/2016
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**0.547**	**0.501**	**0.410**	**0.517**	**0.544**	**0.477**	**0.482**	**0.441**	**0.627**	**0.494**	**0.544**	**0.493**	**0.471**	**0.482**	**0.429**	**0.511**	**0.502**	**0.426**	**0.379**	**0.396**	**0.346**
PESTICIDES (ug/L)																							
4 4-DDD	NA	0.2	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0250	<0.0253	<0.0255	<0.050	**<0.25**	<0.050	<0.27	<0.050	<0.050	<0.030	<0.025	<0.050	<0.050
4 4'-DDE	NA	0.05	<0.101	<0.0500	<0.0556	<0.0510	<0.0250	<0.0253	<0.0250	<0.0250	<0.0250	<0.0253	<0.0255	<0.050	**<0.25**	<0.050	<0.27	<0.030	<0.050	<0.030	<0.025	<0.050	<0.050
4 4'-DDT	NA	0.3	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0250	<0.0253	<0.0255	<0.050	<0.25	<0.050	<0.27	<0.25	<0.050	<0.030	<0.025	<0.050	<0.050
ALDRIN	NA	0.5	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0250	<0.0253	0.0280	<0.002	<0.018	<0.008	<0.008	<0.008	<0.015	<0.008	<0.008	<0.002	<0.015
ALPHA-BHC	NA	NA	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	0.209	<0.0253	<0.0255	<0.025	<0.12	<0.15	<0.21	<0.13	<0.25	<0.050	<0.025	<0.050	<0.050
ALPHA-CHLORDANE	NA	NA	<0.101	<0.100	<0.111	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
BETA-BHC	NA	NA	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	0.624	0.0842	<0.0250	<0.0253	<0.0255	<0.005	<0.045	<0.18	<0.027	<0.025	<0.050	<0.030	<0.025	<0.005	<0.050
CHLORDANE	2	2	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0250	<0.0253	<0.0255	<0.30	<1.5	<1.5	<1.6	<1.5	<0.50	<0.20	<0.25	<0.05	<0.2
DELTA-BHC	NA	NA	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	0.0721	0.0634	<0.0253	<0.0255	<0.025	<0.12	<0.12	<0.13	<0.13	<0.25	<0.030	<0.025	<0.025	<0.050
DIELDRIN	NA	0.1	<0.101	<0.100	<0.111	<0.102	<0.0250	**0.108**	<0.0250	<0.0250	<0.0250	<0.0253	<0.0255	<0.002	<0.015	<0.008	<0.008	<0.008	<0.015	<0.008	<0.008	<0.002	<0.015
ENDOSULFAN I	NA	10	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0250	<0.0253	<0.0255	<0.050	<0.25	<0.25	<0.27	<0.25	<0.50	<0.030	<0.025	<0.050	<0.050
ENDOSULFAN II	NA	10	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0250	<0.0253	<0.0255	<0.050	<0.25	<0.25	<0.27	<0.25	<0.50	<0.030	<0.025	<0.050	<0.050
ENDRIN	2	2	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0250	<0.0253	<0.0255	<0.050	**<0.25**	**<0.25**	<0.27	<0.030	<0.50	<0.030	<0.025	<0.050	<0.050
ENDRIN KETONE	NA	NA	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0250	<0.0253	<0.0255	<0.050	<0.25	<0.25	<0.27	<0.25	<0.50	<0.030	<0.025	<0.050	<0.050
GAMMA-BHC	NA	NA	<0.101	<0.100	<0.111	<0.102	<0.0250	0.0360	<0.0250	<0.0250	<0.0250	<0.0253	0.0833	<0.025	<0.12	<0.12	<0.13	<0.13	<0.050	<0.030	<0.025	<0.025	<0.050
GAMMA-CHLORDANE	NA	NA	<0.101	<0.100	<0.111	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HEPTACHLOR	0.4	0.4	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0250	<0.0253	<0.0255	<0.025	<0.12	<0.12	<0.13	<0.13	<0.25	<0.030	<0.025	<0.025	<0.050
HEPTACHLOR EPOXIDE	0.2	0.2	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	0.0369	<0.0250	<0.0253	<0.0255	<0.025	<0.12	<0.12	<0.13	<0.13	<0.050	<0.030	<0.025	<0.025	<0.050
HEXACHLOROBENZENE	1	1	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	<0.0250	0.480	<0.0250	<0.0253	<0.0255	---	---	---	---	---	---	---	---	---	---
METHOXYCHLOR	40	40	<0.101	<0.100	<0.111	<0.102	<0.0250	<0.0253	0.0411	<0.0250	<0.0250	<0.0253	<0.0255	<0.10	<0.50	<0.50	<0.53	<0.50	<1.0	<0.030	<0.50	<0.10	<0.050
TOXAPHENE	3	NA	<2.02	<2.00	<2.22	<2.04	<2.00	<2.02	<2.00	<2.00	<2.00	<2.02	<2.04	<1.0	**<5.0**	**<5.0**	**<5.3**	**<5.0**	<10	<1.0	**<5.0**	<1.0	<10
Total Pesticides			*ND*	*ND*	*ND*	*ND*	*ND*	*0.144*	*0.665*	*0.673*	*0.272*	*ND*	*0.111*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
SEMI VOLATILES (ug/L)																							
2,4,6-TRICHLOROPHENOL	NA	10	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
2,4-DICHLOROPHENOL	NA	10	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
2,4-DIMETHYLPHENOL	NA	60	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
2,4-DINITROPHENOL	NA	200	<5.10	<5.05	<5.15	<5.05	<5.26	<5.05	<5.00	<5.21	<5.00	<25.8	<5.10	<5.43	<5.10	<5.21	<5.03	<5.15	<5.32	<5.10	<5.00	<5.00	<5.10
2,4-DINITROTOLUENE	NA	30	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
2-CHLORONAPHTHALENE	NA	NA	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
2-METHYLNAPHTHALENE	NA	10	**53.6**	**23.8**	**17.3**	**45.1**	**33.5**	<1.01	**107**	**181**	**112**	**100**	**104**	**64.3**	**82.2**	**73.2**	**69.6**	**85.9**	**58.0**	**128**	**81.2**	**62.6**	**102**
2-METHYLPHENOL	NA	10	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
2-NITROANILINE	NA	NA	<1.02	<1.01	<1.03	<1.01	<1.05	3.97	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
2-NITROPHENOL	NA	NA	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
3/4-METHYLPHENOL	NA	NA																					
3-NITROANILINE	NA	NA	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
4-CHLORO-3-METHYLPHENOL	NA	NA	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
4-CHLOROANILINE	NA	20	<2.55	<2.53	<2.58	<2.53	<2.63	<2.53	<2.50	**188**	<2.50	<2.58	<2.55	<2.72	<2.55	<2.60	<2.51	<2.58	<2.66	<2.55	<2.50	<2.50	<2.55
4-NITROANILINE	NA	NA	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
4-NITROPHENOL	NA	NA	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
ACENAPHTHENE	NA	20	**66.3**	**56.8**	**44.5**	**64.2**	**51.3**	<1.01	**73.5**	**75.2**	**58.0**	**50.9**	**51.7**	**43.2**	**48.1**	**51.3**	**37.9**	**58.1**	**33.6**	**19.5**	**41.8**	**50.0**	**45.4**
ACENAPHTHYLENE	NA	30	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	2.07	<1.04	<1.01	<1.03	<1.06	22.6	2.08	<1.00	<1.02
ACETOPHENONE	NA	NA	<1.02	<1.01	<1.03	1.16	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
ANTHRACENE	NA	60	1.71	1.61	<1.03	<1.01	<1.05	<1.01	<1.00	11.9	3.65	<1.03	1.27	1.78	1.37	1.82	1.01	<1.03	<1.06	<1.02	<1.00	1.52	1.38
BENZO (A) ANTHRACENE	NA	1	<0.102	<0.101	<0.103	<0.101	<0.105	<0.101	<0.100	<0.104	<0.100	<0.103	<0.102	<0.109	<0.102	<0.104	<0.101	<0.103	<0.106	<0.102	<0.100	<0.100	<0.102
BENZO (A) PYRENE	0.2	0.2	<0.102	<0.101	<0.103	<0.101	<0.105	<0.101	<0.100	<0.104	<0.100	<0.103	<0.102	<0.109	<0.102	<0.104	<0.101	<0.103	<0.106	<0.102	<0.100	<0.100	<0.102
BENZO (B) FLUORANTHENE	NA	1	<0.102	<0.101	<0.103	<0.101	<0.105	<0.101	<0.100	<0.104	<0.100	<0.103	<0.102	<0.109	<0.102	<0.104	<0.101	<0.103	<0.106	<0.102	<0.100	<0.100	<0.102
BENZO (K) FLUORANTHENE	NA	1	<0.102	<0.101	<0.103	<0.101	<0.105	<0.101	<0.100	<0.104	<0.100	<0.103	<0.102	<0.109	<0.102	<0.104	<0.101	<0.103	<0.106	<0.102	<0.100	<0.100	<0.102
BENZYL ALCOHOL	NA	NA	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
BIS(2-CHLOROETHYL)ETHER	NA	30	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<1.02	<1.01	<1.03	<1.01	<1.05	4.31	<1.00	<1.04	<1.00	2.66	<1.02	<1.09	<1.02	1.30	<1.01	<1.03	<1.06	<1.02	<1.00	1.32	2.09
CARBAZOLE	NA	NA	3.23	<1.01	1.36	2.71	1.75	<1.01	3.57	11.7	6.15	3.64	3.24	2.88	2.43	3.02	2.70	<1.03	2.44	9.06	2.48	2.81	2.76
CHRYSENE	NA	2	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
DIBENZOFURAN	NA	NA	14.7	7.69	7.97	14.2	13.3	<1.01	20.2	26.1	24.0	11.6	14.1	11.9	12.0	13.7	9.01	11.4	8.26	13.6	11.3	14.4	12.0
DIETHYLPHTHALATE	NA	2000	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
FLUORANTHENE	NA	90	3.29	2.10	2.22	2.21	1.37	<1.01	2.95	5.20	3.33	1.92	2.36	2.26	1.83	2.31	2.01	<1.03	1.68	1.82	1.83	2.24	2.35
FLUORENE	NA	30	25.7	17.6	13.7	23.2	22.4	<1.01	28.8	85.9	42.2	15.8	21.3	22.5	20.1	21.0	16.8	24.5	13.3	22.9	15.3	22.1	20.5
HEXACHLOROETHANE	NA	8	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.102	<0.101	<0.103	<0.101	<0.105	<0.101	<0.100	<0.104	<0.100	<0.103	<0.102	<0.109	<0.102	<0.104	<0.101	<0.103	<0.106	<0.102	<0.100	<0.100	<0.102
NAPHTHALENE	NA	140	**411**	**251**	137	**385**	**369**	<1.01	**685**	**543**	**709**	**544**	**197**	**408**	**549**	**423**	**346**	**468**	**297**	**675**	**327**	**326**	**508**
NITROBENZENE	NA	NA	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
PENTACHLOROPHENOL	1	1	<1.02	<1.01	<1.03	<0.606	<0.632	<0.606	<0.600	<0.625	<0.600	<0.615	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	**5.53**	<1.00	<1.00	<1.00
PHENANTHRENE	NA	40	19.2	12.7	10.1	16.7	16.2	<1.01	19.3	26.3	23.4	13.2	16.2	12.2	12.6	14.9	9.24	14.5	8.89	19.0	9.69	12.6	10.6
PHENOL	NA	1000	<1.02	<1.01	<1.03	<1.01	<1.05	<1.01	<1.00	<1.04	<1.00	<1.03	<1.02	<1.09	<1.02	<1.04	<1.01	<1.03	<1.06	<1.02	<1.00	<1.00	<1.02
PYRENE	NA	60	<1.02	<1.01	1.18	1.46	1.49	<1.01	1.90	4.49	1.98	1.36	1.67	1.12	2.53	1.71	1.09	<1.03	<1.06	1.06	<1.00	1.54	1.29
Total Semi Volatiles			*599*	*373*	*235*	*556*	*510*	*8.28*	*742*	*1,159*	*984*	*745*	*413*	*570*	*734*	*607*	*495*	*662*	*423*	*918*	*493*	*497*	*708*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-3 (FD-1)	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3
Date Sampled			3/16/2011	6/16/2011	9/15/2011	12/23/2011	3/15/2012	6/18/2012	9/25/2012	12/18/2012	3/20/2013	6/14/2013	9/24/2013	12/12/2013	3/20/2014	6/16/2014	9/18/2014	12/9/2014	4/1/2015	6/17/2015	9/1//2015	12/10/2015	3/28/2016
VOC (ug/L)																							
1,2,3-TRICHLOROPROPANE		NA	2.23	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
1,2,4-TRIMETHYLBENZENE	NA	NA	51.6	10.1	17.8	62.1	43.9	45.1	68.8	66.2	84.6	78.3	77.0	10.1	70.6	85.1	74.4	90.6	102	147	66.2	104	48.1
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**11.5**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<20.0**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**
1,2-DICHLOROBENZENE		600	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
1,3,5-TRIMETHYLBENZENE	NA	NA	7.35	<2.00	3.01	12.9	6.98	5.42	22.0	20.2	26.5	<20.0	26.4	27.3	24.6	28.2	22.1	8.50	9.54	11.5	7.24	28.4	16.3
2-CHLOROTOLUENE	NA	NA	5.17	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-ISOPROPYLTOLUENE	NA	NA	4.75	<2.00	<2.00	<2.00	<2.00	32.7	<2.00	<2.00	30.6	27.0	37.9	27.1	34.4	45.9	26.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-METHYL-2-PENTANONE	NA	NA	<5.00	<5.00	<5.00	8.31	<5.00	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BENZENE	5	5	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	**<20.0**	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
CARBON DISULFIDE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
CHLOROBENZENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
CIS-1,2-DICHLOROETHENE	70	70	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
ETHYLBENZENE	700	700	17.4	3.54	<2.00	19.8	13.2	71.4	49.6	57.9	85.1	74.6	78.5	53.8	75.1	98.2	62.7	85.0	102	109	68.0	71.2	50.0
ISOPROPYLBENZENE	NA	NA	7.06	<2.00	2.83	5.50	6.49	5.42	7.94	8.02	10.1	<20.0	10.4	6.90	9.11	13.2	8.0	8.50	9.54	11.5	7.24	6.78	4.07
MTBE	NA	70	2.88	<2.00	2.42	2.10	2.57	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
NAPHTHALENE	NA	140	**1,190**	<2.00	**673**	**1,070**	**537**	**447**	**813**	**937**	**1,450**	**1,670**	**779**	**1,140**	**750**	**1,500**	**915**	**936**	**521**	**2,470**	**1,380**	**30,600**	**1,740**
n-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	4.56	<20.0	35.7	30.5	34.0	45.5	26.4	<2.00	4.23	5.49	5.91	4.82	<2.00
n-PROPLYBENZENE	NA	NA	5.22	<2.00	<2.00	2.43	4.23	4.66	5.23	5.57	7.11	<20.0	7.40	<2.00	<2.00	8.33	5.43	5.40	6.04	7.18	3.82	4.32	3.38
sec-BUTYLBENZENE	NA	NA	52.2	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
STYRENE	100	100	<2.00	<2.00	<2.00	2.57	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TERT-BUTYLBENZENE	NA	NA	6.80	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TETRACHLOROETHENE	5	5	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	**<20.0**	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TOLUENE	1,000	1,000	<2.00	<2.00	<2.00	<2.00	<2.00	19.0	13.0	13.0	21.8	<20.0	19.7	11.4	16.4	22.6	9.9	14.1	19.7	15.2	12.1	10.4	7.88
TRANS-1,2-DICHLOROETHENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<0.270	<2.00
TOTAL XYLENES	10,000	10,000	36.3	6.06	6.77	45.4	26.9	267	173	178	273	262	230	180	221	305	217	279	345	466	215	253	156
Total Volatiles			1,400	*19.7*	*706*	*1,231*	*641*	*898*	*1,153*	*1,286*	*1,993*	*2,112*	*1,302*	*1,487*	*1,235*	*2,152*	*1,367*	*1,427*	*1,119*	*3,243*	*1,766*	*31,083*	*2,026*

Shaded = Compound detected in the laboratory analysis
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ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
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laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW3	EW3	EW3	EW3	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A
Date Sampled			6/17/2016	9/27/2016	12/6/2016	3/31/2017	6/23/2017	8/30/2017	12/5/2017	3/27/2018	6/28/2018	12/18/2018	03/26/2019	06/21/2019	08/22/2019	8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008	12/22/2008	3/19/2009
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**0.292**	**0.170**	**0.327**	**0.289**	**0.324**	**0.328**	**0.377**	**0.491**	**0.382**	**0.374**	**0.344**	**0.369**	**0.335**	**0.493**	**0.432**	**0.431**	**0.457**	**0.568**	**0.551**	**0.457**	**0.464**
PESTICIDES (ug/L)																	(SH)		SH				
4 4-DDD	NA	0.2	<0.050	<0.012	<0.050	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
4 4'-DDE	NA	0.05	<0.050	<0.012	<0.050	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	**<0.100**	**<0.102**	**<0.103**	**<0.100**	**<0.109**	<0.0260	<0.100
4 4'-DDT	NA	0.3	<0.050	<0.012	<0.050	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
ALDRIN	NA	0.5	<0.015	<0.008	<0.002	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
ALPHA-BHC	NA	NA	<0.050	<0.012	<0.050	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
ALPHA-CHLORDANE	NA	NA	---	---	---	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	---	---	---	---	---	---	<0.0260	<0.100
BETA-BHC	NA	NA	<0.050	<0.025	<0.005	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
CHLORDANE	2	2	<0.2	<0.25	<0.050	<0.192	<0.192	<0.187	<0.190	<0.187	<0.187	<0.194	<0.187	<0.189	<0.194	<1.00	<0.100	<0.102	<0.103	<0.100	<0.109	<0.510	<0.100
DELTA-BHC	NA	NA	<0.050	<0.025	<0.025	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
DIELDRIN	NA	0.1	<0.015	<0.008	<0.010	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
ENDOSULFAN I	NA	10	<0.050	<0.025	<0.050	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
ENDOSULFAN II	NA	10	<0.050	<0.025	<0.050	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
ENDRIN	2	2	<0.050	<0.025	<0.050	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
ENDRIN KETONE	NA	NA	<0.050	<0.025	<0.050	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
GAMMA-BHC	NA	NA	<0.050	<0.040	<0.050	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
GAMMA-CHLORDANE	NA	NA	---	---	---	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	---	---	---	---	---	---	<0.0260	<0.100
HEPTACHLOR	0.4	0.4	<0.050	<0.025	<0.025	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
HEPTACHLOR EPOXIDE	0.2	0.2	<0.050	<0.025	<0.025	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
HEXACHLOROBENZENE	1	1	---	---	<0.005	0.063	<0.048	<0.047	0.050	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	---	<0.100
METHOXYCHLOR	40	40	<0.050	<0.50	<0.10	<0.048	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049	<0.050	<0.100	<0.102	<0.103	<0.100	<0.109	<0.0260	<0.100
TOXAPHENE	3	NA	<2.0	**<5.0**	<1.0	---	<1.25	<1.21	<1.24	<1.21	<1.21	<1.26	<1.21	<1.23	<1.26	<1.00	<2.00	<2.04	<2.06	<2.00	<2.17	<2.55	<2.00
Total Pesticides			*ND*	*ND*	*ND*	*0.063*	*ND*	*ND*	*0.050*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
SEMI VOLATILES (ug/L)																							
2,4,6-TRICHLOROPHENOL	NA	10	<1.01	<1.02	<1.00	<9.6	<9.6	<5.1	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	**<100**	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
2,4-DICHLOROPHENOL	NA	10	<1.01	<1.02	<1.00	<9.6	<9.6	<5.1	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	**<100**	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
2,4-DIMETHYLPHENOL	NA	60	<1.01	<1.02	<1.00	<48.1	<48.1	<51.0	<47.6	<46.7	<49.0	<46.7	<46.7	<47.2	<48.5	**<100**	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
2,4-DINITROPHENOL	NA	200	<5.05	<5.26	<5.00	<48.1	<48.1	<51.0	<47.6	<46.7	<49.0	<46.7	<46.7	<47.2	<48.5	<100	<4.85	<5.10	<5.10	<5.05	<5.10	<5.00	<5.00
2,4-DINITROTOLUENE	NA	30	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	**<100**	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
2-CHLORONAPHTHALENE	NA	NA	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
2-METHYLNAPHTHALENE	NA	10	**46.6**	<1.02	**55.6**	**55.2**	**61.2**	**46.2**	**63.6**	**83.6**	**75.7**	**53.9**	**115**	**38.2**	**11.9**	**<100**	**13.5**	**31.6**	**41.6**	**16.5**	**65.6**	**64.0**	**31.0**
2-METHYLPHENOL	NA	10	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
2-NITROANILINE	NA	NA	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
2-NITROPHENOL	NA	NA	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
3/4-METHYLPHENOL	NA	NA				<19.2	<19.2	<20.4	<19.0	<18.7	<19.6	<18.7	<18.7	<18.9	<19.4								
3-NITROANILINE	NA	NA	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
4-CHLORO-3-METHYLPHENOL	NA	NA	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
4-CHLOROANILINE	NA	20	<2.53	<2.55	<2.50	<19.2	<19.2	<10.2	<19.0	<18.7	<19.6	<18.7	<18.7	<18.9	<19.4	**<100**	<0.971	<1.02	<1.02	**41.1**	<1.02	<1.00	<1.00
4-NITROANILINE	NA	NA	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
4-NITROPHENOL	NA	NA	<1.01	<1.02	<1.00	<48.1	<48.1	<51.0	<47.6	<46.7	<49.0	<46.7	<46.7	<47.2	<48.5	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
ACENAPHTHENE	NA	20	**54.7**	15.0	**64.3**	**57.9**	**54.2**	**49.7**	**58.0**	**79.3**	**63.6**	**59.4**	**77.7**	**55.2**	**56.4**	**<100**	**23.7**	**28.7**	**31.1**	14.9	**24.3**	**42.0**	19.9
ACENAPHTHYLENE	NA	30	51.3	9.80	<1.00	2.04	1.70	1.44	2.07	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	1.40	<1.01	<1.02	<1.00	<1.00
ACETOPHENONE	NA	NA	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
ANTHRACENE	NA	60	<1.01	<1.02	1.63	1.57	1.04	<1.02	1.42	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	1.65	1.99	<1.00
BENZO (A) ANTHRACENE	NA	1	<0.101	<0.102	<0.100	<0.05	<0.05	<0.26	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	**<100**	<0.0971	<0.102	<0.102	<0.101	<0.102	<0.100	0.440
BENZO (A) PYRENE	0.2	0.2	<0.101	<0.102	<0.100	<0.05	<0.05	<0.13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<100**	<0.0971	<0.102	<0.102	<0.101	<0.102	<0.100	<0.100
BENZO (B) FLUORANTHENE	NA	1	<0.101	<0.102	<0.100	<0.05	<0.05	<0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<100**	**<4.85**	<0.510	<0.510	<0.505	<0.510	<0.500	<0.500
BENZO (K) FLUORANTHENE	NA	1	<0.101	<0.102	<0.100	<0.05	<0.05	<0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<100**	**<4.85**	<0.510	<0.510	<0.505	<0.510	<0.500	<0.500
BENZYL ALCOHOL	NA	NA	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
BIS(2-CHLOROETHYL)ETHER	NA	30	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	**<100**	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<1.01	<1.02	<1.00	<5.8	<5.8	<5.1	<5.7	**17.1**	<5.9	<5.6	<5.6	<5.7	<5.8	**<100**	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
CARBAZOLE	NA	NA	2.11	<1.02	1.71	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	1.45	<1.00
CHRYSENE	NA	2	<1.01	<1.02	<1.00	<0.05	<0.05	<0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<100**	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
DIBENZOFURAN	NA	NA	11.4	2.43	12.2	14.6	13.7	14.2	15.4	21.6	17.0	19.4	25.8	18.3	19.1	<100	7.78	11.7	9.98	5.20	6.44	12.9	7.05
DIETHYLPHTHALATE	NA	2000	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
FLUORANTHENE	NA	90	1.39	1.26	1.82	2.74	2.18	2.00	2.29	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	**<100**	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
FLUORENE	NA	30	20.7	9.28	29.7	28.2	27.9	23.6	29.4	**40.9**	28.2	**51.0**	**38.2**	**31.0**	**36.0**	<100	7.79	11.6	8.46	5.05	6.81	11.8	6.73
HEXACHLOROETHANE	NA	8	<1.01	<1.02	<1.00	<4.8	<4.8	<5.1	<4.8	<4.7	<4.9	<4.7	<4.7	<4.7	<4.9	**<100**	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.101	<0.102	<0.100	<0.05	<0.05	<0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<100**	<0.0971	<0.102	<0.102	<0.101	<0.102	<0.100	<0.100
NAPHTHALENE	NA	140	**391**	<1.02	**268**	**277**	**303**	**288**	**288**	**517**	**584**	119	**411**	15.9	<9.7	**469**	22.6	**272**	**301**	120	**149**	**487**	**162**
NITROBENZENE	NA	NA	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
PENTACHLOROPHENOL	1	1	<1.00	<1.00	<1.00	<0.87	<0.87	**<1.64**	<0.86	<0.84	<0.88	<0.84	<0.84	<0.85	<0.87	**<100**	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
PHENANTHRENE	NA	40	9.39	<1.02	8.12	10.8	8.77	8.95	9.18	17.4	13.2	14.4	17.2	12.6	14.3	<100	5.44	9.08	8.36	5.24	6.84	13.6	6.36
PHENOL	NA	1000	<1.01	<1.02	<1.00	<9.6	<9.6	<10.2	<9.5	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	<100	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
PYRENE	NA	60	<1.01	<1.02	1.18	1.48	1.12	1.12	1.35	<9.3	<9.8	<9.3	<9.3	<9.4	<9.7	**<100**	<0.971	<1.02	<1.02	<1.01	<1.02	<1.00	<1.00
Total Semi Volatiles			*589*	*37.8*	*444*	*452*	*475*	*435*	*471*	*777*	*782*	*317*	*685*	*171.2*	*137.7*	*469*	*80.8*	*365*	*402*	*208*	*261*	*635*	*233*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3	EW3	EW3	EW3	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A
Date Sampled			6/17/2016	9/27/2016	12/6/2016	3/31/2017	6/23/2017	8/30/2017	12/5/2017	3/27/2018	6/28/2018	12/18/2018	03/26/2019	06/21/2019	08/22/2019	8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008	12/22/2008	3/19/2009
VOC (ug/L)																						
1,2,3-TRICHLOROPROPANE		NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	---	---	---	<5.00	<20.0	<5.00	---	---
1,2,4-TRIMETHYLBENZENE	NA	NA	71.5	45.5	20.5	36.7	34.3	36.3	29.0	79.9	59.8	63.6	69.4	67.7	59.6	53.2	41.5	40.0	57.5	26.7	30.9	46.9	48.4
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**<2.00**	**<2.00**	**<2.00**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	<5	<5	<5	<5	---	---	---	**<5.00**	**<20.0**	**<5.00**	---	---
1,2-DICHLOROBENZENE		600	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	---	---	---	<5.00	<20.0	<5.00	---	---
1,3,5-TRIMETHYLBENZENE	NA	NA	19.9	11.7	4.48	10.2	8.9	9.6	8.2	22.8	17.1	17.2	20.1	20.8	19.8	12.5	11.0	11.4	16.5	<50.0	15.5	10.6	12.4
2-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	2.3	<1.0	<1.0	<1.0	<1	<1	<1	<1	<5.0	<5.0	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
4-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<5.0	<5.0	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
4-ISOPROPYLTOLUENE	NA	NA	<2.00	<2.00	<2.00	12.6	10.0	12.7	9.2	20.2	15.8	17.2	20.8	22.6	20.8	14.3	12.8	<5.00	24.8	<50.0	6.96	12.0	15.9
4-METHYL-2-PENTANONE	NA	NA	<5.00	<5.00	<5.00	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	<10	<25	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
BENZENE	5	5	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
CARBON DISULFIDE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
CHLOROBENZENE	100	100	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
CIS-1,2-DICHLOROETHENE	70	70	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
ETHYLBENZENE	700	700	56.3	15.8	4.43	17.4	18.8	14.8	18.4	73.5	45.4	57.2	47.6	49.6	37.8	49.8	39.5	34.2	52.1	28.1	28.3	45.2	51.5
ISOPROPYLBENZENE	NA	NA	3.62	2.50	<2.00	4.4	3.8	4.5	3.7	9.0	6.3	5.9	6.1	5.3	4.3	5.73	5.42	5.36	7.57	<50.0	<5.00	<5.00	5.91
MTBE	NA	70	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
NAPHTHALENE	NA	140	**415**	**3,680**	**164**	**527**	**528**	**586**	**589**	**747**	**1,090**	**759**	**881**	**1,120**	**1,110**	**904**	---	**148**	**1,380**	**353**	**433**	135	**636**
n-BUTYLBENZENE	NA	NA	<2.00	2.99	<2.00	2.6	2.0	2.6	1.8	4.3	<1.0	3.3	3.1	2.9	2.9	<5.0	<5.0	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
n-PROPLYBENZENE	NA	NA	4.05	<2.00	<2.00	3.1	2.3	3.1	2.4	5.9	3.9	3.7	3.7	2.7	2.0	<5.0	<5.00	<5.00	5.68	<50.0	<5.00	<5.00	<5.00
sec-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1	1.0	<1	<1	---	---	---	<5.00	<20.0	<5.00	---	---
STYRENE	100	100	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	1.2	<5.0	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
TERT-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
TETRACHLOROETHENE	5	5	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
TOLUENE	1,000	1,000	4.44	<2.00	<2.00	1.6	1.9	1.1	2.6	11.8	6.6	7.5	7.5	6.6	6.4	12.6	8.08	6.48	16.7	19.2	5.75	9.26	12.8
TRANS-1,2-DICHLOROETHENE	100	100	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00
TOTAL XYLENES	10,000	10,000	168	57.6	15.3	51.5	54.0	43.5	58.6	265.2	158.4	196	179	177.9	150.1	158.3	108	93.2	173	89.5	79.4	133	154
Total Volatiles			*743*	*3,816*	*209*	*667*	*664*	*717*	*723*	*1,241*	*1,403*	*1,131*	*1,060*	*1,476*	*1,415*	*1,210*	*226*	*339*	*1,734*	*517*	*600*	*392*	*937*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A
Date Sampled			6/11/2009	9/15/2009	12/17/2009	3/19/2010	6/10/2010	9/17/2010	12/21/2010	3/16/2011	6/16/2011	9/15/2011	12/23/2011	3/15/2012	6/18/2012	9/25/2012	12/18/2012	3/20/2013	6/14/2013	9/24/2013	12/12/2013	3/20/2014	6/16/2014
METALS (mg/L)																						
ARSENIC (TOTAL)	0.05	0.01	**0.472**	**0.429**	**0.434**	**0.465**	**0.456**	**0.472**	**0.469**	**0.518**	**0.498**	**0.447**	**0.469**	**0.538**	**0.416**	**0.425**	**0.469**	**0.534**	**0.452**	**0.497**	**0.432**	**0.412**	**0.455**
PESTICIDES (ug/L)														SH				SH					SL
4 4-DDD	NA	0.2	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.050	**<0.25**	<0.050
4 4'-DDE	NA	0.05	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.0500	<0.0526	<0.0510	<0.0250	<0.0253	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.050	**<0.25**	<0.050
4 4'-DDT	NA	0.3	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.050	<0.25	<0.050
ALDRIN	NA	0.5	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.002	<0.008	<0.008
ALPHA-BHC	NA	NA	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	0.0766	<0.0266	<0.0250	<0.025	<0.12	<0.12
ALPHA-CHLORDANE	NA	NA	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	---	---	---	---	---	---	---	---	---	---	---
BETA-BHC	NA	NA	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	0.545	<0.0250	<0.0260	<0.0266	<0.0250	<0.005	<0.025	<0.032
CHLORDANE	2	2	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.30	<1.5	<1.5
DELTA-BHC	NA	NA	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	0.0315	<0.0260	<0.0266	<0.0250	<0.025	<0.12	<0.12
DIELDRIN	NA	0.1	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.002	<0.008	<0.008
ENDOSULFAN I	NA	10	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.050	<0.25	<0.25
ENDOSULFAN II	NA	10	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.050	<0.25	<0.25
ENDRIN	2	2	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.050	**<0.25**	**<0.25**
ENDRIN KETONE	NA	NA	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.050	<0.25	<0.25
GAMMA-BHC	NA	NA	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	0.0427	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.025	<0.12	<0.12
GAMMA-CHLORDANE	NA	NA	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	---	---	---	---	---	---	---	---	---	---	---
HEPTACHLOR	0.4	0.4	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.025	<0.12	<0.12
HEPTACHLOR EPOXIDE	0.2	0.2	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	0.0262	<0.0250	0.0309	0.0384	<0.0266	<0.0250	<0.025	<0.12	<0.12
HEXACHLOROBENZENE	1	1	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	0.148	<0.0260	<0.0266	<0.0250	---	---	---
METHOXYCHLOR	40	40	<0.100	<0.100	<0.102	<0.104	<0.102	<0.108	<0.103	<0.101	<0.100	<0.105	<0.102	<0.0250	<0.0253	<0.0250	<0.0250	<0.0260	<0.0266	<0.0250	<0.10	<0.50	<0.50
TOXAPHENE	3	NA	<2.00	<2.00	<2.04	<2.08	<2.04	<2.15	<2.05	<2.02	<2.00	<2.11	<2.04	<2.00	<2.02	<2.00	<2.00	<2.08	<2.13	<2.00	<1.0	**<5.0**	**<5.0**
Total Pesticides			*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*0.0689*	*0.545*	*0.210*	*0.1150*	*ND*	*ND*	*ND*	*ND*	*ND*
SEMI VOLATILES (ug/L)																							
2,4,6-TRICHLOROPHENOL	NA	10	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
2,4-DICHLOROPHENOL	NA	10	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
2,4-DIMETHYLPHENOL	NA	60	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
2,4-DINITROPHENOL	NA	200	<5.00	<5.05	<5.05	<5.05	<5.10	<5.05	<5.10	<5.08	<5.38	<5.26	<5.00	<5.05	<5.00	<5.00	<5.00	<5.26	<26.6	<5.56	<5.15	<5.21	<5.10
2,4-DINITROTOLUENE	NA	30	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
2-CHLORONAPHTHALENE	NA	NA	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
2-METHYLNAPHTHALENE	NA	10	**60.9**	**55.5**	**49.9**	**76.0**	**70.7**	**98.5**	**71.6**	**98.5**	**40.4**	**63.4**	**98.1**	**168**	**55.3**	**66.6**	**115**	**84.4**	**65.4**	**54.8**	**41.4**	**46.1**	**53.1**
2-METHYLPHENOL	NA	10	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
2-NITROANILINE	NA	NA	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
2-NITROPHENOL	NA	NA	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
3/4-METHYLPHENOL	NA	NA																					
3-NITROANILINE	NA	NA	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
4-CHLORO-3-METHYLPHENOL	NA	NA	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
4-CHLOROANILINE	NA	20	<2.50	<2.53	<2.53	<2.53	<2.55	<2.53	<2.55	<2.54	<2.69	<2.63	<2.50	<2.53	<2.50	<2.50	<2.50	<2.63	<2.66	<2.78	<2.58	<2.60	<2.55
4-NITROANILINE	NA	NA	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
4-NITROPHENOL	NA	NA	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
ACENAPHTHENE	NA	20	**39.6**	**28.5**	**30.4**	**42.0**	**41.2**	**50.6**	**37.4**	**42.7**	**30.0**	**34.5**	**45.8**	**42.1**	**31.3**	**41.9**	**38.5**	**56.7**	**31.0**	**27.9**	**30.3**	**29.4**	**32.8**
ACENAPHTHYLENE	NA	30	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
ACETOPHENONE	NA	NA	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	2.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
ANTHRACENE	NA	60	<1.00	1.12	1.31	1.74	<1.02	1.11	1.06	<1.02	<1.08	<1.05	1.10	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
BENZO (A) ANTHRACENE	NA	1	<0.100	<0.101	<0.101	<0.101	<0.102	<0.101	<0.102	<0.102	<0.108	<0.105	<0.100	<0.101	<0.100	<0.100	<0.100	<0.105	<0.106	<0.111	<0.103	<0.104	<0.102
BENZO (A) PYRENE	0.2	0.2	<0.100	<0.101	<0.101	<0.101	<0.102	<0.101	<0.102	<0.102	<0.108	<0.105	<0.100	<0.101	<0.100	<0.100	<0.100	<0.105	<0.106	<0.111	<0.103	<0.104	<0.102
BENZO (B) FLUORANTHENE	NA	1	<0.100	<0.101	<0.101	<0.101	<0.102	<0.101	<0.102	<0.102	<0.108	<0.105	<0.100	<0.101	<0.100	<0.100	<0.100	<0.105	<0.106	<0.111	<0.103	<0.104	<0.102
BENZO (K) FLUORANTHENE	NA	1	<0.100	<0.101	<0.101	<0.101	<0.102	<0.101	<0.102	<0.102	<0.108	<0.105	<0.100	<0.101	<0.100	<0.100	<0.100	<0.105	<0.106	<0.111	<0.103	<0.104	<0.102
BENZYL ALCOHOL	NA	NA	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
BIS(2-CHLOROETHYL)ETHER	NA	30	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	1.38	<1.11	<1.03	<1.04	<1.02
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	4.98	1.26	<1.00	<1.05	2.62	<1.11	<1.03	<1.04	<1.02
CARBAZOLE	NA	NA	1.22	1.08	1.13	1.39	1.38	1.58	<1.02	1.91	<1.08	<1.05	1.50	<1.01	1.06	<1.00	1.18	1.64	<1.06	1.13	<1.03	<1.04	<1.02
CHRYSENE	NA	2	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
DIBENZOFURAN	NA	NA	12.4	8.78	9.20	13.3	13.7	15.9	11.2	14.5	8.39	10.2	13.7	13.5	11.3	14.3	12.5	19.1	9.38	10.0	10.4	9.77	11.0
DIETHYLPHTHALATE	NA	2000	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
FLUORANTHENE	NA	90	<1.00	<1.01	<1.01	2.39	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
FLUORENE	NA	30	11.1	8.71	8.81	12.4	11.3	14.0	9.12	13.2	7.77	8.54	11.9	11.8	9.06	12.4	11.2	16.7	9.51	8.92	9.43	15.0	11.7
HEXACHLOROETHANE	NA	8	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.100	<0.101	<0.101	<0.101	<0.102	<0.101	<0.102	<0.102	<0.108	<0.105	<0.100	<0.101	<0.100	<0.100	<0.100	<0.105	<0.106	<0.111	<0.103	<0.104	<0.102
NAPHTHALENE	NA	140	**432**	**338**	**332**	**418**	**399**	**583**	**491**	**583**	**456**	**467**	**531**	**1,010**	**298**	**391**	**316**	**442**	**239**	**178**	**249**	**284**	**220**
NITROBENZENE	NA	NA	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
PENTACHLOROPHENOL	1	1	<0.500	<1.01	<1.01	<1.01	<1.02	<2.53	<2.55	<1.02	<1.08	<1.05	<0.600	<0.606	<0.600	<0.600	<0.600	<0.632	<0.635	<1.00	<1.00	<1.00	<1.00
PHENANTHRENE	NA	40	10.4	7.90	8.71	11.3	<1.02	13.1	8.51	10.1	8.42	7.46	10.4	10.1	9.42	10.8	10.9	13.9	9.11	9.22	8.82	8.09	10.1
PHENOL	NA	1000	<1.00	<1.01	<1.01	<1.01	11.4	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	3.17	<1.11	<1.03	<1.04	<1.02
PYRENE	NA	60	<1.00	<1.01	<1.01	<1.01	<1.02	<1.01	<1.02	<1.02	<1.08	<1.05	<1.00	<1.01	<1.00	<1.00	<1.00	<1.05	<1.06	<1.11	<1.03	<1.04	<1.02
Total Semi Volatiles			*568*	*450*	*441*	*579*	*549*	*778*	*630*	*764*	*551*	*591*	*716*	*1,256*	*420*	*538*	*505*	*634*	*371*	*290*	*349*	*392*	*339*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
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SH = Spike Recovery greater than recovery limits
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--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A
Date Sampled			6/11/2009	9/15/2009	12/17/2009	3/19/2010	6/10/2010	9/17/2010	12/21/2010	3/16/2011	6/16/2011	9/15/2011	12/23/2011	3/15/2012	6/18/2012	9/25/2012	12/18/2012	3/20/2013	6/14/2013	9/24/2013	12/12/2013	3/20/2014	6/16/2014
VOC (ug/L)															SL							SH/SL	
1,2,3-TRICHLOROPROPANE		NA	---	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00
1,2,4-TRIMETHYLBENZENE	NA	NA	64.3	48.8	---	---	---	---	---	71.9	84.3	75.8	82.2	<2.00	66.2	43.1	43.6	54.6	41.1	43.8	13.3	42.8	51.0
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	---	**<2.00**	---	---	---	---	---	**15.2**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<20.0**	**<2.00**	**<2.00**	**<2.00**	**<2.00**
1,2-DICHLOROBENZENE		600	---	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00
1,3,5-TRIMETHYLBENZENE	NA	NA	15.8	13.4	---	---	---	---	---	18.6	22.5	21.2	25.8	<2.00	4.88	13.3	13.3	17.0	<20.0	15.0	14.0	15.0	17.2
2-CHLOROTOLUENE	NA	NA	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	3.69	<2.00	<2.00	<2.00
4-CHLOROTOLUENE	NA	NA	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00
4-ISOPROPYLTOLUENE	NA	NA	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	39.5	<2.00	<2.00	27.0	20.5	25.8	18.4	26.4	30.3
4-METHYL-2-PENTANONE	NA	NA	<5.00	<5.00	---	---	---	---	---	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<50.0	<5.00	<5.00	<5.00	<5.00
BENZENE	5	5	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	**<20.0**	<2.00	<2.00	<2.00	<2.00
CARBON DISULFIDE	NA	NA	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00
CHLOROBENZENE	100	100	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00
CIS-1,2-DICHLOROETHENE	70	70	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	2.30	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00
ETHYLBENZENE	700	700	54.5	51.9	---	---	---	---	---	71.8	87.9	79.0	114	<2.00	98.7	53.2	59.1	74.8	59.7	60.9	46.3	62.0	70.3
ISOPROPYLBENZENE	NA	NA	6.69	5.01	---	---	---	---	---	7.45	7.40	6.60	6.98	<2.00	4.88	4.85	5.00	6.06	<20.0	5.84	3.76	5.19	7.24
MTBE	NA	70	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00
NAPHTHALENE	NA	140	**783**	**635**	---	---	---	---	---	**1,070**	<2.00	**1,210**	**896**	**946**	**1,080**	**1,330**	**851**	**1,210**	**773**	**884**	**621**	**669**	**954**
n-BUTYLBENZENE	NA	NA	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	3.66	<20.0	<2.00	22.0	25.8	29.5
n-PROPLYBENZENE	NA	NA	5.44	4.15	---	---	---	---	---	5.87	4.95	6.00	5.07	<2.00	5.06	3.27	3.82	4.44	<20.0	4.57	<2.00	4.31	4.92
sec-BUTYLBENZENE	NA	NA	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00
STYRENE	100	100	<5.00	<2.00	---	---	---	---	---	3.00	<2.00	<2.00	4.83	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00
TERT-BUTYLBENZENE	NA	NA	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00
TETRACHLOROETHENE	5	5	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	**<20.0**	<2.00	<2.00	<2.00	<2.00
TOLUENE	1,000	1,000	12.6	12.4	---	---	---	---	---	15.2	17.1	15.3	27.7	<2.00	28.7	12.6	12.6	18.0	20.7	14.4	10.1	14.8	15.7
TRANS-1,2-DICHLOROETHENE	100	100	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<2.00	<2.00	<2.00	<2.00
TOTAL XYLENES	10,000	10,000	189	159	---	---	---	---	---	244	263	251	360	<2.00	190	182	189	259	238	188	148	195	230
Total Volatiles			*1,131*	*930*	---	---	---	---	---	1,523	*487*	*1,665*	*1,527*	*946*	*1,518*	*1,642*	*1,177*	*1,675*	*1,153*	*1,246*	*897*	*1,060*	*1,410*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW4A	EW4A	EW4A	EW4A
Date Sampled			9/18/2014	12/9/2014	4/1/2015	6/17/2015	9/1/2015	12/10/2015	3/28/2016	6/17/2016	9/27/2016	12/6/2016	3/31/2017	6/23/2017	8/30/2017	12/5/2017	3/27/2018	6/28/2018	09/04/2018	12/18/2018	03/26/2019	06/21/2019	08/22/2019
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**0.406**	**0.457**	**0.450**	**0.422**	**0.382**	**0.354**	**0.322**	**0.268**	**0.190**	**0.318**	**0.290**	**0.305**	**0.344**	**0.375**	**0.457**	**0.391**	**0.339**	**0.331**	**0.345**	**0.332**	**0.326**
PESTICIDES (ug/L)				SL	SL	SL	SL		SL	SL	SL	SL											
4 4-DDD	NA	0.2	**<0.25**	0.084	<0.2	<0.030	<0.025	<0.050	<0.050	<0.050	<0.013	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
4 4'-DDE	NA	0.05	**<0.25**	<0.030	**<0.2**	<0.030	<0.025	<0.050	<0.050	<0.050	<0.013	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
4 4'-DDT	NA	0.3	<0.25	<0.25	<0.2	<0.030	<0.025	<0.050	<0.050	<0.050	<0.013	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
ALDRIN	NA	0.5	<0.008	<0.008	<0.016	<0.008	<0.008	<0.002	<0.015	<0.015	<0.008	<0.015	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
ALPHA-BHC	NA	NA	<0.25	<0.13	<0.26	<0.050	<0.050	<0.025	<0.050	<0.050	<0.013	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
ALPHA-CHLORDANE	NA	NA	---	---	---	---	---	---	---	---	---	---	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
BETA-BHC	NA	NA	<0.025	<0.025	<0.053	<0.060	<0.025	<0.005	<0.050	<0.050	<0.050	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
CHLORDANE	2	2	<1.5	<1.5	<2	<0.10	<0.25	<0.050	<0.2	<0.2	<0.26	<0.50	<0.190	<0.192	<0.196	<0.187	<0.187	<0.187	0.248	<0.196	<0.190	<0.19	<0.187
DELTA-BHC	NA	NA	<0.13	<0.13	<0.26	<0.030	<0.025	<0.025	<0.050	<0.050	<0.026	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
DIELDRIN	NA	0.1	<0.010	<0.008	<0.016	<0.030	<0.008	<0.010	<0.015	<0.015	<0.008	<0.015	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
ENDOSULFAN I	NA	10	<0.25	<0.25	<0.53	<0.030	<0.025	<0.050	<0.050	<0.050	<0.026	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
ENDOSULFAN II	NA	10	<0.25	<0.25	<0.53	<0.030	<0.025	<0.050	<0.050	<0.050	<0.026	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
ENDRIN	2	2	**<0.25**	<0.030	<0.53	<0.030	<0.025	<0.050	<0.050	<0.050	<0.026	<0.050	<0.048	0.285	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
ENDRIN KETONE	NA	NA	<0.25	<0.25	<0.53	<0.030	<0.025	<0.050	<0.050	<0.050	<0.026	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
GAMMA-BHC	NA	NA	<0.13	<0.13	<0.2	<0.030	<0.025	<0.025	<0.050	<0.050	<0.040	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
GAMMA-CHLORDANE	NA	NA	---	---	---	---	---	---	---	---	---	---	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
HEPTACHLOR	0.4	0.4	<0.13	<0.13	<0.26	<0.030	<0.025	<0.025	<0.050	<0.050	<0.026	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
HEPTACHLOR EPOXIDE	0.2	0.2	<0.13	<0.13	**<0.26**	<0.030	<0.025	<0.025	<0.050	<0.050	<0.026	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
HEXACHLOROBENZENE	1	1	---	---	---	---	---	---	---	---	---	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
METHOXYCHLOR	40	40	<0.51	<0.50	<1.1	<0.030	<0.025	<0.10	<0.050	<0.050	<0.026	<0.050	<0.048	<0.048	<0.049	<0.047	<0.047	<0.047	<0.047	<0.049	<0.048	<0.048	<0.047
TOXAPHENE	3	NA	**<5.1**	**<5.0**	<11	<1.0	<1.0	<1.0	<2.0	<10	**<5.1**	**<10**	---	<1.25	<1.27	<1.21	<1.21	<1.21	<1.21	<1.27	<1.24	<1.24	<1.21
Total Pesticides			*ND*	*0.084*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*0.285*	*ND*	*ND*	*ND*	*ND*	*0.248*	*ND*	*ND*	*ND*	*ND*
SEMI VOLATILES (ug/L)																							
2,4,6-TRICHLOROPHENOL	NA	10	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<5.6	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
2,4-DICHLOROPHENOL	NA	10	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<5.6	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
2,4-DIMETHYLPHENOL	NA	60	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<48.1	<48.5	<55.6	<47.2	<46.7	<46.7	<49	<46.7	<48.1	<47.6	<46.7
2,4-DINITROPHENOL	NA	200	<5.21	<5.00	<5.21	<5.68	<5.03	<5.10	<5.15	<5.05	<5.00	<5.00	<48.1	<48.5	<55.6	<47.2	<46.7	<46.7	<49	<46.7	<48.1	<47.6	<46.7
2,4-DINITROTOLUENE	NA	30	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
2-CHLORONAPHTHALENE	NA	NA	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
2-METHYLNAPHTHALENE	NA	10	6.22	**48.6**	**57.1**	**55.4**	**55.9**	**48.5**	**42.0**	**15.9**	4.99	**13.6**	**21.8**	**19.7**	**21.6**	**26.0**	**60.5**	**40.7**	**21.5**	**35.2**	**54.2**	**41.4**	**49.1**
2-METHYLPHENOL	NA	10	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
2-NITROANILINE	NA	NA	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
2-NITROPHENOL	NA	NA	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
3/4-METHYLPHENOL	NA	NA											<19.2	<19.4	<22.2	<18.9	<18.7	<18.7	<19.6	<18.7	<19.2	<0.19	<18.7
3-NITROANILINE	NA	NA	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
4-CHLORO-3-METHYLPHENOL	NA	NA	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
4-CHLOROANILINE	NA	20	<2.60	<2.50	<2.60	<2.84	<2.51	<2.55	<2.58	<2.53	<2.50	<2.50	<19.2	<19.4	<11.1	<18.9	<18.7	<18.7	<19.6	<18.7	<19.2	<0.19	<18.7
4-NITROANILINE	NA	NA	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
4-NITROPHENOL	NA	NA	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<48.1	<48.5	<11.1	<47.2	<46.7	<46.7	<49	<46.7	<48.1	<47.6	<46.7
ACENAPHTHENE	NA	20	**20.1**	**34.4**	**34.3**	12.1	**34.3**	**28.1**	**24.4**	18.9	9.92	14.4	**20.4**	**21.0**	**22.3**	**31.2**	**66.1**	**36.1**	**25.9**	**41.3**	**44.2**	**40.4**	**49.8**
ACENAPHTHYLENE	NA	30	<1.04	<1.00	1.30	14.0	1.61	<1.02	<1.03	18.3	1.22	<1.00	0.69	0.78	<1.11	1.23	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
ACETOPHENONE	NA	NA	<1.04	<1.00	<1.04	<1.14	<1.01	1.11	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
ANTHRACENE	NA	60	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	0.37	0.31	<1.11	0.58	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
BENZO (A) ANTHRACENE	NA	1	<0.104	<0.100	<0.104	<0.114	<0.101	<0.102	<0.103	<0.101	<0.100	<0.100	<0.05	<0.05	<0.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BENZO (A) PYRENE	0.2	0.2	<0.104	<0.100	<0.104	<0.114	<0.101	<0.102	<0.103	<0.101	<0.100	<0.100	<0.05	<0.05	<0.14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BENZO (B) FLUORANTHENE	NA	1	<0.104	<0.100	<0.104	<0.114	<0.101	<0.102	<0.103	<0.101	<0.100	<0.100	<0.05	<0.05	<0.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BENZO (K) FLUORANTHENE	NA	1	<0.104	<0.100	<0.104	<0.114	<0.101	<0.102	<0.103	<0.101	<0.100	<0.100	<0.05	<0.05	<0.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BENZYL ALCOHOL	NA	NA	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
BIS(2-CHLOROETHYL)ETHER	NA	30	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<1.04	<1.00	<1.04	<1.14	<1.01	**70.5**	1.64	<1.01	<1.00	<1.00	<5.8	<5.8	<5.6	<5.7	<5.6	<5.6	<9.8	<5.6	**17.2**	<5.7	<5.6
CARBAZOLE	NA	NA	<1.04	<1.00	1.62	3.73	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
CHRYSENE	NA	2	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<0.05	<0.05	<0.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DIBENZOFURAN	NA	NA	5.34	8.71	10.8	9.19	12.9	10.1	8.38	6.41	2.66	4.33	<9.6	<9.7	<11.1	11.7	20.0	11.8	<9.8	14.5	16.5	14.7	18.1
DIETHYLPHTHALATE	NA	2000	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
FLUORANTHENE	NA	90	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	0.43	0.42	<1.11	0.38	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
FLUORENE	NA	30	6.51	8.14	9.82	11.7	10.2	8.77	8.63	5.98	3.88	6.54	8.47	8.70	7.31	9.76	18.9	10.8	<9.8	13.7	15.2	14.5	17.0
HEXACHLOROETHANE	NA	8	<1.04	<1.00	<1.04	**8.82**	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<4.8	<4.9	<5.6	<4.7	<4.7	<4.7	<4.9	<4.7	<4.8	<4.8	<4.7
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.104	<0.100	<0.104	<0.114	<0.101	<0.102	<0.103	<0.101	<0.100	<0.100	<0.05	<0.05	<0.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
NAPHTHALENE	NA	140	5.21	**241**	**277**	<1.14	**193**	**184**	**207**	72.4	19.9	71.7	137	31.4	**195**	**182**	**393**	**292**	**152**	**271**	**212**	**219**	**331**
NITROBENZENE	NA	NA	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
PENTACHLOROPHENOL	1	1	<1.00	<1.00	<1.00	**5.36**	<1.00	**3.62**	<1.00	<1.00	<1.00	<1.00	<0.87	<0.87	**<1.78**	<0.85	<0.84	<0.84	<0.88	<0.84	<0.87	<0.86	<0.84
PHENANTHRENE	NA	40	4.94	8.02	10.3	13.0	9.97	7.61	6.77	4.86	1.46	3.43	5.85	6.17	5.56	6.95	13.4	<9.3	<9.8	9.8	10.2	9.6	11.8
PHENOL	NA	1000	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	<9.6	<9.7	<11.1	<9.4	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
PYRENE	NA	60	<1.04	<1.00	<1.04	<1.14	<1.01	<1.02	<1.03	<1.01	<1.00	<1.00	0.25	0.22	<1.11	0.27	<9.3	<9.3	<9.8	<9.3	<9.6	<9.5	<9.3
Total Semi Volatiles			*48.3*	*349*	*402*	*133.3*	*318*	*362*	*299*	*142.8*	*44.0*	*114.0*	*195*	*88.7*	*252*	*270*	*572*	*391*	*199*	*386*	*370*	*340*	*477*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW-4A	EW4A	EW4A	EW4A	EW4A
Date Sampled			9/18/2014	12/9/2014	4/1/2015	6/17/2015	9/1/2015	12/10/2015	3/28/2016	6/17/2016	9/27/2016	12/6/2016	3/31/2017	6/23/2017	8/30/2017	12/5/2017	3/27/2018	6/28/2018	09/04/2018	12/18/2018	03/26/2019	06/21/2019	08/22/2019
VOC (ug/L)																						
1,2,3-TRICHLOROPROPANE		NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
1,2,4-TRIMETHYLBENZENE	NA	NA	42.0	60.6	63.6	60.5	43.1	54.8	21.4	24.6	8.97	5.51	21.6	19.3	26.3	20.4	59.8	35.5	25.9	33.2	34.8	28.7	29.6
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5**	<5	<5	<5	<5
1,2-DICHLOROBENZENE		600	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
1,3,5-TRIMETHYLBENZENE	NA	NA	13.1	5.28	5.91	4.83	5.01	15.0	7.54	6.45	<2.00	<2.00	5.2	4.4	6.0	4.7	18.1	9.8	6.2	9.6	10.7	8.5	9.5
2-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
4-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
4-ISOPROPYLTOLUENE	NA	NA	20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	7.9	5.6	8.6	6.0	22.1	13.6	8.5	11.6	14.0	10.8	11.2
4-METHYL-2-PENTANONE	NA	NA	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	<10	<10
BENZENE	5	5	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
CARBON DISULFIDE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
CHLOROBENZENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
CIS-1,2-DICHLOROETHENE	70	70	2.05	<2.00	3.40	2.29	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	<1	<1	<1	<1	<1
ETHYLBENZENE	700	700	57.1	82.0	89.9	80.9	68.5	59.6	29.9	33.4	14.7	6.52	20.5	20.2	26.5	18.9	57.6	46.7	36.5	40.7	45.2	42.6	41.3
ISOPROPYLBENZENE	NA	NA	4.49	5.28	5.91	4.83	5.01	3.41	<2.00	<2.00	<2.00	<2.00	2.3	2.1	3.2	2.4	6.1	4.0	2.8	3.5	3.8	2.9	3.8
MTBE	NA	70	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
NAPHTHALENE	NA	140	**639**	**1,150**	**1,940**	**1,640**	**1,330**	**8,370**	**454**	**198**	**2,200**	97.1	**223**	**241**	**401**	**332**	**641**	**607**	**375**	**448**	**580**	**473**	**524**
n-BUTYLBENZENE	NA	NA	20.1	<2.00	3.82	4.84	3.97	3.36	<2.00	<2.00	<2.00	<2.00	1.1	<1.0	1.3	1.1	4.5	<1.0	1.4	2.4	2.5	1.8	2.3
n-PROPLYBENZENE	NA	NA	3.31	3.35	4.11	3.04	2.43	<2.00	<2.00	<2.00	<2.00	<2.00	1.8	1.2	2.5	1.8	4.6	2.9	2.0	2.6	2.8	2.1	2.5
sec-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1	<1	<1	<1	<1
STYRENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	1.4	<1.0	<1	<1	<1	<1	<1
TERT-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
TETRACHLOROETHENE	5	5	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
TOLUENE	1,000	1,000	11.5	15.3	20.1	14.6	14.3	9.56	5.41	5.52	<2.00	<2.00	3.4	2.6	3.3	2.4	11.7	10.0	5.9	8.8	8.6	10.0	8.3
TRANS-1,2-DICHLOROETHENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<0.270	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
TOTAL XYLENES	10,000	10,000	201	298	333	295	219	211	87.4	87.6	53.4	25.1	59.2	54.3	67.8	53.6	204.2	149.2	105.8	145	165	142.2	114.4
Total Volatiles			*1,014*	*1,620*	*2,473*	*2,113*	*1,691*	*8,727*	*606*	*356*	*2,277*	*134.2*	*346*	*351*	*547*	*443*	*1,032*	*880*	*570*	*705*	*702*	*723*	*747*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-6	EW-6	EW-6	EW-6	EW-6	EW-6	EW-6	EW-6
Date Sampled			8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008	12/22/2008	3/19/2009	6/11/2009	9/15/2009	12/17/2009	3/19/2010	6/10/2010	8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008	12/22/2008	3/19/2009
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**0.204**	**0.194**	**0.172**	**0.191**	**0.238**	**0.292**	**0.169**	**0.192**	**0.169**	**0.161**	**0.183**	**0.196**	**0.167**	**0.393**	**0.335**	**0.391**	**0.372**	**0.514**	**0.520**	**0.369**	**0.338**
PESTICIDES (ug/L)				(SH)													(SH)	(SH)	SH	SH	SH		
4 4-DDD	NA	0.2	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	**0.814**	**3.48**	<0.100	**1.05**	**0.325**	**0.278**	**2.02**	**1.52**
4 4'-DDE	NA	0.05	<0.050	**<0.100**	**<0.103**	**<0.100**	**<0.100**	**<0.101**	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.050	**0.280**	**<0.100**	**<0.100**	**<0.100**	**<0.103**	<0.0260	<0.100
4 4'-DDT	NA	0.3	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.050	<0.100	<0.100	<0.100	<0.100	<0.103	<0.0260	<0.100
ALDRIN	NA	0.5	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.050	<0.100	<0.100	<0.100	<0.100	<0.103	<0.0260	<0.100
ALPHA-BHC	NA	NA	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.050	<0.100	<0.100	<0.100	<0.100	<0.103	<0.0260	<0.100
ALPHA-CHLORDANE	NA	NA	---	---	---	---	---	---	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	---	---	---	---	---	---	0.618	<0.100
BETA-BHC	NA	NA	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.050	<0.100	<0.100	<0.100	0.725	<0.103	<0.0260	<0.100
CHLORDANE	2	2	<1.00	<0.100	<0.103	<0.100	<0.100	<0.101	<0.510	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<1.00	<0.100	<0.100	**15.8**	<0.100	<0.103	**6.84**	**2.94**
DELTA-BHC	NA	NA	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.050	<0.100	<0.100	<0.100	<0.100	<0.103	<0.0260	<0.100
DIELDRIN	NA	0.1	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	**0.114**	**1.65**	<0.100	**0.815**	**0.205**	**0.186**	**0.746**	**0.680**
ENDOSULFAN I	NA	10	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.100	<0.100	<0.100	<0.100	<0.100	<0.103	<0.0260	<0.100
ENDOSULFAN II	NA	10	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.100	<0.100	<0.100	<0.100	<0.100	<0.103	<0.0260	<0.100
ENDRIN	2	2	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.100	0.340	<0.100	0.180	<0.100	<0.103	<0.0260	<0.100
ENDRIN KETONE	NA	NA	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.100	<0.100	<0.100	<0.100	<0.100	<0.103	<0.0260	<0.100
GAMMA-BHC	NA	NA	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.100	<0.100	<0.100	<0.100	<0.100	<0.103	<0.0260	<0.100
GAMMA-CHLORDANE	NA	NA	---	---	---	---	---	---	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	---	---	---	---	---	---	0.607	<0.100
HEPTACHLOR	0.4	0.4	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.100	<0.100	<0.100	<0.100	<0.100	<0.103	<0.0260	<0.100
HEPTACHLOR EPOXIDE	0.2	0.2	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.100	<0.100	<0.100	<0.100	<0.100	<0.103	<0.0260	<0.100
HEXACHLOROBENZENE	1	1	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	---	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.100	0.305	<0.100	<0.100	<0.100	<0.103	<0.0260	<0.100
METHOXYCHLOR	40	40	<0.050	<0.100	<0.103	<0.100	<0.100	<0.101	<0.0260	<0.100	<0.100	<0.100	<0.103	<0.103	<0.101	<0.100	<0.100	<0.100	<0.100	<0.100	<0.103	<0.0260	<0.100
TOXAPHENE	3	NA	<1.00	<2.00	<2.05	<2.00	<2.00	<2.02	<2.55	<2.00	<2.00	<2.00	<2.05	<2.05	<2.02	<2.00	<0.200	<2.00	<2.00	<2.00	<2.06	<0.0260	<2.00
Total Pesticides			*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*0.928*	*6.06*	*ND*	*17.8*	*1.255*	*0.464*	*10.83*	*5.14*
SEMI VOLATILES (ug/L)																							
2,4,6-TRICHLOROPHENOL	NA	10	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	**<100**	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	2.68
2,4-DICHLOROPHENOL	NA	10	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	**<100**	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	2.67
2,4-DIMETHYLPHENOL	NA	60	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	**<100**	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.00
2,4-DINITROPHENOL	NA	200	<5.0	<4.85	<5.21	<5.05	<5.03	<5.05	<5.00	<5.00	<5.00	<5.03	<5.08	<5.10	<5.41	<100	<4.90	<5.43	<5.00	<5.00	<5.10	<5.10	<5.00
2,4-DINITROTOLUENE	NA	30	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	**<100**	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
2-CHLORONAPHTHALENE	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
2-METHYLNAPHTHALENE	NA	10	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	1.44	<1.00	<1.01	<1.02	<1.02	<1.08	**227**	**247**	**213**	**288**	**126**	**126**	**214**	**123**
2-METHYLPHENOL	NA	10	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.00
2-NITROANILINE	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	1.12
2-NITROPHENOL	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.00
3/4-METHYLPHENOL	NA	NA																					
3-NITROANILINE	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
4-CHLORO-3-METHYLPHENOL	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
4-CHLOROANILINE	NA	20	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<2.50	<2.51	<2.54	<2.55	<2.70	**<100**	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
4-NITROANILINE	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
4-NITROPHENOL	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.00
ACENAPHTHENE	NA	20	<5.0	8.25	4.78	8.03	6.90	9.18	13.1	7.38	6.86	4.82	3.87	6.57	6.65	**<100**	**30.9**	**21.9**	**105**	**23.6**	**31.9**	**40.5**	**21.5**
ACENAPHTHYLENE	NA	30	12.3	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	5.15	1.36	<1.02	2.09	1.19
ACETOPHENONE	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
ANTHRACENE	NA	60	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	1.02	<1.09	6.44	<1.00	1.87	1.92	<1.02
BENZO (A) ANTHRACENE	NA	1	**<5.0**	<0.0971	<0.104	<0.101	<0.101	<0.101	<0.100	<0.100	<0.100	<0.101	<0.102	<0.102	<0.108	**<100**	<0.0980	<0.109	0.170	<0.100	<0.102	<0.102	<0.102
BENZO (A) PYRENE	0.2	0.2	**<5.0**	<0.0971	<0.104	<0.101	<0.101	<0.101	<0.100	0.160	<0.100	<0.101	<0.102	<0.102	<0.108	**<100**	<0.0980	<0.109	<0.100	<0.100	<0.102	<0.102	<0.102
BENZO (B) FLUORANTHENE	NA	1	**<5.0**	**<4.85**	<0.521	<0.505	<0.503	<0.505	<0.500	<0.500	<0.100	<0.101	<0.102	<0.102	<0.108	**<100**	**<4.90**	<0.543	<0.500	<0.500	<0.510	<0.510	<0.510
BENZO (K) FLUORANTHENE	NA	1	**<5.0**	**<4.85**	<0.521	<0.505	<0.503	<0.505	<0.500	<0.500	<0.100	<0.101	<0.102	<0.102	<0.108	**<100**	**<4.90**	<0.543	<0.500	<0.500	<0.510	<0.510	<0.510
BENZYL ALCOHOL	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
BIS(2-CHLOROETHYL)ETHER	NA	30	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	**<100**	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	**<100**	<0.980	<1.09	2.52	<1.00	<1.02	<1.02	<1.02
CARBAZOLE	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	1.36	<1.09	8.72	1.85	1.63	2.46	1.29
CHRYSENE	NA	2	**<5.0**	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	**<100**	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
DIBENZOFURAN	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	14.6	11.9	49.5	10.5	10.1	17.1	8.91
DIETHYLPHTHALATE	NA	2000	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
FLUORANTHENE	NA	90	<5.0	1.66	1.67	1.23	1.66	1.56	2.81	1.62	1.98	1.44	1.46	3.26	1.98	**<100**	<0.980	<1.09	2.76	<1.00	<1.02	<1.02	<1.02
FLUORENE	NA	30	11.3	8.93	6.82	6.94	6.69	7.49	13.0	7.28	8.26	5.48	4.26	6.53	7.83	<100	9.67	6.75	38.4	7.16	7.45	10.2	6.37
HEXACHLOROETHANE	NA	8	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	**<100**	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	<1.02
INDENO (1,2,3-CD) PYRENE	NA	0.5	**<5.0**	<0.0971	<0.104	<0.101	<0.101	<0.101	<0.100	<0.100	<0.100	<0.101	<0.102	<0.102	<0.108	**<100**	<0.0980	<0.109	<0.100	<0.100	<0.102	<0.102	<0.102
NAPHTHALENE	NA	140	<5.0	<0.971	1.30	3.29	<1.01	<1.01	<1.00	1.18	<1.00	<1.01	<1.02	<1.02	<1.08	**790**	**713**	**740**	**1,830**	**413**	**549**	**699**	**334**
NITROBENZENE	NA	NA	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	2.64	<1.02
PENTACHLOROPHENOL	1	1	**<5.0**	<0.971	<1.04	**1.89**	<1.01	<1.01	<1.00	<1.00	<0.500	<1.01	<1.02	<1.02	<1.08	**<100**	<0.980	<1.09	<1.00	**5.56**	<1.02	<1.02	**10.1**
PHENANTHRENE	NA	40	<5.0	<0.971	<1.04	1.05	<1.01	1.12	1.84	1.16	2.84	<1.01	<1.02	<1.02	<1.08	<100	10.3	5.26	42.9	6.23	6.76	12.2	6.08
PHENOL	NA	1000	<5.0	<0.971	<1.04	<1.01	<1.01	<1.01	<1.00	<1.00	<1.00	<1.01	<1.02	<1.02	<1.08	<100	<0.980	<1.09	<1.00	<1.00	<1.02	<1.02	1.58
PYRENE	NA	60	<5.0	1.11	<1.04	<1.01	1.06	1.44	1.74	1.30	1.04	1.55	<1.02	1.16	1.34	**<100**	<0.980	<1.09	1.72	<1.00	<1.02	<1.02	<1.02
Total Semi Volatiles			*23.6*	*19.95*	*14.57*	*22.43*	*16.31*	*20.79*	*32.5*	*21.52*	*20.98*	*13.29*	*9.59*	*17.52*	*17.80*	*1,017*	*1,028*	*999*	*2,381*	*595*	*735*	*1002*	*520*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-5	EW-6	EW-6	EW-6	EW-6	EW-6	EW-6	EW-6	EW-6
Date Sampled			8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008	12/22/2008	3/19/2009	6/11/2009	9/15/2009	12/17/2009	3/19/2010	6/10/2010	8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008	12/22/2008	3/19/2009
VOC (ug/L)																							
1,2,3-TRICHLOROPROPANE		NA	---	---	---	<5.00	<5.00	<5.00	---	---	---	<2.00	---	---	---	---	---	---	<5.00	<5.00	<5.00	<2.00	---
1,2,4-TRIMETHYLBENZENE	NA	NA	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	151	137	127	132	122	120	103	91.9
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**---**	**---**	**---**	**<5.00**	**<5.00**	**<5.00**	**---**	**---**	**---**	**<2.00**	**---**	**---**	**---**	**---**	**---**	**---**	**<5.00**	**<5.00**	**<5.00**	**<2.00**	**---**
1,2-DICHLOROBENZENE		600	---	---	---	<5.00	<5.00	<5.00	---	---	---	<2.00	---	---	---	---	---	---	<5.00	<5.00	<5.00	<2.00	---
1,3,5-TRIMETHYLBENZENE	NA	NA	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	44.3	53.8	49.6	48.2	46.0	36.8	32.7	32.4
2-CHLOROTOLUENE	NA	NA	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
4-CHLOROTOLUENE	NA	NA	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
4-ISOPROPYLTOLUENE	NA	NA	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	59.0	90.4	10.3	88.0	54.6	50.7	40.5	46.8
4-METHYL-2-PENTANONE	NA	NA	<25	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	---	---	---	<25	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BENZENE	5	5	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
CARBON DISULFIDE	NA	NA	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
CHLOROBENZENE	100	100	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
CIS-1,2-DICHLOROETHENE	70	70	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	5.50	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
ETHYLBENZENE	700	700	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	222	232	187	279	182	143	228	189
ISOPROPYLBENZENE	NA	NA	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	12.6	12.5	12.4	12.6	13.6	8.21	7.40	8.45
MTBE	NA	70	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
NAPHTHALENE	NA	140	<5.0	---	<20.0	<5.00	<5.00	<20.0	<20.0	<5.00	<5.00	<20.0	---	---	---	**2,680**	---	**294**	**2,410**	46.8	**1,180**	**400**	**974**
n-BUTYLBENZENE	NA	NA	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
n-PROPLYBENZENE	NA	NA	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	10.6	12.3	11.5	12.0	12.3	6.43	5.73	8.50
sec-BUTYLBENZENE	NA	NA	---	---	---	<5.00	<5.00	<5.00	---	---	<5.00	<2.00	---	---	---	---	---	---	<5.00	<5.00	<5.00	<2.00	---
STYRENE	100	100	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	12.5	14.0	<5.00	<5.00	<5.00	<5.00	12.3	<5.00
TERT-BUTYLBENZENE	NA	NA	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	<5.0	14.6	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
TETRACHLOROETHENE	5	5	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
TOLUENE	1,000	1,000	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	74.5	56.6	58.7	68.5	67.6	56.5	49.3	56.5
TRANS-1,2-DICHLOROETHENE	100	100	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
TOTAL XYLENES	10,000	10,000	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	922	717	615	1,220	646	556	810	722
Total Volatiles			*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	---	---	---	*4,194*	*1,340*	*1,366*	*4,270*	*1,191*	*2,158*	*1,689*	*2,130*

WELL	EW-6	EW-6	EW-6	EW-6	EW-6	EW-6	EW-6	EW-6
Date Sampled	6/10/2010	8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008	12/22/2008	3/19/2009
VOC (ug/L)									
1,2,3-TRICHLOROPROPANE	---	---	---	---	<5.00	<5.00	<5.00	<2.00	---
1,2,4-TRIMETHYLBENZENE	---	151	137	127	132	122	120	103	91.9
1,2-DIBROMO-3-CHLOROPROPANE	**---**	**---**	**---**	**---**	**<5.00**	**<5.00**	**<5.00**	**<2.00**	**---**
1,2-DICHLOROBENZENE	---	---	---	---	<5.00	<5.00	<5.00	<2.00	---
1,3,5-TRIMETHYLBENZENE	---	44.3	53.8	49.6	48.2	46.0	36.8	32.7	32.4
2-CHLOROTOLUENE	---	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
4-CHLOROTOLUENE	---	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
4-ISOPROPYLTOLUENE	---	59.0	90.4	10.3	88.0	54.6	50.7	40.5	46.8
4-METHYL-2-PENTANONE	---	<25	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BENZENE	---	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
CARBON DISULFIDE	---	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
CHLOROBENZENE	---	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
CIS-1,2-DICHLOROETHENE	---	5.50	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
ETHYLBENZENE	---	222	232	187	279	182	143	228	189
ISOPROPYLBENZENE	---	12.6	12.5	12.4	12.6	13.6	8.21	7.40	8.45
MTBE	---	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
NAPHTHALENE	---	**2,680**	---	**294**	**2,410**	46.8	**1,180**	**400**	**974**
n-BUTYLBENZENE	---	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
n-PROPLYBENZENE	---	10.6	12.3	11.5	12.0	12.3	6.43	5.73	8.50
sec-BUTYLBENZENE	---	---	---	---	<5.00	<5.00	<5.00	<2.00	---
STYRENE	---	12.5	14.0	<5.00	<5.00	<5.00	<5.00	12.3	<5.00
TERT-BUTYLBENZENE	---	<5.0	14.6	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
TETRACHLOROETHENE	---	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
TOLUENE	---	74.5	56.6	58.7	68.5	67.6	56.5	49.3	56.5
TRANS-1,2-DICHLOROETHENE	---	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
TOTAL XYLENES	---	922	717	615	1,220	646	556	810	722
Total Volatiles	---	*4,194*	*1,340*	*1,366*	*4,270*	*1,191*	*2,158*	*1,689*	*2,130*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	FD-1 (EW-6)	EW-6	FD-1 (EW-6)	EW-6	FD-1 (EW-6)	EW-6	EW-6 (DUP-1)	EW-6	EW-6 (DUP-1)	EW-6	EW-6 (DUP-1)	EW-6	EW-6 (DUP)	EW-6	EW-6 (DUP)	EW-6	EW-6	EW-6 (FD-1)	EW-6	EW-6 (FD-1)	EW-6
Date Sampled			3/19/2009	6/11/2009	6/11/2009	9/15/2009	9/15/2009	12/17/2009	12/17/2009	3/19/2010	3/19/2010	6/10/2010	6/10/2010	9/17/2010	9/17/2010	12/21/2010	12/21/2010	3/16/2011	6/16/2011	6/16/2011	9/15/2011	9/15/2011	12/23/2011
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**0.351**	**0.329**	**0.330**	**0.302**	**0.305**	**0.329**	**0.322**	**0.208**	**0.313**	**0.280**	**0.273**	**0.264**	**0.267**	**0.327**	**0.324**	**0.326**	**0.263**	**0.259**	**0.210**	**0.212**	**0.192**
PESTICIDES (ug/L)																							
4 4-DDD	NA	0.2	**1.69**	**0.380**	0.138	**0.505**	**0.416**	**4.30**	**3.36**	**419**	**553**	**696**	**784**	<0.103	<0.102	**1.49**	**1.39**	**3.37**	**1.62**	**2.93**	<0.101	**0.989**	**0.756**
4 4'-DDE	NA	0.05	<0.100	<0.100	<0.101	<0.101	<0.102	**0.132**	**0.255**	<0.103	<0.102	**33.8**	**39.2**	<0.103	<0.102	<0.102	<0.101	<0.102	<0.0532	<0.0532	<0.0505	<0.0500	<0.0505
4 4'-DDT	NA	0.3	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	<0.102	<0.106	<0.106	<0.101	<0.100	<0.101
ALDRIN	NA	0.5	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	0.211	<0.103	<0.102	<0.102	**31.4**	<0.103	<0.102	<0.102	<0.101	0.166	<0.106	0.111	<0.101	<0.100	<0.101
ALPHA-BHC	NA	NA	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	<0.102	<0.106	<0.106	<0.101	<0.100	<0.101
ALPHA-CHLORDANE	NA	NA	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	3.25	<0.106	<0.106	<0.101	<0.100	---
BETA-BHC	NA	NA	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	2.54	<0.106	<0.106	<0.101	<0.100	<0.101
CHLORDANE	2	2	**2.73**	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	<0.102	<0.106	<0.106	<0.101	<0.100	**2.81**
DELTA-BHC	NA	NA	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	0.186	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	<0.102	<0.106	<0.106	<0.101	<0.100	<0.101
DIELDRIN	NA	0.1	**0.810**	**0.179**	**0.160**	0.180	0.171	**2.09**	**1.46**	**343**	**439**	**198**	**194**	<0.103	<0.102	**0.764**	**0.851**	**2.19**	**0.729**	**0.918**	<0.101	**0.480**	**0.359**
ENDOSULFAN I	NA	10	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	0.293	<0.106	<0.106	<0.101	<0.100	<0.101
ENDOSULFAN II	NA	10	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	<0.102	<0.106	<0.106	<0.101	<0.100	<0.101
ENDRIN	2	2	<0.100	<0.100	<0.101	<0.101	<0.102	0.344	0.448	**56.9**	**49.7**	**19.9**	**21.6**	<0.103	<0.102	<0.102	0.106	0.243	<0.106	<0.106	<0.101	<0.100	<0.101
ENDRIN KETONE	NA	NA	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	<0.102	<0.106	0.256	<0.101	<0.100	<0.101
GAMMA-BHC	NA	NA	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	<0.102	<0.106	<0.106	<0.101	0.126	<0.101
GAMMA-CHLORDANE	NA	NA	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	1.78	<0.106	<0.106	<0.101	<0.100	---
HEPTACHLOR	0.4	0.4	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	0.113	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	<0.102	<0.106	<0.106	<0.101	<0.100	<0.101
HEPTACHLOR EPOXIDE	0.2	0.2	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	<0.102	<0.106	<0.106	<0.101	<0.100	<0.101
HEXACHLOROBENZENE	1	1	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	<0.102	<0.106	0.106	<0.101	<0.100	<0.101
METHOXYCHLOR	40	40	<0.100	<0.100	<0.101	<0.101	<0.102	<0.103	<0.104	<0.103	<0.102	<0.102	<0.100	<0.103	<0.102	<0.102	<0.101	<0.102	<0.106	0.106	<0.101	<0.100	<0.101
TOXAPHENE	3	NA	<2.00	<2.00	<2.00	<2.01	<2.03	<2.05	<2.08	<2.06	<2.03	<2.04	<2.00	<2.06	<2.04	<2.04	<2.02	<2.03	<2.13	<2.13	<2.02	<2.00	<2.02
Total Pesticides			*5.23*	*0.559*	*0.298*	*0.685*	*0.587*	*6.87*	*6.03*	*819*	*1,042*	*948*	*1,070*	*ND*	*ND*	*2.25*	*2.35*	*13.83*	*2.35*	*4.43*	*ND*	*1.595*	*3.93*
SEMI VOLATILES (ug/L)																							
2,4,6-TRICHLOROPHENOL	NA	10	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
2,4-DICHLOROPHENOL	NA	10	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
2,4-DIMETHYLPHENOL	NA	60	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
2,4-DINITROPHENOL	NA	200	<5.00	<5.00	<5.00	<5.08	<5.08	<5.15	<5.59	<5.10	<5.05	<5.03	<5.10	<5.24	<5.10	<5.05	<5.05	<5.05	<5.10	<5.21	5.60	<5.05	<5.15
2,4-DINITROTOLUENE	NA	30	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
2-CHLORONAPHTHALENE	NA	NA	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
2-METHYLNAPHTHALENE	NA	10	**162**	**173**	**183**	**162**	**160**	**137**	**122**	**313**	**339**	**154**	**170**	**145**	**222**	**102**	**152**	**293**	**54.2**	**34.1**	**111**	**111**	**152**
2-METHYLPHENOL	NA	10	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
2-NITROANILINE	NA	NA	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
2-NITROPHENOL	NA	NA	<1.00	1.63	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
3/4-METHYLPHENOL	NA	NA																					
3-NITROANILINE	NA	NA	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
4-CHLORO-3-METHYLPHENOL	NA	NA	<1.00	<1.00	<1.00	2.38	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
4-CHLOROANILINE	NA	20	<1.00	<2.50	<2.50	<2.54	<2.54	<2.58	<2.79	<2.53	<2.53	<2.51	<2.55	<2.62	<2.55	<2.53	<2.53	<2.53	<2.55	<2.60	<2.50	<2.53	<2.58
4-NITROANILINE	NA	NA	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
4-NITROPHENOL	NA	NA	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
ACENAPHTHENE	NA	20	**27.4**	**25.1**	**29.3**	**25.2**	**23.7**	**28.7**	**24.6**	**25.5**	**31.3**	**28.2**	**26.1**	**24.6**	**29.6**	**23.7**	**25.4**	**28.2**	17.2	13.6	14.5	13.5	19.5
ACENAPHTHYLENE	NA	30	1.43	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
ACETOPHENONE	NA	NA	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
ANTHRACENE	NA	60	<1.00	<1.00	<1.00	<1.02	<1.02	2.01	1.16	1.75	1.85	1.43	1.18	<1.05	<1.02	1.19	<1.01	1.90	1.64	1.44	<1.00	<1.01	<1.03
BENZO (A) ANTHRACENE	NA	1	<0.100	<0.100	<0.100	<0.102	<0.102	<0.103	<0.112	<0.101	<0.101	<0.101	<0.102	<0.105	<0.102	<0.101	<0.101	<0.101	<0.102	<0.104	<0.100	<0.101	<0.103
BENZO (A) PYRENE	0.2	0.2	0.130	<0.100	<0.100	<0.102	<0.102	<0.103	<0.112	<0.101	<0.101	<0.101	<0.102	<0.105	<0.102	<0.101	<0.101	<0.101	<0.102	<0.104	<0.100	<0.101	<0.103
BENZO (B) FLUORANTHENE	NA	1	<0.500	<0.100	<0.100	<0.102	<0.102	<0.103	<0.112	<0.101	<0.101	<0.101	<0.102	<0.105	<0.102	<0.101	<0.101	<0.101	<0.102	<0.104	<0.100	<0.101	<0.103
BENZO (K) FLUORANTHENE	NA	1	<0.500	<0.100	<0.100	<0.102	<0.102	<0.103	<0.112	<0.101	<0.101	<0.101	<0.102	<0.105	<0.102	<0.101	<0.101	<0.101	<0.102	<0.104	<0.100	<0.101	<0.103
BENZYL ALCOHOL	NA	NA	<1.00	1.04	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<1.00	4.10	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
BIS(2-CHLOROETHYL)ETHER	NA	30	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	1.13	<1.04	1.02	<1.01	<1.03
CARBAZOLE	NA	NA	1.48	1.41	1.78	2.33	2.08	1.58	1.41	1.48	1.70	1.83	1.78	1.05	1.23	1.25	1.40	2.14	<1.02	<1.04	<1.00	<1.01	<1.03
CHRYSENE	NA	2	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
DIBENZOFURAN	NA	NA	11.6	10.4	12.1	9.93	9.26	12.8	11.5	13.6	15.5	12.1	11.2	9.99	12.1	9.65	10.1	14.2	6.27	<1.04	6.40	6.12	8.77
DIETHYLPHTHALATE	NA	2000	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
FLUORANTHENE	NA	90	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	2.48	2.52	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	1.17	<1.02	<1.04	<1.00	<1.01	<1.03
FLUORENE	NA	30	7.88	6.94	8.13	<1.02	6.53	10.1	7.73	10.4	12.1	9.57	9.04	7.01	8.53	7.48	7.80	9.77	<1.02	5.62	4.87	4.17	7.08
HEXACHLOROETHANE	NA	8	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.100	<0.100	<0.100	<0.102	<0.102	<0.103	<0.112	<0.101	<0.101	<0.101	<0.102	<0.105	<0.102	<0.101	<0.101	<0.101	<0.102	<0.104	<0.100	<0.101	<0.103
NAPHTHALENE	NA	140	**411**	**553**	**630**	**392**	**354**	18.9	89.7	**552**	**584**	**424**	**448**	**290**	**470**	**382**	**492**	**726**	66.6	28.2	**370**	**372**	**267**
NITROBENZENE	NA	NA	<1.00	2.04	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
PENTACHLOROPHENOL	1	1	<1.00	**<2.50**	<0.500	**2.63**	**3.21**	**6.83**	**4.29**	<1.01	<1.01	**4.35**	**4.77**	<2.62	<2.55	<2.53	<2.53	<1.01	<1.02	<1.04	<1.00	<1.01	<0.619
PHENANTHRENE	NA	40	7.28	7.16	8.20	6.93	6.66	10.2	7.87	7.84	9.31	9.23	8.90	6.60	7.59	6.71	7.07	8.66	4.18	3.14	3.50	2.88	4.79
PHENOL	NA	1000	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
PYRENE	NA	60	<1.00	<1.00	<1.00	<1.02	<1.02	<1.03	<1.12	<1.01	<1.01	<1.01	<1.02	<1.05	<1.02	<1.01	<1.01	<1.01	<1.02	<1.04	<1.00	<1.01	<1.03
Total Semi Volatiles			*630*	*786*	*873*	*603*	*565*	*228*	*270*	*928*	*997*	*640*	*681*	*484*	*751*	*534*	*696*	*1,085*	*151.2*	*86.1*	*517*	*510*	*459*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	FD-1 (EW-6)	EW-6	FD-1 (EW-6)	EW-6	FD-1 (EW-6)	EW-6	EW-6 (DUP-1)	EW-6	EW-6 (DUP-1)	EW-6	EW-6 (DUP-1)	EW-6	EW-6 (DUP)	EW-6	EW-6 (DUP)	EW-6	EW-6	EW-6 (FD-1)	EW-6	EW-6 (FD-1)	EW-6
Date Sampled			3/19/2009	6/11/2009	6/11/2009	9/15/2009	9/15/2009	12/17/2009	12/17/2009	3/19/2010	3/19/2010	6/10/2010	6/10/2010	9/17/2010	9/17/2010	12/21/2010	12/21/2010	3/16/2011	6/16/2011	6/16/2011	9/15/2011	9/15/2011	12/23/2011
VOC (ug/L)																							
1,2,3-TRICHLOROPROPANE		NA	---	---	---	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
1,2,4-TRIMETHYLBENZENE	NA	NA	95.0	125	128	99.4	108	---	---	---	---	---	---	---	---	---	---	145	127	131	95.3	94.1	89.5
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**---**	**---**	**---**	**<2.00**	**<2.00**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**28.1**	**19.9**	**<2.00**	**<2.00**	**<2.00**	**17.6**
1,2-DICHLOROBENZENE		600	---	---	---	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
1,3,5-TRIMETHYLBENZENE	NA	NA	32.8	39.5	41.0	33.8	35.3	---	---	---	---	---	---	---	---	---	---	51.1	41.0	42.9	28.1	26.7	29.8
2-CHLOROTOLUENE	NA	NA	<5.00	<5.00	<5.00	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	8.73	<2.00	<2.00	<2.00	<2.00
4-CHLOROTOLUENE	NA	NA	<5.00	<5.00	<5.00	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	4.28	<2.00	<2.00	<2.00	<2.00
4-ISOPROPYLTOLUENE	NA	NA	46.4	<5.00	<5.00	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	18.1	<2.00	<2.00	<2.00	<2.00
4-METHYL-2-PENTANONE	NA	NA	<5.00	<5.00	<5.00	<5.00	<5.00	---	---	---	---	---	---	---	---	---	---	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BENZENE	5	5	<5.00	<5.00	<5.00	2.38	2.70	---	---	---	---	---	---	---	---	---	---	2.55	<2.00	<2.00	<2.00	<2.00	<2.00
CARBON DISULFIDE	NA	NA	<5.00	<5.00	<5.00	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
CHLOROBENZENE	100	100	<5.00	<5.00	<5.00	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
CIS-1,2-DICHLOROETHENE	70	70	<5.00	<5.00	<5.00	3.06	3.28	---	---	---	---	---	---	---	---	---	---	<2.00	<2.00	2.05	<2.00	<2.00	<2.00
ETHYLBENZENE	700	700	143	146	126	153	154	---	---	---	---	---	---	---	---	---	---	240	133	129	142	138	132
ISOPROPYLBENZENE	NA	NA	8.54	10.3	10.70	8.26	8.36	---	---	---	---	---	---	---	---	---	---	9.29	6.81	6.69	5.72	5.95	3.94
MTBE	NA	70	<5.00	<5.00	<5.00	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
NAPHTHALENE	NA	140	**960**	**1,640**	**969**	**1,160**	**1,190**	---	---	---	---	---	---	---	---	---	---	**1,390**	**638**	**761**	**1,120**	**486**	**803**
n-BUTYLBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	4.64	5.51	<2.00	<2.00	4.69
n-PROPLYBENZENE	NA	NA	8.29	9.93	10.0	7.54	7.86	---	---	---	---	---	---	---	---	---	---	11.0	6.43	6.58	6.05	6.11	4.33
sec-BUTYLBENZENE	NA	NA	---	<5.00	<5.00	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	**111**	<2.00	<2.00	<2.00	<2.00
STYRENE	100	100	<5.00	<5.00	<5.00	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	14.8	<2.00	2.22	<2.00	<2.00	5.63
TERT-BUTYLBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TETRACHLOROETHENE	5	5	<5.00	<5.00	<5.00	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TOLUENE	1,000	1,000	55.9	52.3	53.9	58.5	60.0	---	---	---	---	---	---	---	---	---	---	73.1	54.6	55.0	46.4	46.8	39.5
TRANS-1,2-DICHLOROETHENE	100	100	<5.00	<5.00	<5.00	<2.00	<2.00	---	---	---	---	---	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TOTAL XYLENES	10,000	10,000	596	636	552	667	679	---	---	---	---	---	---	---	---	---	---	1,070	618	595	487	423	470
Total Volatiles			*1,946*	*2,659*	*1,891*	*2,193*	*2,249*	---	---	---	---	---	---	---	---	---	---	3,035	*1,791*	*1,739*	*1,931*	*1,227*	*1,600*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-6 (FD-1)	EW-6	EW-6 (FD-1)	EW-6	EW-6 (DUP-1)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD-1)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)
Date Sampled			12/23/2011	3/15/2012	3/15/2012	6/18/2012	6/18/2012	9/25/2012	9/25/2012	12/18/2012	12/18/2012	3/20/2013	3/20/2013	6/14/2013	6/14/2013	9/24/2013	9/24/2013	12/12/2013	12/12/2013	3/20/2014	3/20/2014	6/16/2014	6/16/2014
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**0.208**	**0.189**	**0.182**	**0.194**	**0.192**	**0.167**	**0.156**	**0.183**	**0.188**	**0.281**	**0.287**	**0.210**	**0.210**	**0.233**	**0.237**	**0.174**	**0.170**	**0.190**	**0.185**	**0.207**	**0.210**
PESTICIDES (ug/L)																		SL	SL	SL	SL	SL	SL
4 4-DDD	NA	0.2	**0.897**	**0.630**	**0.770**	**0.806**	<0.0250	**0.512**	**0.472**	**0.786**	**0.829**	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	<0.25	<0.25	**1.3**	**1.0**	**0.97**	**0.85**
4 4'-DDE	NA	0.05	<0.0500	**0.0818**	<0.0250	<0.0250	<0.0250	<0.0250	0.0286	<0.0250	<0.0250	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	<0.25	<0.25	**<1.0**	**<0.25**	**<0.25**	**<0.25**
4 4'-DDT	NA	0.3	<0.100	<0.0250	<0.0250	<0.0250	**4.93**	<0.0250	<0.0250	<0.0250	<0.0250	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	<0.25	<0.25	**<1.0**	<0.25	<0.25	<0.25
ALDRIN	NA	0.5	<0.100	0.0615	0.0756	**0.0837**	**0.0718**	<0.0250	<0.0250	0.0339	0.0488	0.0440	<0.0253	0.180	0.0868	0.0829	<0.0255	<0.022	<0.025	<0.10	<0.075	0.099	0.070
ALPHA-BHC	NA	NA	<0.100	<0.0250	<0.0250	0.0586	<0.0250	<0.0250	<0.0250	0.0628	0.0843	0.136	0.133	<0.0258	0.0828	0.0897	0.0609	<0.12	<0.12	<0.50	<1.2	<0.15	<0.12
ALPHA-CHLORDANE	NA	NA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
BETA-BHC	NA	NA	<0.100	<0.0250	<0.0250	<0.0250	<0.0250	0.295	0.183	<0.0250	<0.0250	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	<0.025	<0.025	<0.10	<0.25	<0.025	<0.025
CHLORDANE	2	2	**4.20**	**4.11**	**6.27**	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	1.2	1.3	**4.3**	**3.3**	**4.1**	**2.7**
DELTA-BHC	NA	NA	<0.100	<0.0250	<0.0250	0.0481	0.0501	0.0267	0.0302	0.0601	0.0544	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	<0.12	<0.12	<0.50	<1.2	<0.12	<0.12
DIELDRIN	NA	0.1	**0.348**	**0.435**	**0.329**	**0.377**	**0.958**	**0.274**	**0.197**	**0.255**	**0.521**	**0.359**	**0.366**	**0.386**	**0.376**	**0.141**	**0.154**	0.056	0.049	**<0.13**	**0.18**	**0.16**	**0.12**
ENDOSULFAN I	NA	10	<0.100	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	<0.25	<0.25	<1.0	<2.5	<0.25	<0.25
ENDOSULFAN II	NA	10	<0.100	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	<0.25	<0.25	<1.0	<2.5	<0.25	<0.25
ENDRIN	2	2	<0.100	<0.0250	<0.0250	0.0470	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	<0.25	<0.25	**<1.0**	**<2.5**	**<0.25**	**<0.25**
ENDRIN KETONE	NA	NA	<0.100	<0.0250	**0.0398**	0.0570	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	<0.25	<0.25	<1.0	<2.5	<0.25	<0.25
GAMMA-BHC	NA	NA	<0.100	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	<0.12	<0.12	<0.50	<1.2	<0.12	<0.12
GAMMA-CHLORDANE	NA	NA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HEPTACHLOR	0.4	0.4	<0.100	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	<0.12	<0.12	**<0.50**	**<1.2**	<0.12	<0.12
HEPTACHLOR EPOXIDE	0.2	0.2	<0.100	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	<0.12	<0.12	**<0.50**	**<1.2**	<0.12	<0.12
HEXACHLOROBENZENE	1	1	<0.100	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	0.0436	0.0777	<0.0255	<0.0253	<0.0258	<0.0255	<0.0260	<0.0255	---	---	---	---	---	---
METHOXYCHLOR	40	40	<0.100	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0255	<0.0253	0.0942	0.0706	<0.0260	<0.0255	<0.50	<0.50	<2.0	<5.0	<0.50	<0.50
TOXAPHENE	3	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.04	<2.02	<2.06	<2.04	<2.08	<2.04	<5.0	<5.0	**<20**	**<50.0**	**<5.0**	**<5.0**
Total Pesticides			*5.45*	*5.32*	*7.48*	*1.477*	*6.01*	*1.108*	*0.911*	*1.241*	*1.615*	*0.539*	*0.499*	*0.660*	*0.616*	*0.314*	*0.215*	*1.3*	*1.3*	*5.6*	*4.5*	*5.3*	*3.7*
SEMI VOLATILES (ug/L)																							
2,4,6-TRICHLOROPHENOL	NA	10	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
2,4-DICHLOROPHENOL	NA	10	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
2,4-DIMETHYLPHENOL	NA	60	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	7.01	14.9	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
2,4-DINITROPHENOL	NA	200	<5.00	<5.05	<5.10	<5.00	<5.00	<5.00	<5.00	<5.00	<5.05	<5.00	<5.00	<25.0	<25.5	<5.32	<5.56	<5.15	<5.05	<5.10	<5.10	<5.15	<5.05
2,4-DINITROTOLUENE	NA	30	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
2-CHLORONAPHTHALENE	NA	NA	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
2-METHYLNAPHTHALENE	NA	10	**150**	**72.8**	**119**	**83.7**	**83.3**	**56.5**	**70.4**	**56.5**	**63.2**	**102**	**109**	**57.4**	**48.8**	**14.6**	**22.5**	4.46	5.40	**37.3**	**35.0**	**46.4**	**57.0**
2-METHYLPHENOL	NA	10	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
2-NITROANILINE	NA	NA	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
2-NITROPHENOL	NA	NA	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
3/4-METHYLPHENOL	NA	NA																					
3-NITROANILINE	NA	NA	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
4-CHLORO-3-METHYLPHENOL	NA	NA	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
4-CHLOROANILINE	NA	20	<2.50	<2.53	<2.55	<2.50	<2.50	<2.50	<2.50	**63.2**	<2.53	<2.50	<2.50	<2.50	<2.55	<2.66	<2.78	<2.58	<2.53	<2.55	<2.55	<2.58	<2.53
4-NITROANILINE	NA	NA	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
4-NITROPHENOL	NA	NA	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
ACENAPHTHENE	NA	20	19.4	10.9	16.2	16.1	15.2	13.6	14.3	11.4	13.4	16.1	17.6	12.4	11.9	6.06	9.30	9.72	8.71	11.0	10.2	11.2	13.7
ACENAPHTHYLENE	NA	30	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
ACETOPHENONE	NA	NA	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	2.01	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
ANTHRACENE	NA	60	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	2.70	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
BENZO (A) ANTHRACENE	NA	1	<0.100	<0.101	<0.102	<0.100	<0.100	<0.100	<0.100	<0.100	<0.101	<0.100	<0.100	<0.100	<0.102	<0.106	<0.111	<0.103	<0.101	<0.102	<0.102	<0.103	<0.101
BENZO (A) PYRENE	0.2	0.2	<0.100	<0.101	<0.102	<0.100	<0.100	<0.100	<0.100	<0.100	<0.101	<0.100	<0.100	<0.100	<0.102	<0.106	<0.111	<0.103	<0.101	<0.102	<0.102	<0.103	<0.101
BENZO (B) FLUORANTHENE	NA	1	<0.100	<0.101	<0.102	<0.100	<0.100	<0.100	<0.100	<0.100	<0.101	<0.100	<0.100	<0.100	<0.102	<0.106	<0.111	<0.103	<0.101	<0.102	<0.102	<0.103	<0.101
BENZO (K) FLUORANTHENE	NA	1	<0.100	<0.101	<0.102	<0.100	<0.100	<0.100	<0.100	<0.100	<0.101	<0.100	<0.100	<0.100	<0.102	<0.106	<0.111	<0.103	<0.101	<0.102	<0.102	<0.103	<0.101
BENZYL ALCOHOL	NA	NA	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	1.49	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
BIS(2-CHLOROETHYL)ETHER	NA	30	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<1.00	<1.01	<1.02	3.52	4.30	<1.00	<1.00	<1.00	<1.01	1.94	<1.00	2.56	2.55	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	1.39	1.18
CARBAZOLE	NA	NA	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	1.67	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
CHRYSENE	NA	2	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
DIBENZOFURAN	NA	NA	8.65	4.93	7.31	7.03	6.80	4.51	4.78	4.74	5.23	7.36	8.16	4.77	4.72	2.02	3.01	3.38	3.02	4.32	3.84	4.26	5.64
DIETHYLPHTHALATE	NA	2000	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
FLUORANTHENE	NA	90	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
FLUORENE	NA	30	6.75	<1.01	<1.02	4.84	4.62	3.68	4.02	3.64	3.98	5.54	5.98	6.10	5.90	1.96	2.86	3.81	2.93	4.17	3.68	4.11	5.28
HEXACHLOROETHANE	NA	8	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	**17.4**	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.100	<0.101	<0.102	<0.100	<0.100	<0.100	<0.100	<0.100	<0.101	<0.100	<0.100	<0.100	<0.102	<0.106	<0.111	<0.103	<0.101	<0.102	<0.102	<0.103	<0.101
NAPHTHALENE	NA	140	**248**	**245**	**268**	**243**	**252**	**164**	**147**	**204**	**219**	**268**	**275**	31.1	9.66	4.48	37.8	1.15	3.27	56.1	49.6	114	83.9
NITROBENZENE	NA	NA	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
PENTACHLOROPHENOL	1	1	<0.600	<0.606	<0.612	<0.600	<0.600	<0.600	<0.600	**6.29**	<0.606	<0.600	<0.600	<0.597	<0.609	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
PHENANTHRENE	NA	40	4.46	3.55	5.41	5.04	5.00	3.42	3.82	2.88	3.34	3.50	3.78	2.29	1.72	1.47	2.03	1.85	1.79	2.71	2.48	2.93	3.75
PHENOL	NA	1000	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
PYRENE	NA	60	<1.00	<1.01	<1.02	<1.00	<1.00	<1.00	<1.00	<1.00	<1.01	<1.00	<1.00	<1.00	<1.02	<1.06	<1.11	<1.03	<1.01	<1.02	<1.02	<1.03	<1.01
Total Semi Volatiles			*437*	*337*	*416*	*363*	*371*	*246*	*244*	*379*	*308*	*404*	*420*	*123.6*	*101.8*	*30.6*	*77.5*	*24.37*	*25.12*	*115.6*	*104.8*	*184*	*170*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-6 (FD-1)	EW-6	EW-6 (FD-1)	EW-6	EW-6 (DUP-1)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD-1)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)
Date Sampled			12/23/2011	3/15/2012	3/15/2012	6/18/2012	6/18/2012	9/25/2012	9/25/2012	12/18/2012	12/18/2012	3/20/2013	3/20/2013	6/14/2013	6/14/2013	9/24/2013	9/24/2013	12/12/2013	12/12/2013	3/20/2014	3/20/2014	6/16/2014	6/16/2014			
VOC (ug/L)																									
1,2,3-TRICHLOROPROPANE		NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
1,2,4-TRIMETHYLBENZENE	NA	NA	87.2	63.1	63.8	87.4	85.8	29.0	31.7	36.3	37.3	72.4	73.4	70.4	72.4	26.6	27.1	27.5	2.29	40.9	39.0	59.1	59.0			
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<20.0**	**<20.0**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**			
1,2-DICHLOROBENZENE		600	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
1,3,5-TRIMETHYLBENZENE	NA	NA	28.8	18.5	18.4	5.46	5.47	9.60	10.4	11.5	12.1	25.4	25.7	22.1	21.3	7.92	8.41	6.88	12.4	14.7	13.8	20.1	19.8			
2-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
4-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
4-ISOPROPYLTOLUENE	NA	NA	<2.00	<2.00	<2.00	36.0	35.1	<2.00	<2.00	<2.00	<2.00	31.7	30.2	24.5	25.9	9.54	10.2	11.5	14.9	20.8	22.0	30.3	31.0			
4-METHYL-2-PENTANONE	NA	NA	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<50.0	<50.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00			
BENZENE	5	5	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	**<20.0**	**<20.0**	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
CARBON DISULFIDE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
CHLOROBENZENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
CIS-1,2-DICHLOROETHENE	70	70	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
ETHYLBENZENE	700	700	130	87.0	87.5	118	105	36.2	36.2	42.6	43.6	95.9	96.1	102	97.5	40.2	39.6	34.4	34.9	62.6	59.2	83.0	85.9			
ISOPROPYLBENZENE	NA	NA	3.94	4.37	4.39	5.46	5.47	2.44	2.69	2.22	2.57	4.79	4.98	<20.0	<20.0	2.76	2.87	<2.00	2.32	3.35	3.27	6.03	6.16			
MTBE	NA	70	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
NAPHTHALENE	NA	140	**867**	**1,210**	**891**	**933**	**745**	**651**	**5,430**	**443**	**2,070**	**883**	**1,120**	**1,140**	**1,050**	**257**	**795**	129	**196**	**390**	**669**	**508**	**648**			
n-BUTYLBENZENE	NA	NA	4.54	3.17	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	3.62	3.49	<20.0	<20.0	<2.00	<2.00	10.6	14.8	20.2	21.5	29.0	29.7			
n-PROPLYBENZENE	NA	NA	4.34	4.46	4.41	3.47	3.24	<2.00	2.15	2.16	2.38	5.11	5.37	<20.0	<20.0	2.14	<2.00	<2.00	<2.00	3.01	2.97	4.21	4.31			
sec-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
STYRENE	100	100	5.42	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
TERT-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
TETRACHLOROETHENE	5	5	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	**<20.0**	**<20.0**	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
TOLUENE	1,000	1,000	38.5	22.2	22.1	26.8	25.9	7.21	7.11	9.38	9.60	22.4	22.8	25.3	25.2	8.15	8.11	7.50	8.50	14.8	14.2	20.6	21.8			
TRANS-1,2-DICHLOROETHENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<20.0	<20.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
TOTAL XYLENES	10,000	10,000	433	279	281	358	347	140	141	179	180	381	383	524	506	123	122	111	118	217	203	299	297			
Total Volatiles			*1,603*	*1,692*	*1,373*	*1,574*	*1,358*	*875*	*5,661*	*726*	*2,358*	*1,525*	*1,765*	*1,908*	*1,798*	*477*	*1,013*	*338*	*404*	*787*	*1,048*	*1,059*	*1,203*			

Shaded = Compound detected in the laboratory analysis
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mg/L = milligram per liter
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SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6	EW-6 (DUP)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6A	EW-6A (FD)	EW-6A	EW-6A (FD)	EW-6A	EW-6A (FD)	EW-6A	EW-6A (FD)	EW-6A
Date Sampled			9/18/2014	9/18/2014	12/9/2014	12/9/2014	4/1/2015	4/1/2015	6/17/2015	6/17/2015	9/1/2015	9/1/2015	3/28/2016	3/28/2016	6/17/2016	6/17/2016	9/27/2016	9/27/2016	12/6/2016	12/6/2016	3/31/2017	3/31/2017	6/23/2017
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**0.153**	**0.155**	**0.191**	**0.186**	**0.202**	**0.196**	**0.191**	**0.192**	**0.129**	**0.137**	**0.337**	**0.330**	**0.298**	**0.283**	**0.413**	**0.400**	**0.431**	**0.437**	**0.336**	**0.323**	**0.351**
PESTICIDES (ug/L)					SL		SL		SL	SL	SL	SL	SL	SL	SL	SL	SL		SL	SL			SH
4 4-DDD	NA	0.2	**<1.3**	**<1.3**	**0.32**	**0.35**	**1.2**	**1.1**	<0.050	<0.050	**0.20**	**0.24**	<0.050	0.10	<0.10	<0.10	<0.13	<0.075	<0.080	<0.070	0.130	0.128	0.109
4 4'-DDE	NA	0.05	**<1.3**	**<1.3**	<0.030	<0.030	**<0.2**	**<0.2**	<0.030	<0.050	<0.025	<0.025	<0.050	<0.050	<0.026	<0.025	**<0.13**	<0.025	<0.050	<0.050	<0.049	<0.048	<0.047
4 4'-DDT	NA	0.3	**<1.3**	**<1.3**	<0.25	<0.25	<0.2	<0.2	<0.030	<0.050	<0.025	<0.025	<0.050	<0.050	<0.026	<0.025	<0.13	<0.025	<0.050	<0.050	<0.049	<0.048	<0.047
ALDRIN	NA	0.5	**<1.3**	**<0.080**	0.077	<0.040	<0.5	<0.015	0.031	0.051	<0.015	<0.020	<0.015	<0.015	<0.008	<0.008	<0.038	<0.013	<0.015	<0.015	<0.049	<0.048	<0.047
ALPHA-BHC	NA	NA	<0.64	<0.63	<0.13	<0.13	<0.25	<0.25	<0.030	<0.050	<0.025	<0.013	<0.050	<0.050	<0.050	<0.025	<0.038	<0.050	<0.10	<0.090	0.088	0.073	0.079
ALPHA-CHLORDANE	NA	NA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.079	0.104	0.095
BETA-BHC	NA	NA	<0.13	<0.13	<0.025	<0.025	<0.051	<0.051	<0.025	<0.050	<0.025	<0.040	<0.050	<0.050	<0.026	<0.025	<0.038	<0.025	<0.050	<0.050	<0.049	<0.048	<0.047
CHLORDANE	2	2	**2.4**	**3.0**	<1.5	1.7	**6.0**	**5.3**	1.2	1.0	1.2	<1.5	<0.2	<0.2	<0.26	<0.25	<1.3	<0.25	<0.50	<0.50	<0.194	0.355	0.508
DELTA-BHC	NA	NA	<0.64	<0.63	<0.13	<0.13	<0.051	<0.25	<0.030	<0.050	<0.025	<0.13	<0.050	0.094	<0.026	<0.025	<0.13	<0.025	<0.060	<0.050	<0.049	0.063	<0.047
DIELDRIN	NA	0.1	<0.10	<0.10	0.046	0.052	**0.30**	**0.25**	0.070	0.075	<0.020	<0.030	<0.050	0.073	<0.008	<0.008	<0.038	<0.015	<0.050	<0.015	<0.049	<0.048	<0.047
ENDOSULFAN I	NA	10	<1.3	<1.3	<0.25	<0.25	<0.51	<0.51	<0.030	<0.050	<0.025	<0.25	<0.050	<0.050	<0.026	<0.025	<0.13	<0.025	<0.080	<0.050	<0.049	<0.048	<0.047
ENDOSULFAN II	NA	10	<1.3	<1.3	<0.25	<0.25	<0.51	<0.51	<0.030	<0.050	<0.025	<0.25	<0.050	<0.050	<0.026	<0.025	<0.13	<0.025	<0.050	<0.050	<0.049	<0.048	<0.047
ENDRIN	2	2	**<1.3**	**<1.3**	<0.030	<0.030	<0.51	<0.51	<0.050	<0.050	<0.025	<0.25	<0.050	<0.050	<0.026	<0.025	<0.13	<0.025	<0.050	<0.050	<0.049	<0.048	<0.047
ENDRIN KETONE	NA	NA	<1.3	<1.3	<0.25	<0.25	<0.51	<0.51	<0.030	<0.050	<0.025	<0.25	<0.050	<0.050	<0.026	<0.025	<0.13	<0.025	<0.050	<0.050	<0.049	<0.048	<0.047
GAMMA-BHC	NA	NA	<0.64	<0.63	<0.13	<0.13	<0.2	<0.2	<0.030	<0.050	<0.025	<0.25	<0.050	<0.050	<0.026	<0.025	<0.038	<0.025	<0.050	<0.050	<0.049	<0.048	<0.047
GAMMA-CHLORDANE	NA	NA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---	---	<0.049	<0.048	<0.047
HEPTACHLOR	0.4	0.4	**<0.64**	**<0.63**	<0.13	<0.13	<0.25	<0.25	<0.030	<0.050	<0.025	<0.13	<0.050	<0.050	<0.026	<0.025	<0.13	<0.025	<0.050	<0.050	<0.049	<0.048	<0.047
HEPTACHLOR EPOXIDE	0.2	0.2	**<0.64**	**<0.63**	<0.13	<0.13	<0.20	**<0.25**	<0.030	<0.050	<0.025	<0.13	<0.050	<0.050	<0.090	<0.10	<0.13	<0.025	<0.050	<0.070	<0.049	<0.048	<0.047
HEXACHLOROBENZENE	1	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		<0.050	<0.050	0.156	0.157	0.082
METHOXYCHLOR	40	40	<2.6	<2.5	<0.50	<0.50	<1.0	<1.0	<0.030	<0.10	<0.025	<0.50	<0.050	<0.050	<0.026	<0.025	<0.13	<0.025	<0.050	<0.050	<0.049	<0.048	<0.047
TOXAPHENE	3	NA	**<26**	**<25**	**<5.0**	**<5.0**	<10	<10	<1.0	<2.0	<1.0	**<5.0**	<2.0	<2.0	<5.2	<5.0	**<25**	**<5.0**	**<10**	**<10**	---	---	<1.21
Total Pesticides			*2.4*	*3.0*	*0.44*	*2.1*	*7.5*	*6.7*	*1.3*	*1.1*	*1.4*	*0.24*	*ND*	*0.267*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*0.453*	*0.880*	*0.873*
SEMI VOLATILES (ug/L)																							
2,4,6-TRICHLOROPHENOL	NA	10	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<2.3	<9.4
2,4-DICHLOROPHENOL	NA	10	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<2.3	<9.4
2,4-DIMETHYLPHENOL	NA	60	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<47.6	<11.7	<47.2
2,4-DINITROPHENOL	NA	200	<5.05	<5.00	<5.21	<5.05	<5.21	<5.15	<5.38	<5.38	<5.05	<5.05	<5.05	<5.05	<5.21	<5.32	<5.00	<5.00	<5.10	<5.00	<47.6	<11.7	<47.2
2,4-DINITROTOLUENE	NA	30	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<2.3	<9.4
2-CHLORONAPHTHALENE	NA	NA	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<2.3	<9.4
2-METHYLNAPHTHALENE	NA	10	<1.01	<1.00	**46.3**	**45.5**	4.54	<1.03	**29.6**	**35.4**	**39.4**	**24.0**	**198**	**250**	**106**	**90.0**	**179**	**199**	**119**	**174**	<0.19	**294**	**240**
2-METHYLPHENOL	NA	10	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<2.3	<9.4
2-NITROANILINE	NA	NA	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<9.3	<9.4
2-NITROPHENOL	NA	NA	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<2.3	<9.4
3/4-METHYLPHENOL	NA	NA																			<19.0	<4.7	<18.9
3-NITROANILINE	NA	NA	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<9.3	<9.4
4-CHLORO-3-METHYLPHENOL	NA	NA	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	9.3	<9.4
4-CHLOROANILINE	NA	20	<2.53	<2.50	<2.60	<2.53	<2.60	<2.58	<2.69	<2.69	<2.53	<2.53	<2.53	<2.53	<2.60	<2.66	<2.50	<2.50	<2.55	<2.50	<19.0	<4.7	<18.9
4-NITROANILINE	NA	NA	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<9.3	<9.4
4-NITROPHENOL	NA	NA	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<47.6	<11.7	<47.2
ACENAPHTHENE	NA	20	<1.01	5.28	9.31	10.2	6.70	6.34	4.00	4.14	11.4	7.20	**34.8**	**41.5**	**40.1**	**38.7**	**70.8**	**72.6**	**51.1**	**63.3**	**61.4**	**78.4**	**60.1**
ACENAPHTHYLENE	NA	30	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	4.91	5.12	<1.01	<1.01	<1.01	<1.01	38.3	36.6	8.56	9.00	<1.02	<1.00	2.69	2.56	2.36
ACETOPHENONE	NA	NA	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<2.3	<9.4
ANTHRACENE	NA	60	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	1.66	1.81	<1.04	<1.06	1.45	2.08	1.61	1.84	1.79	1.63	1.59
BENZO (A) ANTHRACENE	NA	1	<0.101	<0.100	<0.104	<0.101	<0.104	<0.103	<0.108	<0.108	<0.101	<0.101	<0.101	<0.101	<0.104	<1.06	<0.100	<0.100	<0.102	<0.100	<0.05	<0.05	0.05
BENZO (A) PYRENE	0.2	0.2	<0.101	<0.100	<0.104	<0.101	<0.104	<0.103	<0.108	<0.108	<0.101	<0.101	<0.101	<0.101	<0.104	<0.106	<0.100	<0.100	<0.102	<0.100	<0.05	<0.05	<0.05
BENZO (B) FLUORANTHENE	NA	1	<0.101	<0.100	<0.104	<0.101	<0.104	<0.103	<0.108	<0.108	<0.101	<0.101	<0.101	<0.101	<0.104	<0.106	<0.100	<0.100	<0.102	<1.00	<0.05	<0.05	<0.05
BENZO (K) FLUORANTHENE	NA	1	<0.101	<0.100	<0.104	<0.101	<0.104	<0.103	<0.108	<0.108	<0.101	<0.101	<0.101	<0.101	<0.104	<0.106	<0.100	<0.100	<0.102	<0.100	<0.05	<0.05	<0.05
BENZYL ALCOHOL	NA	NA	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<9.3	<9.4
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<2.3	<9.4
BIS(2-CHLOROETHYL)ETHER	NA	30	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<2.3	<9.4
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	1.57	1.46	<1.04	<1.06	<1.00	1.19	<1.02	<1.00	**33.7**	<1.4	<5.7
CARBAZOLE	NA	NA	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	1.30	1.43	1.17	1.20	1.40	1.32	1.40	1.48	<9.5	<9.3	<9.4
CHRYSENE	NA	2	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<0.05	<0.05	<0.05
DIBENZOFURAN	NA	NA	<1.01	1.30	3.21	<1.01	2.51	2.35	3.13	3.03	4.18	2.46	14.0	16.8	17.9	16.9	24.2	24.5	20.5	21.5	27.0	7.3	28.7
DIETHYLPHTHALATE	NA	2000	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	5.30	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<2.3	<9.4
FLUORANTHENE	NA	90	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	0.90	0.82	0.96
FLUORENE	NA	30	<1.01	1.44	<1.04	<1.01	2.16	1.96	3.40	4.04	3.16	2.06	10.4	11.6	14.2	14.0	22.5	23.8	18.5	21.0	15.9	22.3	17.8
HEXACHLOROETHANE	NA	8	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	3.81	**10.0**	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<4.8	<1.2	<4.7
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.101	<0.100	<0.104	<0.101	<0.104	<0.103	<0.108	<0.108	<0.101	<0.101	<0.101	<0.101	<0.104	<0.106	<0.100	<0.100	<0.102	<0.100	<0.05	<0.05	<0.05
NAPHTHALENE	NA	140	<1.01	<1.00	95.6	53.2	<1.04	<1.03	71.3	103	120	87.3	**647**	**793**	**668**	**494**	**852**	**885**	**459**	**688**	**1,110**	**1,160**	**982**
NITROBENZENE	NA	NA	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<2.3	<9.4
PENTACHLOROPHENOL	1	1	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	**4.22**	**4.60**	<1.00	<1.00	**3.09**	**5.61**	**2.23**	**1.99**	<1.00	<1.00	<1.00	<1.00	**4.02**	**3.83**	**3.25**
PHENANTHRENE	NA	40	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	4.09	4.84	2.83	1.62	11.0	12.0	10.3	10.2	10.7	11.4	9.37	9.52	14.1	19.1	16.5
PHENOL	NA	1000	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	<9.5	<2.3	<9.4
PYRENE	NA	60	<1.01	<1.00	<1.04	<1.01	<1.04	<1.03	<1.08	<1.08	<1.01	<1.01	<1.01	<1.01	<1.04	<1.06	<1.00	<1.00	<1.02	<1.00	0.56	0.52	0.61
Total Semi Volatiles			*ND*	*8.02*	*154.4*	*108.9*	*15.91*	*10.65*	*128.5*	*174.17*	*181*	*124.6*	*923*	*1,135*	*904*	*704*	*1,171*	*1,230*	*680*	*981*	*1,272*	*1,600*	*1,354*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6	EW-6 (DUP)	EW-6	EW-6 (FD)	EW-6	EW-6 (FD)	EW-6A	EW-6A (FD)	EW-6A	EW-6A (FD)	EW-6A	EW-6A (FD)	EW-6A	EW-6A (FD)	EW-6A
Date Sampled			9/18/2014	9/18/2014	12/9/2014	12/9/2014	4/1/2015	4/1/2015	6/17/2015	6/17/2015	9/1/2015	9/1/2015	3/28/2016	3/28/2016	6/17/2016	6/17/2016	9/27/2016	9/27/2016	12/6/2016	12/6/2016	3/31/2017	3/31/2017	6/23/2017
VOC (ug/L)																							
1,2,3-TRICHLOROPROPANE		NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0
1,2,4-TRIMETHYLBENZENE	NA	NA	24.4	24.4	56.8	58.6	72.1	90.9	56.7	83.4	33.0	47.5	94.6	64.0	161	146	66.5	131	179	200	125	130	110
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<5.0**	**<5.0**	**<5.0**
1,2-DICHLOROBENZENE		600	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0
1,3,5-TRIMETHYLBENZENE	NA	NA	6.81	6.86	2.42	2.54	3.97	4.31	3.86	4.59	3.36	3.36	35.7	49.9	60.2	61.7	60.6	41.5	53.0	62.0	50.4	51.0	42.6
2-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0
4-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0
4-ISOPROPYLTOLUENE	NA	NA	6.85	6.46	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	67.7	69.6	62.1
4-METHYL-2-PENTANONE	NA	NA	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<10.0	<10.0	<10.0
BENZENE	5	5	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	3.11	2.66	**5.10**	**5.39**	<2.00	<2.00	<2.00	<2.00	2.0	2.0	1.8
CARBON DISULFIDE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0
CHLOROBENZENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	2.08	2.02	3.01	2.90	<2.00	<2.00	<2.00	<2.00	1.8	1.9	1.9
CIS-1,2-DICHLOROETHENE	70	70	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	3.63	3.44	4.86	5.41	2.38	<2.00	<2.00	2.36	2.7	2.7	2.4
ETHYLBENZENE	700	700	39.3	39.4	55.1	57.3	80.2	90.7	80.6	95.8	54.6	74.7	148	138	327	295	149	160	52.8	56.2	199	200	194
ISOPROPYLBENZENE	NA	NA	2.15	2.23	2.42	2.54	3.97	4.31	3.86	4.64	3.36	3.34	8.11	9.97	12.0	12.7	15.7	11.8	11.9	13.6	14.4	14.6	12.6
MTBE	NA	70	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0
NAPHTHALENE	NA	140	**356**	**303**	**598**	**457**	**1,510**	**479**	**984**	**839**	**518**	**185**	**1,390**	**1,380**	**1,550**	**2,820**	**855**	**11,500**	**1,370**	**2,890**	**1,890**	**2,360**	**1,690**
n-BUTYLBENZENE	NA	NA	6.99	6.69	<2.00	<2.00	3.18	3.17	2.46	2.80	<2.00	<2.00	5.24	<2.00	<2.00	<2.00	7.87	6.90	<2.00	<2.00	7.2	7.8	5.8
n-PROPLYBENZENE	NA	NA	<2.00	<2.00	2.22	2.13	2.71	2.95	2.31	2.50	<2.00	<2.00	9.44	12.3	15.1	15.3	13.6	9.55	10.2	11.4	12.5	12.4	10.1
sec-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	2.47	2.90	<2.00	2.17	2.05	2.38	2.2	2.3	2.0
STYRENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	3.20	3.29	3.11	2.12	2.48	3.00	3.0	3.1	2.7
TERT-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0
TETRACHLOROETHENE	5	5	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0
TOLUENE	1,000	1,000	6.28	6.14	11.1	11.6	18.8	19.5	20.7	20.4	14.7	17.1	57.8	60.0	114	115	70.5	60.3	67.9	85.2	56.6	57.8	52.2
TRANS-1,2-DICHLOROETHENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0
TOTAL XYLENES	10,000	10,000	131	129	252	262	337	412	348	505	181	269	484	723	1,110	1,110	1,200	774	1,040	436	738	709	745
Total Volatiles			*580*	*524*	*980*	*854*	*2,032*	*1,107*	*1,502*	*1,558*	*808*	*600*	*2,242*	*2,445*	*3,368*	*4,596*	*2,444*	*12,699*	*2,789*	*3,762*	*3,173*	*3,624*	*2,935*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-6A (FD)	EW-6A	EW-6A (FD)	EW-6A	EW-6A (FD)	EW-6A	EW-6A (FD)	EW-6A	EW-6A	EW-6A	FD (EW-6A)	EW-6A	FD (EW-6A)	EW-6A	FD (EW-6A)	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7
Date Sampled			6/23/2017	8/30/2017	8/30/2017	12/5/2017	12/5/2017	3/27/2018	3/27/2018	6/28/2018	09/04/2018	03/26/2019	03/26/2019	06/21/2019	06/21/2019	08/22/2019	08/22/2019	8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**0.321**	**0.349**	**0.348**	**0.353**	**0.349**	**0.296**	**0.287**	**0.278**	**0.361**	**0.140**	**0.146**	**0.142**	**0.155**	**0.138**	**0.144**	**0.352**	**0.326**	**0.331**	**0.284**	**0.411**	**0.404**
PESTICIDES (ug/L)								SH	SH										(SH)		SH		
4 4-DDD	NA	0.2	0.109	0.060	0.097	0.068	0.068	<0.047	0.049	0.125	0.065	0.133	0.176	0.138	0.172	0.133	0.078	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
4 4'-DDE	NA	0.05	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	**<0.102**	**<0.100**	**<0.100**	**<0.101**
4 4'-DDT	NA	0.3	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
ALDRIN	NA	0.5	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
ALPHA-BHC	NA	NA	0.056	0.056	0.049	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
ALPHA-CHLORDANE	NA	NA	0.089	0.089	0.075	0.065	0.075	0.110	0.053	0.080	<0.049	0.108	0.099	0.125	0.152	0.161	0.145	---	---	---	---	---	---
BETA-BHC	NA	NA	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
CHLORDANE	2	2	<0.192	1.56	1.33	1.13	0.538	0.398	0.488	<0.187	1.92	1.96	1.78	<0.187	<0.189	1.20	0.983	<1.00	<0.0995	<0.102	<0.100	<0.100	<0.101
DELTA-BHC	NA	NA	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
DIELDRIN	NA	0.1	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	0.081	0.070	0.070	0.084	0.054	0.072	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
ENDOSULFAN I	NA	10	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
ENDOSULFAN II	NA	10	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
ENDRIN	2	2	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
ENDRIN KETONE	NA	NA	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
GAMMA-BHC	NA	NA	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
GAMMA-CHLORDANE	NA	NA	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	0.064	0.098	0.085	0.111	0.145	0.153	0.150	---	---	---	---	---	---
HEPTACHLOR	0.4	0.4	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
HEPTACHLOR EPOXIDE	0.2	0.2	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
HEXACHLOROBENZENE	1	1	0.234	<0.047	<0.047	0.071	0.072	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
METHOXYCHLOR	40	40	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.049	<0.047	<0.049	<0.047	<0.048	<0.047	<0.047	<0.047	<0.047	<0.050	<0.0995	<0.102	<0.100	<0.100	<0.101
TOXAPHENE	3	NA	<1.25	<1.21	<1.23	<1.25	<1.24	<1.21	<1.26	<1.21	<1.26	<1.23	<1.24	<1.21	<1.23	<1.21	<1.21	<1.00	<1.99	<2.04	<2.00	<2.00	<2.02
Total Pesticides			*0.488*	*1.77*	*1.55*	*1.33*	*0.753*	*0.508*	*0.590*	*0.205*	*2.05*	*2.38*	*2.21*	*0.444*	*0.553*	*1.70*	*1.428*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
SEMI VOLATILES (ug/L)																							
2,4,6-TRICHLOROPHENOL	NA	10	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
2,4-DICHLOROPHENOL	NA	10	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
2,4-DIMETHYLPHENOL	NA	60	<46.7	<46.7	<46.7	<46.7	<46.7	<46.7	<46.7	<46.7	<47.6	<47.2	<47.6	<48.1	<46.7	<46.7	<46.7	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
2,4-DINITROPHENOL	NA	200	<46.7	<46.7	<46.7	<46.7	<46.7	<46.7	<46.7	<46.7	<47.6	<47.2	<47.6	<48.1	<46.7	<46.7	<46.7	<5.0	<4.95	<5.38	<5.00	<5.05	<5.05
2,4-DINITROTOLUENE	NA	30	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
2-CHLORONAPHTHALENE	NA	NA	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
2-METHYLNAPHTHALENE	NA	10	**209**	**294**	**247**	**222**	**223**	**159**	**115**	**206**	**197**	**221**	**224**	**128**	**106**	**101**	**79.4**	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
2-METHYLPHENOL	NA	10	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
2-NITROANILINE	NA	NA	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
2-NITROPHENOL	NA	NA	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
3/4-METHYLPHENOL	NA	NA	<18.7	<18.7	<18.7	<18.7	<18.7	<18.7	<18.7	<18.7	<19	<18.9	<19	<19.2	<18.7	<18.7	<18.7						
3-NITROANILINE	NA	NA	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
4-CHLORO-3-METHYLPHENOL	NA	NA	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
4-CHLOROANILINE	NA	20	<18.7	<18.7	<18.7	<18.7	<18.7	<18.7	<18.7	<18.7	<19	<18.9	<19	<19.2	<18.7	<18.7	<18.7	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
4-NITROANILINE	NA	NA	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
4-NITROPHENOL	NA	NA	<46.7	<46.7	<46.7	<46.7	<46.7	<46.7	<46.7	<46.7	<47.6	<47.2	<47.6	<48.1	<46.7	<46.7	<46.7	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
ACENAPHTHENE	NA	20	**52.6**	**76.6**	**61.4**	**52.8**	**54.0**	**52.3**	**47.7**	**75.1**	**64.1**	**33**	**31.2**	**24.0**	**27.9**	**31.5**	**26.3**	8.97	6.33	<1.08	<1.00	6.02	6.84
ACENAPHTHYLENE	NA	30	2.53	3.32	2.37	2.59	1.61	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	4.12	<1.00	<1.01	<1.01
ACETOPHENONE	NA	NA	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
ANTHRACENE	NA	60	1.64	1.23	1.20	2.93	2.19	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
BENZO (A) ANTHRACENE	NA	1	0.05	<0.23	<0.23	0.27	0.17	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	**<5.0**	<0.0990	<0.108	<0.100	<0.101	<0.101
BENZO (A) PYRENE	0.2	0.2	<0.05	<0.12	<0.12	0.09	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<5.0**	<0.0990	<0.108	<0.100	<0.101	<0.101
BENZO (B) FLUORANTHENE	NA	1	<0.05	<0.23	<0.23	0.11	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<5.0**	**<4.95**	<0.538	<0.500	<0.505	<0.505
BENZO (K) FLUORANTHENE	NA	1	<0.05	<0.23	<0.23	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<5.0**	**<4.95**	<0.538	<0.500	<0.505	<0.505
BENZYL ALCOHOL	NA	NA	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
BIS(2-CHLOROETHYL)ETHER	NA	30	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<5.6	<5.6	**35.5**	**46.7**	<5.6	<5.6	<5.6	<5.6	<5.7	<5.7	<5.7	<5.8	<5.6	<5.6	<5.6	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
CARBAZOLE	NA	NA	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
CHRYSENE	NA	2	<0.05	<0.23	<0.23	0.26	0.16	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	**<5.0**	<0.990	<1.08	<1.00	<1.01	<1.01
DIBENZOFURAN	NA	NA	29.7	25.9	23.8	27.2	28.5	19.7	17.9	31.0	25.2	16.1	15.5	11.5	13.8	17.1	13.1	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
DIETHYLPHTHALATE	NA	2000	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
FLUORANTHENE	NA	90	0.97	<0.93	<0.93	1.85	1.44	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
FLUORENE	NA	30	15.5	16.9	15.9	16.5	10.2	15.6	13.9	22.7	16.8	10.2	9.8	<9.6	9.5	14.9	<9.3	5.21	4.46	3.55	<1.00	3.71	3.45
HEXACHLOROETHANE	NA	8	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.8	<4.7	<4.8	<4.8	<4.7	<4.7	<4.7	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.05	<0.23	<0.23	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<5.0**	<0.0990	<0.108	<0.100	<0.100	<0.101
NAPHTHALENE	NA	140	**806**	**1,330**	**1,100**	**795**	**804**	**599**	**491**	**669**	**1,120**	**625**	**635**	**403**	**419**	**457**	**379**	6.51	2.73	1.89	2.07	3.68	<1.01
NITROBENZENE	NA	NA	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
PENTACHLOROPHENOL	1	1	**3.44**	**4.11**	**3.89**	**2.62**	**1.92**	**1.87**	**1.73**	**4.64**	**5.88**	**3.54**	**3.69**	**1.80**	**1.78**	**1.23**	**1.55**	**<5.0**	<0.990	<1.08	**1.30**	<1.01	<1.01
PHENANTHRENE	NA	40	14.6	16.8	16.6	19.9	19.3	14.8	14.2	21.5	14.9	9.5	<9.5	<9.6	<9.3	12.4	10.1	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
PHENOL	NA	1000	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
PYRENE	NA	60	0.63	<0.93	<0.93	1.75	1.19	<9.3	<9.3	<9.3	<9.5	<9.4	<9.5	<9.6	<9.3	<9.3	<9.3	<5.0	<0.990	<1.08	<1.00	<1.01	<1.01
Total Semi Volatiles			*1,137*	*1,769*	*1,508*	*1,193*	*1,148*	*862*	*701*	*1,030*	*1,444*	*918*	*919*	*568*	*578*	*639*	*512*	*20.69*	*13.52*	*9.56*	*3.37*	*13.41*	*10.29*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-6A (FD)	EW-6A	EW-6A (FD)	EW-6A	EW-6A (FD)	EW-6A	EW-6A (FD)	EW-6A	EW-6A	EW-6A	FD (EW-6A)	EW-6A	FD (EW-6A)	EW-6A	FD (EW-6A)	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7
Date Sampled			6/23/2017	8/30/2017	8/30/2017	12/5/2017	12/5/2017	3/27/2018	3/27/2018	6/28/2018	09/04/2018	03/26/2019	03/26/2019	06/21/2019	06/21/2019	08/22/2019	08/22/2019	8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008
VOC (ug/L)																							
1,2,3-TRICHLOROPROPANE		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	---	---	---	<5.00	<5.00	<5.00
1,2,4-TRIMETHYLBENZENE	NA	NA	104	126	134	95.2	97.5	77.5	85.0	150	140	99.4	91.6	90.2	91.3	78.7	80.4	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5**	<5	<5	<5	<5	<5	<5	**---**	**---**	**---**	**<5.00**	**<5.00**	**<5.00**
1,2-DICHLOROBENZENE		600	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.4	<1	1.0	1.1	<1	<1	<1	<1	---	---	---	<5.00	<5.00	<5.00
1,3,5-TRIMETHYLBENZENE	NA	NA	43.2	40.5	41.2	27.2	35.5	32.5	34.4	61.6	47.9	36.4	37.0	22.0	23.2	15.7	13.9	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
2-CHLOROTOLUENE	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.00	<5.0	<5.00	<5.00	<5.00	<5.00
4-CHLOROTOLUENE	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.00	<5.0	<5.00	<5.00	<5.00	<5.00
4-ISOPROPYLTOLUENE	NA	NA	61.3	61.0	61.1	37.4	50.3	40.5	41.5	89.7	67.2	56.3	55.9	26.5	26.8	13.3	12.7	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
4-METHYL-2-PENTANONE	NA	NA	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	<10	<10	<10	<10	<25	<5.00	<5.00	<5.00	<5.00	<5.00
BENZENE	5	5	1.8	1.7	1.7	1.2	1.2	1.2	1.4	2.4	2.0	<1	<1	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
CARBON DISULFIDE	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
CHLOROBENZENE	100	100	2.0	2.0	1.9	1.4	1.4	1.6	1.7	2.5	2.2	1.5	1.5	1.2	1.3	1.1	1.2	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
CIS-1,2-DICHLOROETHENE	70	70	2.7	2.0	2.1	1.9	1.6	2.1	2.1	3.0	2.3	<1	<1	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
ETHYLBENZENE	700	700	191	198	208	134	136	132	136	264	228	158	155	152	146.0	130	134	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
ISOPROPYLBENZENE	NA	NA	12.6	12.6	12.8	7.9	10.6	9.5	10.6	15.0	12.0	8.3	7.9	6.4	5.8	6.3	4.9	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
MTBE	NA	70	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	47.5	11.8	6.47	<5.00	<5.00	<5.00
NAPHTHALENE	NA	140	**1,700**	**2,060**	**1,990**	**1,380**	**1,410**	**1,030**	**1,040**	**1,720**	**1,960**	**976**	**944**	**784**	**706**	**712**	**705**	6.56	---	<20.0	<5.00	<5.00	<20.0
n-BUTYLBENZENE	NA	NA	5.9	6.4	6.4	4.1	4.9	5.3	5.7	<1.0	6.3	6.1	5.9	3.9	3.8	3.3	3.4	<5.00	<5.0	<5.00	<5.00	<5.00	<5.00
n-PROPLYBENZENE	NA	NA	10.0	10.6	10.6	6.7	8.6	7.8	8.8	14.0	10.6	8.7	9.1	7.1	6.8	6.8	5.6	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
sec-BUTYLBENZENE	NA	NA	2.0	2.3	2.2	1.5	2.0	2.2	2.4	3.6	2.8	2.6	2.7	1.4	1.5	1.7	1.6	---	---	---	<5.00	<5.00	<5.00
STYRENE	100	100	2.8	2.8	2.7	1.5	1.5	1.8	2.0	3.2	3.3	2.0	1.9	<1	<1	1.6	1.4	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
TERT-BUTYLBENZENE	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
TETRACHLOROETHENE	5	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
TOLUENE	1,000	1,000	55.7	54.2	55.5	30.6	31.9	29.6	31.2	62.0	70.4	30.3	29.5	29.6	32.2	19.7	23.3	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
TRANS-1,2-DICHLOROETHENE	100	100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
TOTAL XYLENES	10,000	10,000	688	740	766	484	494	443	454	1,075	812	508	500	317	288	217.6	235	<5.0	<5.00	<5.00	<5.00	5.54	<5.00
Total Volatiles			*2,883*	*3,320*	*3,296*	*2,215*	*2,287*	*1,817*	*1,857*	*3,467*	*3,367*	*1,387*	*1,343*	*1,441*	*1,333*	*1,208*	*1,222*	*54.1*	*11.8*	*6.47*	*ND*	*5.54*	*ND*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7
Date Sampled			12/22/2008	3/19/2009	6/11/2009	9/15/2009	12/17/2009	3/19/2010	6/10/2010	9/17/2010	12/21/2010	3/16/2011	6/16/2011	12/23/2011	3/15/2012	6/18/2012	9/25/2012	12/18/2012	3/20/2013	6/14/2013	9/24/2013	12/12/2013	3/20/2014
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**0.316**	**0.308**	**0.295**	**0.273**	**0.283**	**0.283**	**0.261**	**0.283**	**0.289**	**0.297**	**0.295**	**0.305**	**0.293**	**0.255**	**0.287**	**0.311**	**0.371**	**0.270**	**0.336**	**0.305**	**0.248**
PESTICIDES (ug/L)																							
4 4-DDD	NA	0.2	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.050	<0.050
4 4'-DDE	NA	0.05	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.0510	<0.0510	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.050	**<0.050**
4 4'-DDT	NA	0.3	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.050	<0.050
ALDRIN	NA	0.5	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.002	<0.002
ALPHA-BHC	NA	NA	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	0.0407	<0.0269	<0.0260	<0.0250	<0.025	<0.025
ALPHA-CHLORDANE	NA	NA	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	---	---	---	---	---	---	---	---	---	---
BETA-BHC	NA	NA	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.005	<0.005
CHLORDANE	2	2	<0.510	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.30	<0.030
DELTA-BHC	NA	NA	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.025	<0.025
DIELDRIN	NA	0.1	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.002	<0.003
ENDOSULFAN I	NA	10	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.050	<0.050
ENDOSULFAN II	NA	10	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.050	<0.050
ENDRIN	2	2	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.050	<0.050
ENDRIN KETONE	NA	NA	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.050	<0.050
GAMMA-BHC	NA	NA	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.025	<0.025
GAMMA-CHLORDANE	NA	NA	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	---	---	---	---	---	---	---	---	---	---
HEPTACHLOR	0.4	0.4	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.025	<0.025
HEPTACHLOR EPOXIDE	0.2	0.2	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.025	<0.025
HEXACHLOROBENZENE	1	1	---	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	0.0476	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	---	---
METHOXYCHLOR	40	40	<0.0260	<0.101	<0.101	<0.101	<0.102	<0.102	<0.105	<0.101	<0.100	<0.101	<0.102	<0.102	<0.0250	<0.0250	<0.0250	<0.0250	<0.0269	<0.0260	<0.0250	<0.10	<0.10
TOXAPHENE	3	NA	<2.55	<2.01	<2.00	<2.01	<2.04	<2.04	<2.11	<2.02	<2.00	<2.02	<2.04	<2.04	<2.00	<2.00	<2.00	<2.00	<2.15	<2.08	<2.00	<1.0	<1.0
Total Pesticides			*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*0.0476*	*ND*	*0.0407*	*ND*	*ND*	*ND*	*ND*	*ND*
SEMI VOLATILES (ug/L)																							
2,4,6-TRICHLOROPHENOL	NA	10	<1.01	<1.00	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
2,4-DICHLOROPHENOL	NA	10	<1.01	<1.00	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
2,4-DIMETHYLPHENOL	NA	60	<1.01	<1.00	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
2,4-DINITROPHENOL	NA	200	<5.05	<5.00	<5.15	<4.95	<5.10	<5.18	<5.05	<5.15	<5.08	<5.03	<5.43	<5.05	<5.13	<5.00	<4.98	<5.05	<5.21	<26.9	<5.10	<5.10	<5.05
2,4-DINITROTOLUENE	NA	30	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
2-CHLORONAPHTHALENE	NA	NA	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
2-METHYLNAPHTHALENE	NA	10	<1.01	1.96	2.08	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	2.23	2.20	1.67	1.47	2.21	<1.02	<1.01
2-METHYLPHENOL	NA	10	<1.01	<1.00	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
2-NITROANILINE	NA	NA	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
2-NITROPHENOL	NA	NA	<1.01	<1.00	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
3/4-METHYLPHENOL	NA	NA																					
3-NITROANILINE	NA	NA	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
4-CHLORO-3-METHYLPHENOL	NA	NA	<1.01	<1.00	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
4-CHLOROANILINE	NA	20	<1.01	<1.01	<2.58	<2.48	<2.55	<2.59	<2.53	<2.58	<2.54	<2.51	<2.72	<2.53	<2.56	<2.50	<2.49	<2.53	<2.60	<2.69	<2.55	<2.55	<2.53
4-NITROANILINE	NA	NA	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
4-NITROPHENOL	NA	NA	<1.01	<1.00	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	1.44	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
ACENAPHTHENE	NA	20	12.0	6.91	9.21	7.04	5.88	4.62	10.9	12.5	10.4	13.9	12.0	**20.5**	12.1	8.80	9.22	8.60	7.09	6.34	8.87	3.92	6.17
ACENAPHTHYLENE	NA	30	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
ACETOPHENONE	NA	NA	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
ANTHRACENE	NA	60	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
BENZO (A) ANTHRACENE	NA	1	<0.101	0.449	<0.103	<0.0990	<0.102	<0.104	<0.101	0.351	<0.102	<0.101	<0.109	<0.101	<0.103	<0.100	<0.0995	<0.101	<0.104	<0.108	<0.102	<0.103	<0.101
BENZO (A) PYRENE	0.2	0.2	<0.101	<0.101	<0.103	<0.0990	<0.102	<0.104	<0.101	**0.304**	<0.102	<0.101	<0.109	<0.101	<0.103	<0.100	<0.0995	<0.101	<0.104	<0.108	<0.102	<0.103	<0.101
BENZO (B) FLUORANTHENE	NA	1	<0.505	<0.505	<0.103	<0.0990	<0.102	<0.104	<0.101	<0.103	<0.102	<0.101	<0.109	<0.101	<0.103	<0.100	<0.0995	<0.101	<0.104	<0.108	<0.102	<0.103	<0.101
BENZO (K) FLUORANTHENE	NA	1	<0.505	<0.505	<0.103	<0.0990	<0.102	<0.104	<0.101	<0.103	<0.102	<0.101	<0.109	<0.101	<0.103	<0.100	<0.0995	<0.101	<0.104	<0.108	<0.102	<0.103	<0.101
BENZYL ALCOHOL	NA	NA	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
BIS(2-CHLOROETHYL)ETHER	NA	30	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	3.46	<0.995	<1.01	<1.04	3.03	<1.02	<1.02	<1.01
CARBAZOLE	NA	NA	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
CHRYSENE	NA	2	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
DIBENZOFURAN	NA	NA	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
DIETHYLPHTHALATE	NA	2000	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	1.66	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
FLUORANTHENE	NA	90	<1.01	<1.01	<1.03	<0.990	<1.02	2.22	<1.01	1.22	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
FLUORENE	NA	30	7.20	4.45	5.91	3.97	4.09	2.65	6.16	7.80	5.57	8.03	5.95	7.96	4.76	5.16	6.77	6.74	5.28	6.09	6.03	2.96	5.11
HEXACHLOROETHANE	NA	8	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.101	<0.101	<0.103	<0.0990	<0.102	<0.104	<0.101	0.155	<0.102	<0.101	<0.109	<0.101	<0.103	<0.100	<0.0995	<0.101	<0.104	<0.108	<0.102	<0.103	<0.101
NAPHTHALENE	NA	140	3.48	3.08	4.45	2.07	3.79	1.59	2.87	2.49	<1.02	4.36	<1.09	4.13	3.73	3.67	3.15	2.90	2.22	<1.08	6.64	2.18	2.61
NITROBENZENE	NA	NA	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
PENTACHLOROPHENOL	1	1	<1.01	<1.00	**9.84**	<0.990	<1.02	<1.04	<1.01	<2.58	<2.54	<1.01	<1.09	<0.606	<0.615	<0.600	<0.597	<0.606	<0.625	<0.642	<1.00	<1.00	<1.00
PHENANTHRENE	NA	40	<1.01	<1.01	2.48	<0.990	<1.02	<1.04	<1.01	1.15	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
PHENOL	NA	1000	<1.01	<1.00	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
PYRENE	NA	60	<1.01	<1.01	<1.03	<0.990	<1.02	<1.04	<1.01	<1.03	<1.02	<1.01	<1.09	<1.01	<1.03	<1.00	<0.995	<1.01	<1.04	<1.08	<1.02	<1.02	<1.01
Total Semi Volatiles			*22.7*	*16.85*	*33.97*	*13.08*	*13.76*	*11.08*	*19.9*	*26.0*	*16.0*	*26.3*	*18.0*	*35.7*	*20.6*	*21.09*	*21.37*	*20.44*	*16.26*	*16.93*	*23.75*	*9.06*	*13.89*

Shaded = Compound detected in the laboratory analysis
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mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
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--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7
Date Sampled			12/22/2008	3/19/2009	6/11/2009	9/15/2009	12/17/2009	3/19/2010	6/10/2010	9/17/2010	12/21/2010	3/16/2011	6/16/2011	12/23/2011	3/15/2012	6/18/2012	9/25/2012	12/18/2012	3/20/2013	6/14/2013	9/24/2013	12/12/2013	3/20/2014
VOC (ug/L)				SL																		SH/SL
1,2,3-TRICHLOROPROPANE		NA	<2.00	---	---	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
1,2,4-TRIMETHYLBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	3.00	4.01	<2.00	<2.00	<2.00	<2.00	<2.00
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**<2.00**	**---**	**---**	**<2.00**	**---**	**---**	**---**	**---**	**---**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**
1,2-DICHLOROBENZENE		600	<2.00	---	---	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
1,3,5-TRIMETHYLBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
2-CHLOROTOLUENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-CHLOROTOLUENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-ISOPROPYLTOLUENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-METHYL-2-PENTANONE	NA	NA	<5.00	<5.00	<5.00	<5.00	---	---	---	---	---	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BENZENE	5	5	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
CARBON DISULFIDE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
CHLOROBENZENE	100	100	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
CIS-1,2-DICHLOROETHENE	70	70	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
ETHYLBENZENE	700	700	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
ISOPROPYLBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
MTBE	NA	70	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
NAPHTHALENE	NA	140	30.9	54.9	**173**	<20.0	---	---	---	---	---	**875**	<2.00	11.0	**219**	**1,510**	16.2	4.10	5.29	7.16	<2.00	5.78	8.85
n-BUTYLBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
n-PROPLYBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	4.01	<2.00	<2.00	<2.00	<2.00	<2.00
sec-BUTYLBENZENE	NA	NA	<2.00	---	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
STYRENE	100	100	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TERT-BUTYLBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TETRACHLOROETHENE	5	5	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TOLUENE	1,000	1,000	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TRANS-1,2-DICHLOROETHENE	100	100	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TOTAL XYLENES	10,000	10,000	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	3.37	<2.00	<2.00	2.39	4.07	3.59	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
Total Volatiles			*30.9*	*54.9*	*173*	*ND*	---	---	---	---	---	*878*	*ND*	*11.0*	*221*	*1,517*	*27.8*	*4.10*	*5.29*	*7.16*	*ND*	*5.78*	*8.85*

Shaded = Compound detected in the laboratory analysis
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laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

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WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW7	EW7	EW7
Date Sampled			6/16/2014	9/18/2014	12/9/2014	4/1/2015	6/17/2015	9/1/2015	12/10/2015	3/28/2016	6/17/2016	9/27/2016	12/6/2016	3/31/2017	6/23/2017	8/30/2017	12/5/2017	3/27/2018	6/28/2018	09/04/2018	12/18/2018	03/26/2019	06/21/2019
METALS (mg/L)																						
ARSENIC (TOTAL)	0.05	0.01	**0.126**	**0.224**	**0.312**	**0.246**	**0.248**	**0.182**	**0.172**	**0.216**	**0.157**	**0.247**	**0.247**	**0.195**	**0.145**	**0.129**	**0.221**	**0.213**	**0.238**	**0.227**	**0.237**	**0.229**	**0.249**
PESTICIDES (ug/L)																						
4 4-DDD	NA	0.2	<0.050	**<0.25**	<0.005	<0.053	<0.050	<0.025	<0.050	<0.050	<0.005	<0.050	<0.005	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
4 4'-DDE	NA	0.05	<0.050	**<0.25**	<0.005	<0.048	<0.050	<0.025	<0.050	<0.050	<0.005	<0.050	<0.005	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
4 4'-DDT	NA	0.3	<0.050	<0.25	<0.050	<0.053	<0.050	<0.025	<0.050	<0.050	<0.005	<0.050	<0.005	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
ALDRIN	NA	0.5	<0.002	<0.008	<0.002	<0.002	<0.010	<0.008	<0.004	<0.015	<0.002	<0.002	<0.002	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
ALPHA-BHC	NA	NA	<0.025	<0.13	<0.025	<0.027	<0.025	<0.025	<0.025	<0.050	<0.026	<0.025	<0.026	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
ALPHA-CHLORDANE	NA	NA	---	---	---	---	---	---	---	---	---	---	---	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
BETA-BHC	NA	NA	<0.005	<0.025	<0.005	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
CHLORDANE	2	2	<0.30	<1.5	<0.30	<0.32	<0.050	<0.25	<0.050	<0.2	<0.051	<0.050	<0.052	<0.189	<0.190	<0.187	<0.192	<0.187	<0.187	<0.194	<0.187	<0.187	<0.194
DELTA-BHC	NA	NA	<0.025	<0.13	<0.025	<0.027	<0.025	<0.025	<0.025	<0.025	<0.026	<0.025	<0.026	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
DIELDRIN	NA	0.1	<0.002	<0.008	<0.010	<0.002	<0.002	<0.025	<0.003	<0.010	<0.002	<0.002	<0.002	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
ENDOSULFAN I	NA	10	<0.050	<0.25	<0.050	<0.053	<0.050	<0.25	<0.050	<0.050	<0.005	<0.050	<0.005	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
ENDOSULFAN II	NA	10	<0.050	<0.25	<0.050	<0.053	<0.050	<0.025	<0.050	<0.050	<0.005	<0.050	<0.005	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
ENDRIN	2	2	<0.050	**<0.25**	<0.005	<0.053	<0.050	<0.025	<0.050	<0.050	<0.005	<0.050	<0.005	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
ENDRIN KETONE	NA	NA	<0.050	<0.25	<0.050	<0.053	<0.050	<0.025	<0.050	<0.050	<0.005	<0.050	<0.005	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
GAMMA-BHC	NA	NA	<0.025	<0.13	<0.025	<0.027	<0.025	<0.025	<0.025	<0.025	<0.026	<0.025	<0.026	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
GAMMA-CHLORDANE	NA	NA	---	---	---	---	---	---	---	---	---	---	---	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
HEPTACHLOR	0.4	0.4	<0.025	<0.13	<0.025	<0.027	<0.025	<0.025	<0.025	<0.025	<0.026	<0.025	<0.026	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
HEPTACHLOR EPOXIDE	0.2	0.2	<0.025	<0.13	<0.025	<0.027	<0.025	<0.025	<0.025	<0.025	<0.026	<0.025	<0.026	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
HEXACHLOROBENZENE	1	1	---	---	---	---	---		---	---	---	---	<0.005	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
METHOXYCHLOR	40	40	<0.10	<0.51	<0.10	<0.11	<0.10	<0.025	<0.10	<0.10	<0.005	<0.10	<0.005	<0.047	<0.048	<0.047	<0.048	<0.047	<0.047	<0.049	<0.047	<0.047	<0.049
TOXAPHENE	3	NA	<1.0	**<5.1**	<1.0	<1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	---	<1.24	<1.21	<1.25	<1.21	<1.21	<1.26	<1.21	<1.21	<1.26
Total Pesticides			*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
SEMI VOLATILES (ug/L)																						
2,4,6-TRICHLOROPHENOL	NA	10	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
2,4-DICHLOROPHENOL	NA	10	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
2,4-DIMETHYLPHENOL	NA	60	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<46.7	<49.0	<46.7	<47.2	<48.1	<46.7	<46.7	<46.7	<46.7	<47.6
2,4-DINITROPHENOL	NA	200	<5.21	<5.26	<5.15	<5.38	<5.00	<5.05	<5.56	<5.05	<5.05	<5.00	<5.00	<46.7	<49.0	<46.7	<47.2	<48.1	<46.7	<46.7	<46.7	<46.7	<47.6
2,4-DINITROTOLUENE	NA	30	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
2-CHLORONAPHTHALENE	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
2-METHYLNAPHTHALENE	NA	10	<1.04	<1.05	<1.03	<1.08	<1.00	1.43	<5.56	<1.01	<1.01	<1.00	<1.00	<0.19	0.55	0.36	<0.19	0.40	0.41	0.50	0.66	0.64	0.43
2-METHYLPHENOL	NA	10	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
2-NITROANILINE	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
2-NITROPHENOL	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
3/4-METHYLPHENOL	NA	NA												<18.7	<19.6	<18.7	<18.9	<19.2	<18.7	<18.7	<18.7	<18.7	<0.19
3-NITROANILINE	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
4-CHLORO-3-METHYLPHENOL	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
4-CHLOROANILINE	NA	20	<2.60	<2.63	<2.58	<2.69	<2.50	<2.53	<2.78	<2.53	<2.53	<2.50	<2.50	<18.7	<19.6	<18.7	<9.4	<19.2	<18.7	<18.7	<18.7	<18.7	<0.19
4-NITROANILINE	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
4-NITROPHENOL	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<46.7	<49.0	<46.7	<9.4	<48.1	<46.7	<46.7	<46.7	<46.7	<47.6
ACENAPHTHENE	NA	20	5.19	4.23	5.23	3.97	<1.00	5.50	3.89	4.84	4.09	4.32	4.02	4.54	4.51	3.52	3.64	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
ACENAPHTHYLENE	NA	30	<1.04	<1.05	<1.03	<1.08	3.12	<1.01	<1.11	<1.01	4.18	<1.00	<1.00	<0.19	<0.20	<0.19	<0.19	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
ACETOPHENONE	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
ANTHRACENE	NA	60	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<0.19	<0.20	<0.19	<0.19	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
BENZO (A) ANTHRACENE	NA	1	<0.104	<0.100	<0.103	<0.108	<0.100	<0.101	<0.111	<0.101	<0.101	<0.100	<0.100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BENZO (A) PYRENE	0.2	0.2	<0.104	<0.100	<0.103	<0.108	<0.100	<0.101	<0.111	<0.101	<0.101	<0.100	<0.100	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BENZO (B) FLUORANTHENE	NA	1	<0.104	<0.100	<0.103	<0.108	<0.100	<0.101	<0.111	<0.101	<0.101	<0.100	<0.100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BENZO (K) FLUORANTHENE	NA	1	<0.104	<0.100	<0.103	<0.108	<0.100	<0.101	<0.111	<0.101	<0.101	<0.100	<0.100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BENZYL ALCOHOL	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
BIS(2-CHLOROETHYL)ETHER	NA	30	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	1.29	<1.05	<1.03	<1.08	<1.00	<1.01	1.61	1.25	<1.01	<1.00	<1.00	5.8	<5.9	**42.1**	<5.7	<5.8	**30.6**	**7.2**	<5.6	**8.5**	<5.7
CARBAZOLE	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
CHRYSENE	NA	2	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DIBENZOFURAN	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
DIETHYLPHTHALATE	NA	2000	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
FLUORANTHENE	NA	90	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	0.53	0.49	0.47	0.36	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
FLUORENE	NA	30	4.09	3.85	4.46	3.03	4.08	3.40	3.14	4.14	3.04	5.07	5.24	5.75	5.18	4.19	4.45	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
HEXACHLOROETHANE	NA	8	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<4.7	<4.9	<4.7	<4.7	<4.8	<4.7	<4.7	<4.7	<4.7	<4.8
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.104	<0.100	<0.103	<0.108	<0.100	<0.101	<0.111	<0.101	<0.101	<0.100	<0.100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
NAPHTHALENE	NA	140	6.44	<1.05	2.01	1.34	3.85	7.49	<1.11	<1.01	1.39	1.84	2.00	0.40	3.08	2.29	0.84	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
NITROBENZENE	NA	NA	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
PENTACHLOROPHENOL	1	1	<1.00	<1.00	<1.00	<1.00	**3.22**	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.85	<0.88	<0.30	<0.85	<0.87	<0.84	<0.84	<0.84	<0.84	<0.86
PHENANTHRENE	NA	40	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<0.19	<0.20	<0.19	<0.19	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
PHENOL	NA	1000	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	<9.3	<9.8	<9.3	<9.4	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
PYRENE	NA	60	<1.04	<1.05	<1.03	<1.08	<1.00	<1.01	<1.11	<1.01	<1.01	<1.00	<1.00	0.22	0.24	0.23	<0.19	<9.6	<9.3	<9.3	<9.3	<9.3	<9.5
Total Semi Volatiles			*17.01*	*8.08*	*11.70*	*8.34*	*14.27*	*17.82*	*8.64*	*10.23*	*12.70*	*11.23*	*11.26*	*17.2*	*14.05*	*53.2*	*9.3*	*0.40*	*31.0*	*7.7*	*0.66*	*9.1*	*0.43*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW-7	EW7	EW7	EW7
Date Sampled			6/16/2014	9/18/2014	12/9/2014	4/1/2015	6/17/2015	9/1/2015	12/10/2015	3/28/2016	6/17/2016	9/27/2016	12/6/2016	3/31/2017	6/23/2017	8/30/2017	12/5/2017	3/27/2018	6/28/2018	09/04/2018	12/18/2018	03/26/2019	06/21/2019
VOC (ug/L)							SH			SH													
1,2,3-TRICHLOROPROPANE		NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
1,2,4-TRIMETHYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	2.42	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5**	<5	<5	<5
1,2-DICHLOROBENZENE		600	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
1,3,5-TRIMETHYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
2-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
4-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
4-ISOPROPYLTOLUENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
4-METHYL-2-PENTANONE	NA	NA	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	<10
BENZENE	5	5	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
CARBON DISULFIDE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
CHLOROBENZENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
CIS-1,2-DICHLOROETHENE	70	70	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
ETHYLBENZENE	700	700	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
ISOPROPYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	1	<1	<1
MTBE	NA	70	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
NAPHTHALENE	NA	140	11.1	2.19	2.64	<2.00	2.50	<2.00	**2,380**	<2.00	**481**	**3,070**	<2.00	<1.0	2.5	<1.0	<1.0	1.6	5.3	2.6	4.2	4.2	4.0
n-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
n-PROPLYBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
sec-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
STYRENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
TERT-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
TETRACHLOROETHENE	5	5	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
TOLUENE	1,000	1,000	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
TRANS-1,2-DICHLOROETHENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<0.270	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1
TOTAL XYLENES	10,000	10,000	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	<2
Total Volatiles			*11.1*	*2.19*	*2.64*	*ND*	*2.50*	*ND*	*2,380*	*ND*	*483*	*3,070*	*ND*	*ND*	*ND*	*ND*	*ND*	*1.6*	*5.3*	*2.6*	*5.2*	*4.2*	*4.0*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-7	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	FD-1 (EW-8)	EW-8	EW-8	Effluent to EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8
Date Sampled			08/22/2019	8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008	12/22/2008	12/22/2008	3/19/2009	6/11/2009	6/12/2009	9/15/2009	12/17/2009	3/19/2010	6/10/2010	9/17/2010	12/21/2010	3/16/2011	6/16/2011	9/15/2011
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**0.249**	**0.392**	**0.363**	**0.397**	**0.365**	**0.462**	**0.545**	**0.338**	**0.331**	**0.349**	**0.351**	**0.355**	**0.322**	**0.322**	**0.353**	**0.360**	**0.334**	**0.347**	**0.402**	**0.368**	**0.288**
PESTICIDES (ug/L)						(SH)		SH	SH								(SH)						
4 4-DDD	NA	0.2	<0.047	**6.59**	<0.100	**1.12**	**2.10**	**1.87**	**0.318**	**2.39**	**2.26**	**1.50**	**0.705**	**6.08**	**0.629**	**1.94**	**474**	**85.6**	<0.102	**1.03**	**2.24**	**1.98**	**0.624**
4 4'-DDE	NA	0.05	<0.047	**0.418**	**<0.100**	**<0.102**	**0.360**	**0.140**	**<0.104**	<0.0260	<0.0260	<0.102	<0.101	**0.217**	<0.101	**0.151**	<0.103	<0.101	<0.102	<0.102	<0.101	**0.123**	<0.0505
4 4'-DDT	NA	0.3	<0.047	<0.050	<0.100	<0.102	<0.100	<0.100	<0.104	<0.0260	<0.0260	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	<0.101	<0.104	<0.101
ALDRIN	NA	0.5	<0.047	<0.050	<0.100	<0.102	<0.100	<0.100	<0.104	<0.0260	<0.0260	<0.102	<0.101	<0.102	<0.101	0.152	**17.8**	<0.101	<0.102	<0.102	<0.101	<0.104	<0.101
ALPHA-BHC	NA	NA	<0.047	<0.050	<0.100	<0.102	<0.100	<0.100	<0.104	<0.0260	<0.0260	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	0.137	<0.104	<0.101
ALPHA-CHLORDANE	NA	NA	<0.047	---	---	---	---	---	---	0.105	0.097	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	0.169	<0.104	<0.101
BETA-BHC	NA	NA	<0.047	<0.050	<0.100	<0.102	<0.100	0.724	<0.104	<0.0260	<0.0260	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	<0.101	<0.104	<0.101
CHLORDANE	2	2	<0.187	<1.00	<0.100	<0.102	**11.9**	<0.100	<0.104	<0.510	<0.510	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	<0.101	<0.104	<0.101
DELTA-BHC	NA	NA	<0.047	0.571	<0.100	<0.102	<0.100	<0.100	<0.104	<0.0260	<0.0260	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	<0.101	<0.104	<0.101
DIELDRIN	NA	0.1	<0.047	**3.37**	**0.389**	**0.545**	**0.950**	**0.815**	**0.365**	**0.681**	**0.933**	**0.561**	**0.262**	**1.56**	0.293	**0.821**	**889**	**41.6**	<0.102	**0.457**	**0.993**	**0.602**	<0.101
ENDOSULFAN I	NA	10	<0.047	<0.100	<0.100	<0.102	<0.100	<0.100	<0.104	<0.0260	<0.0260	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	0.156	<0.104	<0.101
ENDOSULFAN II	NA	10	<0.047	<0.100	<0.100	<0.102	<0.100	<0.100	<0.104	<0.0260	<0.0260	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	<0.101	<0.104	<0.101
ENDRIN	2	2	<0.047	<0.100	<0.100	<0.102	<0.100	<0.100	<0.104	<0.0260	<0.0260	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	<0.101	<0.104	<0.101
ENDRIN KETONE	NA	NA	<0.047	0.0615	<0.100	<0.102	<0.100	<0.100	<0.104	0.083	0.080	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	<0.101	<0.104	<0.101
GAMMA-BHC	NA	NA	<0.047	0.332	<0.100	<0.102	<0.100	<0.100	0.260	0.170	0.168	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	0.164	<0.104	<0.101
GAMMA-CHLORDANE	NA	NA	<0.047	---	---	---	---	---	---	0.100	0.085	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	0.112	<0.104	<0.101
HEPTACHLOR	0.4	0.4	<0.047	<0.100	<0.100	<0.102	<0.100	<0.100	<0.104	<0.0260	<0.0260	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	<0.101	<0.104	<0.101
HEPTACHLOR EPOXIDE	0.2	0.2	<0.047	<0.100	<0.100	<0.102	<0.100	<0.100	<0.104	<0.0260	<0.0260	<0.102	<0.101	0.171	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	<0.101	<0.104	<0.101
HEXACHLOROBENZENE	1	1	<0.047	<0.100	<0.100	<0.102	<0.100	<0.100	<0.104	<0.0260	<0.0260	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	<0.101	<0.104	<0.101
METHOXYCHLOR	40	40	<0.047	<0.100	<0.100	0.220	<0.100	<0.100	<0.104	<0.0260	<0.0260	<0.102	<0.101	<0.102	<0.101	<0.103	<0.103	<0.101	<0.102	<0.102	<0.101	<0.104	<0.101
TOXAPHENE	3	NA	<1.21	<1.00	<2.00	<2.04	<2.00	<2.00	<0.104	<2.55	<2.55	<2.04	<2.00	<2.04	<2.01	<2.05	<10.3	<2.02	<2.03	<2.03	<2.02	<2.08	<2.02
Total Pesticides			*ND*	*11.34*	*0.389*	*1.89*	*15.3*	*3.55*	*0.943*	*3.53*	*3.62*	*2.06*	*0.967*	*8.03*	*0.922*	*3.06*	*1,381*	*127.2*	*ND*	*1.49*	*3.97*	*2.71*	*0.624*
SEMI VOLATILES (ug/L)				(G)	(SL)			(SL)	(SL)	(SL)	(SL)		(SL)			(SL)					(SL)	SH/SL	SL
2,4,6-TRICHLOROPHENOL	NA	10	<9.6	**<250**	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
2,4-DICHLOROPHENOL	NA	10	<9.6	**<250**	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
2,4-DIMETHYLPHENOL	NA	60	<48.1	**<250**	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
2,4-DINITROPHENOL	NA	200	<48.1	**<250**	<4.95	<5.43	<4.95	<5.05	<5.15	<5.00	<5.10	<5.00	<5.05	<5.15	<5.00	<5.05	<5.10	<5.08	<5.08	<5.10	<5.10	<5.32	<5.05
2,4-DINITROTOLUENE	NA	30	<9.6	**<250**	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
2-CHLORONAPHTHALENE	NA	NA	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	2.92	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
2-METHYLNAPHTHALENE	NA	10	0.62	**1,440**	**898**	**2,940**	**176**	**483**	**379**	**1,020**	<1.02	**742**	**770**	**1,200**	**593**	**525**	**1,030**	**541**	**511**	**527**	**1,220**	**171**	**728**
2-METHYLPHENOL	NA	10	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
2-NITROANILINE	NA	NA	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
2-NITROPHENOL	NA	NA	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	2.27	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
3/4-METHYLPHENOL	NA	NA	<19.2																				
3-NITROANILINE	NA	NA	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	1.41	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
4-CHLORO-3-METHYLPHENOL	NA	NA	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
4-CHLOROANILINE	NA	20	<19.2	**<250**	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<2.53	<1.03	<2.50	<2.53	<2.60	<2.54	<2.54	<2.55	<2.55	<2.66	<2.53
4-NITROANILINE	NA	NA	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
4-NITROPHENOL	NA	NA	<48.1	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
ACENAPHTHENE	NA	20	<9.6	**270**	**95.1**	**747**	**29.9**	**75.3**	**92.4**	**92.8**	<1.02	**128**	**145**	**234**	**117**	**98.1**	**306**	**115**	**107**	**121**	**224**	**89.4**	**131**
ACENAPHTHYLENE	NA	30	<9.6	<250	6.48	<1.09	1.70	<1.01	<1.03	<1.00	<1.02	7.58	6.17	8.23	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
ACETOPHENONE	NA	NA	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
ANTHRACENE	NA	60	<9.6	<250	9.21	56.6	1.18	7.91	8.23	12.3	13.6	9.46	10.5	27.5	7.17	8.87	22.3	7.98	7.03	10.5	14.8	13.6	12.7
BENZO (A) ANTHRACENE	NA	1	<0.05	**<250**	<0.0990	**7.47**	<0.0990	<0.101	<0.103	<0.100	<0.102	0.740	0.222	**1.08**	<0.100	<0.101	**3.08**	<0.102	0.279	<0.102	0.464	<0.106	<0.101
BENZO (A) PYRENE	0.2	0.2	<0.05	**<250**	<0.0990	**2.42**	<0.0990	<0.101	<0.103	<0.100	<0.102	**0.215**	<0.101	**1.72**	<0.100	<0.101	**2.92**	<0.102	<0.102	<0.102	0.153	<0.106	<0.101
BENZO (B) FLUORANTHENE	NA	1	<0.05	**<250**	**<4.95**	**2.38**	<0.495	<0.505	<0.515	<0.500	<0.510	<0.500	<0.101	0.410	<0.100	<0.101	**4.47**	<0.102	<0.102	<0.102	<0.102	<0.106	<0.101
BENZO (K) FLUORANTHENE	NA	1	<0.05	**<250**	**<4.95**	**1.78**	<0.495	<0.505	<0.515	<0.500	<0.510	<0.500	<0.101	<0.103	<0.100	<0.101	**3.30**	<0.102	<0.102	<0.102	<0.102	<0.106	<0.101
BENZYL ALCOHOL	NA	NA	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
BIS(2-CHLOROETHYL)ETHER	NA	30	<9.6	**<250**	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<5.8	**<250**	<0.990	<1.09	1.46	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	1.11	1.08
CARBAZOLE	NA	NA	<9.6	<250	8.65	10.7	1.92	8.40	8.57	12.2	13.8	10.5	10.3	12.7	13.1	10.5	8.04	12.7	8.11	9.30	15.9	4.24	8.89
CHRYSENE	NA	2	<0.05	**<250**	<0.990	**6.63**	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	**2.13**	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
DIBENZOFURAN	NA	NA	<9.6	<250	55.1	165	14.1	43.1	42.5	58.9	70.2	62.6	71.4	82.0	52.8	55.7	83.5	63.5	56.7	64.0	75.5	43.6	51.2
DIETHYLPHTHALATE	NA	2000	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
FLUORANTHENE	NA	90	<9.6	**<250**	3.47	56.9	<0.990	4.19	3.02	6.56	7.40	4.20	4.15	15.4	2.91	3.17	18.5	3.24	3.51	4.25	6.93	3.18	3.68
FLUORENE	NA	30	<9.6	<250	50.0	**392**	9.33	37.5	36.2	49.9	59.5	50.6	54.7	75.5	40.9	44.1	80.1	52.6	48.1	54.5	66.0	39.5	46.4
HEXACHLOROETHANE	NA	8	<4.8	**<250**	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.05	**<250**	<0.0990	<0.109	<0.0990	<0.101	<0.103	<0.100	<0.102	<0.100	<0.101	<0.103	<0.100	<0.101	**2.58**	<0.102	<0.102	<0.102	<0.102	<0.106	<0.101
NAPHTHALENE	NA	140	<9.6	**4,000**	**3,450**	**9,250**	**552**	**2,060**	**1,790**	**5,160**	**3,870**	**2,850**	**3,420**	**4,390**	**2,730**	**2,430**	**3,780**	**2,540**	**2,280**	**2,530**	**5,400**	**1,350**	**3,810**
NITROBENZENE	NA	NA	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	8.30	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
PENTACHLOROPHENOL	1	1	<0.87	**<250**	<0.990	<1.09	**1.41**	<1.01	<1.03	**4.54**	<1.02	<1.00	<0.505	<1.03	<1.00	**2.72**	<1.04	**1.49**	<2.54	<2.55	<1.02	<1.06	<1.01
PHENANTHRENE	NA	40	<9.6	<250	49.7	**723**	9.81	43.1	43.5	65.2	72.0	52.6	44.9	90.7	47.4	47.5	170	56.3	49.4	48.7	64.3	31.7	35.4
PHENOL	NA	1000	<9.6	<250	<0.990	<1.09	<0.990	<1.01	<1.03	<1.00	<1.02	<1.00	<1.01	<1.03	<1.00	<1.01	<1.04	<1.02	<1.02	<1.02	<1.02	<1.06	<1.01
PYRENE	NA	60	<9.6	**<250**	2.11	43.0	<0.990	3.18	2.54	4.68	5.11	3.20	2.32	12.0	3.02	1.26	16.9	2.24	3.36	2.96	1.70	1.55	2.70
Total Semi Volatiles			*0.62*	*5,710*	*4,628*	*14,405*	*799*	*2,766*	*2,406*	*6,501*	*4,133*	*3,931*	*4,540*	*6,165*	*3,607*	*3,227*	*5,534*	*3,396*	*3,074*	*3,372*	*7,090*	*1,749*	*4,831*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-7	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	FD-1 (EW-8)	EW-8	EW-8	Effluent to EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8
Date Sampled			08/22/2019	8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008	12/22/2008	12/22/2008	3/19/2009	6/11/2009	6/12/2009	9/15/2009	12/17/2009	3/19/2010	6/10/2010	9/17/2010	12/21/2010	3/16/2011	6/16/2011	9/15/2011
VOC (ug/L)																							
1,2,3-TRICHLOROPROPANE		NA	<1	---	---	---	<5.00	<5.00	<5.00	<2.00	---	---	---	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00
1,2,4-TRIMETHYLBENZENE	NA	NA	<1	714	1,870	261	529	815	275	239	215	282	279	394	254	---	---	---	---	---	465	<2.00	317
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	<5	**---**	**---**	**---**	**<5.00**	**<5.00**	**<5.00**	**<2.00**	**---**	**---**	**---**	**<5.00**	**<2.00**	**---**	**---**	**---**	**---**	**---**	**102**	**<2.00**	**<2.00**
1,2-DICHLOROBENZENE		600	<1	---	---	---	<5.00	<5.00	<5.00	<2.00	---	---	---	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00
1,3,5-TRIMETHYLBENZENE	NA	NA	<1	176	103	85.2	123	342	91.9	119	116	105	138	27.8	108	---	---	---	---	---	141	<2.00	130
2-CHLOROTOLUENE	NA	NA	<1	<5.0	<5.0	16.4	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00
4-CHLOROTOLUENE	NA	NA	<1	<5.0	<5.0	7.42	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00
4-ISOPROPYLTOLUENE	NA	NA	<1	114	113	22.8	88.7	72.2	18.5	28.9	29.2	73.9	<5.00	17.6	<2.00	---	---	---	---	---	18.3	<2.00	<2.00
4-METHYL-2-PENTANONE	NA	NA	<10	<25	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	---	---	---	---	---	<5.00	<5.00	<5.00
BENZENE	5	5	<1	**6.4**	<5.00	<5.00	<5.00	**16.3**	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	2.72	---	---	---	---	---	3.44	<2.00	2.88
CARBON DISULFIDE	NA	NA	<1	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00
CHLOROBENZENE	100	100	<1	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	3.23	<2.00	<2.00
CIS-1,2-DICHLOROETHENE	70	70	<1	22.2	10.7	9.17	14.0	56.6	11.4	11.4	11.5	15.6	10.8	10.2	8.86	---	---	---	---	---	<2.00	<2.00	8.95
ETHYLBENZENE	700	700	<1	442	**1,480**	228	422	**720**	232	185	171	286	220	315	212	---	---	---	---	---	398	<2.00	257
ISOPROPYLBENZENE	NA	NA	<1	50.4	33.8	30.2	39.9	119	29.2	38.7	38.8	31.6	37.1	394	31.3	---	---	---	---	---	38.5	<2.00	32.2
MTBE	NA	70	<1	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00
NAPHTHALENE	NA	140	5.1	**21,800**	---	**793**	**6,400**	**3,860**	**3,680**	**6,630**	**5,200**	**5,250**	**6,150**	**6,400**	**5,600**	---	---	---	---	---	**5,490**	<2.00	**5,830**
n-BUTYLBENZENE	NA	NA	<1	<5.0	<5.0	17.9	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	12.3	<2.00	15.4
n-PROPLYBENZENE	NA	NA	<1	37.2	27.4	22.5	30.7	93.2	19.4	30.6	30	28.1	31.5	19.0	26.3	---	---	---	---	---	33.3	<2.00	27.7
sec-BUTYLBENZENE	NA	NA	<1	---	---	---	<5.00	<5.00	<5.00	<2.00	---	---	<5.00	<5.00	3.78	---	---	---	---	---	<2.00	<2.00	<2.00
STYRENE	100	100	<1	22.7	14.9	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	22.2	<2.00	<2.00
TERT-BUTYLBENZENE	NA	NA	<1	<5.0	26.8	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00
TETRACHLOROETHENE	5	5	<1	<5.0	<5.00	<5.00	<5.00	**5.72**	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	3.00	<2.00	<2.00
TOLUENE	1,000	1,000	<1	133	96.0	85.6	113	326	80.7	106	107	107	84.6	99.4	84.6	---	---	---	---	---	108	<2.00	88.0
TRANS-1,2-DICHLOROETHENE	100	100	<1	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00
TOTAL XYLENES	10,000	10,000	<2	1,789	796	675	1,710	2,450	710	762	705	1,080	886	1,600	824	---	---	---	---	---	1,620	<2.00	1,030
Total Volatiles			*5.1*	*25,307*	*4,572*	*2,254*	*9,470*	*8,876*	*5,148*	*8,151*	*6,624*	*7,259*	*7,837*	*9,287*	*7,156*	---	---	---	---	---	8,458	*ND*	*7,739*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8 (FD)	EW-8	EW-8	EW-8	EW-8
Date Sampled			12/23/2011	3/15/2012	6/18/2012	9/25/2012	12/18/2012	3/20/2013	6/14/2013	9/24/2013	12/12/2013	3/20/2014	6/16/2014	9/18/2014	12/9/2014	6/17/2015	9/1/2015	12/10/2015	12/10/2015	3/28/2016	6/17/2016	9/27/2016	12/6/2016
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**0.326**	**0.328**	**0.289**	**0.311**	**0.354**	**0.487**	**0.325**	**0.452**	**0.348**	**0.349**	**0.139**	**0.309**	**0.307**	**0.283**	**0.235**	**0.246**	**0.244**	**0.250**	**0.191**	**0.220**	**0.203**
PESTICIDES (ug/L)				SH	SH		SH	SH			SL	SL	SL	SL	SL		SL		SL	SL	SL	SL	SL
4 4-DDD	NA	0.2	**0.929**	**0.466**	**0.704**	**0.660**	**1.89**	<0.0255	<0.0255	<0.0250	**2.9**	**1.7**	**1.7**	**<2.6**	**0.32**	**1.5**	**0.61**	**1.1**	**0.66**	**1.6**	**1.8**	<0.13	0.16
4 4'-DDE	NA	0.05	<0.0500	<0.0255	**0.0596**	0.0466	<0.0250	<0.0255	<0.0255	**0.0876**	**<0.50**	**<0.50**	**<0.25**	**<2.6**	<0.050	**0.12**	**<0.25**	**0.055**	**0.032**	**0.068**	**0.15**	**<0.13**	<0.025
4 4'-DDT	NA	0.3	<0.100	<0.0255	<0.0250	<0.0250	<0.0250	<0.0255	<0.0255	<0.0250	**<0.50**	**<0.50**	<0.25	**<2.6**	<0.050	<0.030	<0.25	<0.025	<0.025	<0.050	<0.025	<0.13	<0.025
ALDRIN	NA	0.5	<0.100	<0.0255	**0.0800**	0.0375	0.142	0.269	0.0758	0.0553	0.25	<0.015	0.062	<0.077	<0.015	0.076	<0.008	0.11	0.057	0.14	0.21	<0.038	<0.050
ALPHA-BHC	NA	NA	<0.100	<0.0255	<0.0250	<0.0250	<0.0250	<0.0255	0.359	<0.0250	<0.30	<0.25	<0.38	<1.3	0.40	0.14	<0.13	<0.025	<0.025	<0.10	<0.025	<0.13	<0.40
ALPHA-CHLORDANE	NA	NA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
BETA-BHC	NA	NA	<0.100	<0.0255	0.183	<0.0250	<0.0250	<0.0255	<0.0255	<0.0250	<0.050	<0.050	<0.025	<0.26	<0.050	<0.025	<0.025	<0.025	<0.025	<0.050	<0.025	<0.063	<0.13
CHLORDANE	2	2	0.881	<0.0255	<0.0250	<0.0250	<0.0250	<0.0255	<0.0255	<0.0250	1.9	0.86	0.42	**<15**	<0.50	<3.0	**<7.5**	<0.25	<0.25	0.71	1.6	<0.13	<0.25
DELTA-BHC	NA	NA	<0.100	<0.0255	<0.0250	<0.0250	<0.0250	0.442	0.499	0.319	<0.25	<0.25	<0.12	<1.3	<0.25	<0.030	<0.13	<0.025	<0.025	<0.050	<0.025	<0.063	<0.025
DIELDRIN	NA	0.1	**0.474**	**0.304**	**0.472**	**0.411**	**0.954**	**0.771**	**0.719**	**0.392**	**1.0**	**0.66**	**0.33**	**<0.20**	**0.14**	**<0.43**	**0.28**	**0.27**	**0.25**	**0.50**	**0.44**	<0.075	**0.10**
ENDOSULFAN I	NA	10	<0.100	<0.0255	<0.0250	<0.0250	<0.0250	<0.0255	<0.0255	<0.0250	<0.50	<0.50	<0.25	<2.6	<0.50	<0.030	<0.25	<0.025	<0.025	<0.050	<0.025	<0.13	<0.025
ENDOSULFAN II	NA	10	<0.100	0.0314	0.0639	<0.0250	<0.0250	0.0439	0.0449	<0.0250	<0.50	<0.50	<0.25	<2.6	<0.50	<0.030	<0.25	<0.025	<0.025	<0.050	<0.025	<0.13	<0.025
ENDRIN	2	2	<0.100	<0.0255	<0.0250	<0.0250	<0.0250	<0.0255	<0.0255	<0.0250	**<0.50**	**<0.50**	**<0.25**	**<2.6**	<0.050	0.099	<0.25	<0.025	<0.025	<0.050	<0.025	<0.13	<0.025
ENDRIN KETONE	NA	NA	<0.100	<0.0255	0.0487	<0.0250	0.0934	<0.0255	<0.0255	<0.0250	<0.50	<0.50	<0.25	<2.6	<0.50	<0.030	<0.25	<0.025	<0.025	<0.050	<0.025	<0.13	<0.025
GAMMA-BHC	NA	NA	<0.100	<0.0255	0.158	0.214	0.189	<0.0255	0.210	0.112	<0.25	<0.25	<0.12	<1.3	<0.050	0.063	<0.13	<0.050	<0.050	<0.10	<0.10	<0.075	<0.13
GAMMA-CHLORDANE	NA	NA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
HEPTACHLOR	0.4	0.4	<0.100	<0.0255	<0.0250	<0.0250	<0.0250	<0.0255	<0.0255	<0.0250	<0.25	<0.25	<0.12	**<1.3**	<0.025	<0.030	<0.13	<0.025	<0.025	<0.050	<0.025	<0.13	<0.025
HEPTACHLOR EPOXIDE	0.2	0.2	<0.100	<0.0255	0.0642	0.0263	0.0662	<0.0255	<0.0255	0.0567	**<0.25**	**<0.25**	<0.12	**<1.3**	<0.025	<0.030	<0.13	<0.025	<0.025	<0.050	<0.025	<0.13	<0.025
HEXACHLOROBENZENE	1	1	<0.100	<0.0255	<0.0250	<0.0250	<0.0250	<0.0255	<0.0255	<0.0250	---	---	---	---	---	---	---	---	---	---	---	---	<0.025
METHOXYCHLOR	40	40	<0.100	<0.0255	<0.0250	<0.0250	<0.0250	<0.0255	<0.0255	<0.0250	<1.0	<1.0	<0.50	<5.1	<1.0	<0.030	<0.50	<0.025	<0.025	<0.050	<0.025	<0.13	<0.025
TOXAPHENE	3	NA	<2.00	<2.04	<2.00	<2.00	<2.00	<2.04	<2.04	<2.00	**<10**	**<10**	**<5.0**	**<51**	**<10**	<50	**<5.0**	<1.0	<1.0	<2.0	<5.0	**<25**	<1.0
Total Pesticides			*2.284*	*0.801*	*1.833*	*1.395*	*3.33*	*1.526*	*1.908*	*1.023*	*6.1*	*3.2*	*2.5*	*ND*	*0.86*	*2.0*	*0.89*	*1.54*	*1.00*	*3.0*	*4.2*	*ND*	*0.26*
SEMI VOLATILES (ug/L)			SH	SL	SL	SL	SL	SL	SL	SL	SH			SL	SL	SL	SH/SL	SL	SL		SL		SH/SL
2,4,6-TRICHLOROPHENOL	NA	10	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	3.38	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
2,4-DICHLOROPHENOL	NA	10	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
2,4-DIMETHYLPHENOL	NA	60	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
2,4-DINITROPHENOL	NA	200	<5.21	<5.05	<5.00	9.59	<5.00	<5.05	<25.3	<5.00	<5.05	<5.43	<5.10	<5.49	<5.10	<5.10	<5.05	<5.00	<5.05	<5.05	<5.68	<5.00	<5.10
2,4-DINITROTOLUENE	NA	30	<1.04	<1.01	<1.00	4.04	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
2-CHLORONAPHTHALENE	NA	NA	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
2-METHYLNAPHTHALENE	NA	10	**1,030**	**1,170**	**789**	**1,050**	**893**	**953**	**532**	**455**	**49.2**	**567**	**708**	**313**	**2,340**	**943**	**616**	**982**	**360**	**885**	**376**	**652**	**544**
2-METHYLPHENOL	NA	10	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
2-NITROANILINE	NA	NA	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
2-NITROPHENOL	NA	NA	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
3/4-METHYLPHENOL	NA	NA																					
3-NITROANILINE	NA	NA	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
4-CHLORO-3-METHYLPHENOL	NA	NA	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	1.06	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
4-CHLOROANILINE	NA	20	<2.60	<2.53	<2.50	<2.50	<2.50	3.63	<2.53	<2.50	<2.53	<2.72	<2.55	<2.75	<2.55	<2.55	<2.53	<2.50	<2.53	<2.53	<2.84	<2.50	<2.55
4-NITROANILINE	NA	NA	<1.04	<1.01	<1.00	<1.00	<1.00	1.74	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
4-NITROPHENOL	NA	NA	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
ACENAPHTHENE	NA	20	**168**	**170**	**92.3**	**196**	**197**	**149**	**144**	**106**	**104**	**99.0**	**140**	**58.7**	**143**	**76.4**	<1.01	**141**	**67.7**	**141**	**74.2**	1.91	**90.2**
ACENAPHTHYLENE	NA	30	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	5.97	<1.02	<1.10	7.61	<1.02	5.18	<1.00	<1.01	6.31	69.5	28.1	<1.02
ACETOPHENONE	NA	NA	3.26	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	4.43	<1.01	<1.14	<1.00	<1.02
ANTHRACENE	NA	60	9.39	9.69	9.32	7.04	8.31	11.2	9.54	7.53	7.65	8.66	9.69	4.82	7.04	10.7	5.58	6.77	3.65	12.6	7.44	5.70	6.06
BENZO (A) ANTHRACENE	NA	1	<0.104	<0.101	0.305	<0.100	<0.100	<0.101	<0.101	<0.100	<0.101	<0.109	<0.102	<0.110	<0.102	<0.100	<0.101	<0.100	<0.101	<0.101	<0.114	<0.100	<0.102
BENZO (A) PYRENE	0.2	0.2	<0.104	<0.101	<0.100	<0.100	<0.100	<0.101	<0.101	<0.100	<0.101	<0.109	<0.102	<0.110	<0.102	<0.100	<0.101	<0.100	<0.101	<0.101	<0.114	<0.100	<0.102
BENZO (B) FLUORANTHENE	NA	1	<0.104	<0.101	<0.100	<0.100	<0.100	<0.101	<0.101	<0.100	<0.101	<0.109	<0.102	<0.110	<0.102	<0.100	<0.101	<0.100	<0.101	<0.101	<0.114	<0.100	<0.102
BENZO (K) FLUORANTHENE	NA	1	<0.104	<0.101	<0.100	<0.100	<0.100	<0.101	<0.101	<0.100	<0.101	<0.109	<0.102	<0.110	<0.102	<0.100	<0.101	<0.100	<0.101	<0.101	<0.114	<0.100	<0.102
BENZYL ALCOHOL	NA	NA	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
BIS(2-CHLOROETHYL)ETHER	NA	30	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<1.04	<1.01	4.39	<1.00	<1.00	<1.01	2.62	<1.00	<1.01	<1.09	1.02	<1.10	<1.02	<1.02	<1.01	1.28	1.36	1.69	<1.14	<1.00	<1.02
CARBAZOLE	NA	NA	11.7	7.80	10.5	10.9	11.9	14.6	12.9	13.0	10.8	8.9	11.7	8.54	10.2	35.6	6.58	9.67	6.62	13.2	11.2	10.1	8.62
CHRYSENE	NA	2	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
DIBENZOFURAN	NA	NA	59.9	55.4	51.3	59.5	92.1	85.1	74.1	60.7	62.7	48.7	63.4	32.4	55.9	54.7	42.2	58.2	37.6	60.2	68.1	58.6	49.4
DIETHYLPHTHALATE	NA	2000	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
FLUORANTHENE	NA	90	2.57	2.09	3.30	3.53	4.10	5.44	3.48	3.15	3.01	2.97	3.96	2.34	<1.02	1.64	2.16	4.02	1.94	5.43	2.00	1.81	1.70
FLUORENE	NA	30	49.9	47.3	40.4	46.1	63.4	72.7	51.0	46.1	47.7	42.0	51.2	27.3	39.7	44.8	28.0	41.0	25.9	51.8	44.7	68.9	58.8
HEXACHLOROETHANE	NA	8	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	**224**	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.104	<0.101	<0.100	<0.100	<0.100	<0.101	<0.101	<0.100	<0.101	<0.109	<0.102	<0.110	<0.102	<0.100	<0.101	<0.100	<0.101	<0.101	<0.114	<0.100	<0.102
NAPHTHALENE	NA	140	**4,830**	**4,680**	**3,120**	**4,220**	**2,460**	**4,940**	**5,180**	**2,830**	**297**	**2,850**	**3,010**	**506**	**6,870**	**4,020**	**2,270**	**3,730**	**1,510**	**3,370**	**2,310**	**4,030**	**2,630**
NITROBENZENE	NA	NA	<1.04	<1.01	<1.00	<1.00	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	2.19	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
PENTACHLOROPHENOL	1	1	<0.625	<0.606	<0.600	<0.600	<0.600	**4.23**	**5.22**	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
PHENANTHRENE	NA	40	39.8	41.0	45.4	46.7	64.9	68.8	66.8	54.8	44.0	40.8	50.0	28.7	37.7	38.2	29.1	44.4	25.3	50.9	46.1	36.7	30.7
PHENOL	NA	1000	<1.04	<1.01	<1.00	1.56	<1.00	<1.01	<1.01	<1.00	<1.01	<1.09	<1.02	<1.10	<1.02	<1.02	<1.01	<1.00	<1.01	<1.01	<1.14	<1.00	<1.02
PYRENE	NA	60	1.86	2.46	3.85	2.84	4.04	4.80	3.11	2.94	1.63	1.95	3.52	1.35	<1.02	<1.02	1.54	2.78	1.51	3.25	1.94	<1.00	1.32
Total Semi Volatiles			*6,206*	*6,186*	*4,170*	*5,658*	*3,799*	*6,314*	*6,088*	*3,803*	*628*	*3,676*	*4,056*	*983*	*9,511*	*5,225*	*3,006*	*5,021*	*2,046*	*4,601*	*3,011*	*4,894*	*3,421*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8 (FD)	EW-8	EW-8	EW-8	EW-8
Date Sampled			12/23/2011	3/15/2012	6/18/2012	9/25/2012	12/18/2012	3/20/2013	6/14/2013	9/24/2013	12/12/2013	3/20/2014	6/16/2014	9/18/2014	12/9/2014	6/17/2015	9/1/2015	12/10/2015	12/10/2015	3/28/2016	6/17/2016	9/27/2016	12/6/2016
VOC (ug/L)												SL				SH							
1,2,3-TRICHLOROPROPANE		NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<200	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<40.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
1,2,4-TRIMETHYLBENZENE	NA	NA	384	381	245	463	368	403	459	<2.00	<2.00	379	419	328	2,990	522	323	462	534	443	1,250	323	448
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**150**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**122**	**<200**	**46.4**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<40.0**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**
1,2-DICHLOROBENZENE		600	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<200	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<40.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
1,3,5-TRIMETHYLBENZENE	NA	NA	131	<2.00	35.6	119	122	141	<200	106	118	116	148	140	45.4	68.5	44.0	141	141	141	416	90.2	103
2-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<200	38.4	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<40.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<200	12.6	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<40.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-ISOPROPYLTOLUENE	NA	NA	<2.00	<2.00	74.4	<2.00	<2.00	96.2	<200	81.4	95.3	89.2	116	76.2	<2.00	<2.00	<40.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-METHYL-2-PENTANONE	NA	NA	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<500	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<100	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BENZENE	5	5	2.97	2.81	2.16	2.65	2.81	3.62	**<200**	2.70	<2.00	2.29	3.08	2.49	2.06	<2.00	**<40.0**	<2.00	<2.00	<2.00	3.04	<2.00	<2.00
CARBON DISULFIDE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<200	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	54.2	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
CHLOROBENZENE	100	100	3.36	3.01	2.59	2.62	2.94	3.70	**<200**	3.20	2.82	2.98	3.27	2.82	<2.00	<2.00	<40.0	2.47	2.47	2.30	2.41	2.15	<2.00
CIS-1,2-DICHLOROETHENE	70	70	11.4	7.71	10.9	13.7	14.4	11.4	**<200**	11.9	9.64	14.0	11.8	19.2	13.2	7.43	<40.0	7.80	8.04	8.86	12.6	10.4	7.44
ETHYLBENZENE	700	700	314	<2.00	120	288	256	321	295	270	207	294	277	198	642	290	164	232	231	222	345	160	148
ISOPROPYLBENZENE	NA	NA	34.7	33.2	35.6	32.9	36.2	40.4	<200	36.8	32.5	37.7	52.2	41.7	45.4	68.5	44.2	42.9	42.6	35.5	42.1	52.1	31.1
MTBE	NA	70	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	**<200**	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<40.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
NAPHTHALENE	NA	140	**5,320**	**5,420**	**2,480**	**5,530**	**8,390**	**10,900**	**12,500**	**3,740**	**3,820**	**5,960**	**9,370**	**6,050**	**49,800**	**6,120**	**8,090**	**7,440**	**13,400**	**9,660**	**10,700**	**5,720**	**27,900**
n-BUTYLBENZENE	NA	NA	17.3	<2.00	<2.00	<2.00	<2.00	19.8	<200	80.3	98.7	92.5	112	81.6	17.0	24.2	<40.0	21.0	19.6	13.7	<2.00	19.8	<2.00
n-PROPLYBENZENE	NA	NA	32.7	25.9	30.0	25.0	30.1	33.8	<200	31.5	<2.00	33.4	38.2	32.9	36.3	58.4	<40.0	35.7	35.4	36.2	39.9	40.4	23.7
sec-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<200	4.32	<2.00	4.69	<2.00	3.74	<2.00	3.98	<40.0	4.74	4.99	3.14	4.83	3.73	3.22
STYRENE	100	100	6.57	4.65	3.96	3.90	4.38	6.04	**<200**	3.80	7.69	3.38	3.16	2.30	2.98	2.41	<40.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TERT-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<200	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<40.0	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TETRACHLOROETHENE	5	5	2.11	<2.00	2.72	<2.00	<2.00	2.04	**<200**	<2.00	<2.00	<2.00	2.10	<2.00	<2.00	<2.00	**<40.0**	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TOLUENE	1,000	1,000	101	72.6	64.1	59.7	69.5	85.9	<200	57.6	58.0	64.2	73.7	56.8	78.4	44.3	<40.0	47.5	46.6	54.3	67.2	42.6	33.7
TRANS-1,2-DICHLOROETHENE	100	100	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	**<200**	12.3	9.64	13.0	11.8	<2.00	13.1	<2.00	<40.0	<0.270	<0.270	<2.00	<2.00	<2.00	<2.00
TOTAL XYLENES	10,000	10,000	1,350	1,290	722	1,230	949	1,220	1,400	381	817	1,110	798	596	1,190	1,270	662	1,000	981	713	1,130	1,190	632
Total Volatiles			*7,873*	*7,249*	*3,829*	*7,784*	*10,245*	*13,421*	*14,654*	*4,920*	*5,276*	*8,216*	*11,439*	*7,632*	*54,876*	*8,487*	*9,381*	*9,445*	*15,455*	*11,333*	*14,013*	*7,665*	*32,783*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8 (FD)	EW-8	EW-8 (FD)	EW8	EW-8 (FD)	EW8	EW8	EW8	EW-9	FD-1	EW-9	EW-9	EW-9	EW-9	EW-9
Date Sampled			3/31/2017	6/23/2017	8/30/2017	12/5/2017	3/27/2018	6/28/2018	6/28/2018	09/04/2018	09/04/2018	12/18/2018	12/18/2018	03/26/2019	06/21/2019	08/22/2019	8/6/2007	8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**0.148**	**0.217**	**0.203**	**0.201**	**0.156**	**0.267**	**0.273**	**0.344**	**0.338**	**0.292**	**0.286**	**0.307**	**0.339**	**0.296**	**0.157**	**0.499**	0.0203	<0.0200	0.0370	**0.135**	**0.427**
PESTICIDES (ug/L)				SH															(SH)				
4 4-DDD	NA	0.2	**0.427**	**0.403**	**0.803**	**0.642**	**1.28**	**0.246**	**0.260**	**0.439**	**0.678**	**0.714**	**0.637**	**0.952**	**0.877**	**0.326**	<0.050	<0.050	<0.0990	<0.102	<0.100	**0.220**	<0.100
4 4'-DDE	NA	0.05	<0.047	<0.047	**0.055**	<0.049	**0.092**	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	<0.049	<0.047	<0.050	<0.050	<0.0990	**<0.102**	**<0.100**	**<0.100**	**<0.100**
4 4'-DDT	NA	0.3	<0.047	<0.047	<0.029	<0.049	<0.048	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	<0.049	<0.047	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
ALDRIN	NA	0.5	<0.047	<0.047	0.030	<0.049	<0.048	<0.048	<0.047	0.080	0.100	0.132	0.126	0.151	0.166	0.060	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
ALPHA-BHC	NA	NA	0.052	<0.047	<0.029	<0.049	<0.048	<0.048	0.052	<0.047	<0.048	<0.048	<0.047	0.055	<0.049	<0.047	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
ALPHA-CHLORDANE	NA	NA	<0.047	<0.047	0.060	<0.049	0.104	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	0.075	<0.047	---	<1.00	---	---	---	---	---
BETA-BHC	NA	NA	<0.047	<0.047	<0.029	<0.049	<0.048	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	<0.049	<0.047	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
CHLORDANE	2	2	<0.187	<0.187	0.435	0.304	0.702	<0.190	<0.187	0.361	0.543	0.908	0.757	0.595	0.444	0.244	<1.00	<1.00	<0.0990	<0.102	<0.100	<0.100	<0.100
DELTA-BHC	NA	NA	<0.047	<0.047	<0.029	<0.049	<0.048	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	<0.049	<0.047	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
DIELDRIN	NA	0.1	**0.258**	**0.309**	**0.125**	**0.159**	**0.520**	**0.144**	**0.136**	**0.131**	**0.136**	**0.181**	**0.169**	**0.222**	**0.217**	**0.104**	<0.050	<0.050	<0.0990	<0.102	<0.100	**0.180**	<0.100
ENDOSULFAN I	NA	10	<0.047	<0.047	<0.029	<0.049	<0.048	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	<0.049	<0.047	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
ENDOSULFAN II	NA	10	<0.047	<0.047	<0.029	<0.049	<0.048	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	<0.049	<0.047	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
ENDRIN	2	2	<0.047	<0.047	<0.029	<0.049	<0.048	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	<0.049	<0.047	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
ENDRIN KETONE	NA	NA	<0.047	<0.047	<0.029	<0.049	<0.048	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	<0.049	<0.047	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
GAMMA-BHC	NA	NA	0.072	<0.047	<0.029	<0.049	<0.048	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	<0.049	<0.047	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
GAMMA-CHLORDANE	NA	NA	<0.047	<0.047	0.053	<0.049	0.087	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	0.065	<0.047	---	---	---	---	---	---	---
HEPTACHLOR	0.4	0.4	<0.047	<0.047	<0.029	<0.049	<0.048	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	<0.049	<0.047	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
HEPTACHLOR EPOXIDE	0.2	0.2	<0.047	<0.047	<0.029	<0.049	<0.048	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	<0.049	<0.047	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
HEXACHLOROBENZENE	1	1	0.126	0.073	0.120	<0.049	<0.048	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	0.084	<0.049	<0.047	<0.050	---	<0.0990	<0.102	<0.100	<0.100	<0.100
METHOXYCHLOR	40	40	<0.047	<0.047	<0.029	<0.049	<0.048	<0.048	<0.047	<0.047	<0.048	<0.048	<0.047	<0.047	<0.049	<0.047	<0.050	<0.050	<0.0990	<0.102	<0.100	<0.100	<0.100
TOXAPHENE	3	NA	---	<1.21	<0.747	<1.27	<1.25	<1.24	<1.21	<1.21	<1.24	<1.25	<1.21	<1.21	<1.26	<1.21	<1.00		<1.98	<2.04	<2.00	<2.00	<2.00
Total Pesticides			*0.935*	*0.785*	*1.681*	*1.105*	*2.79*	*0.390*	*0.448*	*1.011*	*1.457*	*1.089*	*0.926*	*2.059*	*1.844*	*0.734*	*ND*	*ND*	*ND*	*ND*	*ND*	*0.400*	*ND*
SEMI VOLATILES (ug/L)				SH																(SL)	(SL)	(SL)	(SL)
2,4,6-TRICHLOROPHENOL	NA	10	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
2,4-DICHLOROPHENOL	NA	10	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
2,4-DIMETHYLPHENOL	NA	60	<46.7	<46.7	<46.7	<47.6	<46.7	<48.5	<48.1	<46.7	<49	<46.7	<46.7	<47.2	<48.1	<46.7	<5.0		<0.962	<1.01	<1.08	<1.01	<1.09
2,4-DINITROPHENOL	NA	200	<46.7	<46.7	<46.7	<47.6	<46.7	<48.5	<48.1	<46.7	<49	<46.7	<46.7	<47.2	<48.1	<46.7	<5.0	<5.0	<4.81	<5.05	<5.38	<5.03	<5.43
2,4-DINITROTOLUENE	NA	30	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
2-CHLORONAPHTHALENE	NA	NA	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
2-METHYLNAPHTHALENE	NA	10	**1,070**	**1,120**	**1,170**	**812**	**876**	**746**	**769**	**567**	**569**	**544**	**608**	**890**	**586**	**543**	7.50	44.8	<0.962	<1.01	1.08	**36.5**	<1.09
2-METHYLPHENOL	NA	10	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<10	<0.962	<1.01	<1.08	<1.01	<1.09
2-NITROANILINE	NA	NA	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
2-NITROPHENOL	NA	NA	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
3/4-METHYLPHENOL	NA	NA	<18.7	<18.7	<18.7	<19.0	<18.7	<19.4	<19.2	<18.7	<19.6	<18.7	<18.7	<18.9	<19.2	<18.7							
3-NITROANILINE	NA	NA	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
4-CHLORO-3-METHYLPHENOL	NA	NA	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0		<0.962	<1.01	<1.08	<1.01	<1.09
4-CHLOROANILINE	NA	20	<18.7	<18.7	<18.7	<19.0	<18.7	<19.4	<19.2	<18.7	<19.6	<18.7	<18.7	<18.9	<19.2	<18.7	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
4-NITROANILINE	NA	NA	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
4-NITROPHENOL	NA	NA	<46.7	<46.7	<46.7	<47.6	<46.7	<48.5	<48.1	<46.7	<49	<46.7	<46.7	<47.2	<48.1	<46.7	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
ACENAPHTHENE	NA	20	**175**	**190**	**240**	**150**	**181**	**157**	**177**	**167**	**167**	**133**	**149**	**156**	**112**	**139**	<5.0	<5.0	<0.962	<1.01	5.85	8.32	<1.09
ACENAPHTHYLENE	NA	30	9.12	8.26	13.2	4.60	11.2	<9.7	12.0	<9.3	<9.8	<9.3	<9.3	11.9	<9.6	9.7	<5.0	38.9	<0.962	<1.01	<1.08	<1.01	<1.09
ACETOPHENONE	NA	NA	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
ANTHRACENE	NA	60	6.46	5.82	16.1	3.73	15.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	10.5	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
BENZO (A) ANTHRACENE	NA	1	0.14	<0.23	**1.41**	0.12	0.67	0.07	0.08	0.09	0.12	0.23	0.19	0.32	0.22	0.10	**<5.0**	**<5.0**	<0.0962	<0.101	<0.108	<0.101	<0.109
BENZO (A) PYRENE	0.2	0.2	0.05	<0.12	**0.47**	<0.05	**0.24**	<0.05	<0.05	<0.05	<0.05	0.07	0.06	0.1	0.06	<0.05	**<5.0**	**<5.0**	<0.0962	<0.101	<0.108	<0.101	<0.109
BENZO (B) FLUORANTHENE	NA	1	0.05	<0.23	0.57	0.06	0.27	<0.05	<0.05	<0.05	<0.05	0.07	0.07	0.12	0.07	<0.05	**<5.0**	**<5.0**	**<4.81**	<0.505	<0.538	<0.503	<0.543
BENZO (K) FLUORANTHENE	NA	1	<0.05	<0.23	<0.23	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<5.0**	**<5.0**	**<4.81**	<0.505	<0.538	<0.503	<0.543
BENZYL ALCOHOL	NA	NA	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
BIS(2-CHLOROETHYL)ETHER	NA	30	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0		<0.962	<1.01	<1.08	<1.01	<1.09
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<5.6	**80.4**	<5.6	<5.7	**90.1**	<5.8	<5.8	<5.6	<5.9	**8.4**	**9.1**	<5.7	<5.8	<5.6	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
CARBAZOLE	NA	NA	15.7	15.8	15.6	<9.5	14.9	11.8	14.4	13.5	12.4	12.4	13.1	12.9	11.5	11.9	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
CHRYSENE	NA	2	0.13	<0.23	1.17	0.11	0.59	0.06	0.06	0.07	0.09	0.18	0.16	0.27	0.15	0.08	**<5.0**	**<5.0**	<0.962	<1.01	<1.08	<1.01	<1.09
DIBENZOFURAN	NA	NA	98.1	97.5	117	89.5	105	79.9	92.3	81.8	82.7	71.3	78.2	95.7	61.9	77.0	<5.0	13.1	<0.962	<1.01	<1.08	4.48	<1.09
DIETHYLPHTHALATE	NA	2000	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
FLUORANTHENE	NA	90	2.72	2.57	13.8	1.82	10.1	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
FLUORENE	NA	30	63.1	54.3	**97.5**	**56.9**	**88.6**	**56.9**	**67.4**	**60.1**	**61.5**	**56.1**	**60.9**	**73.2**	**50.2**	**58.2**	<5.0	11.5	<0.962	<1.01	3.45	4.16	<1.09
HEXACHLOROETHANE	NA	8	<4.7	<4.7	<4.7	<4.8	<4.7	<4.9	<4.8	<4.7	<4.9	<4.7	<4.7	<4.7	<4.8	<4.7	<5.0	<5.0	<0.962	<1.01	3.41	<1.01	<1.09
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.05	<0.23	<0.23	<0.05	0.10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<5.0**	**<5.0**	<0.0962	<0.101	<0.108	<0.101	<0.109
NAPHTHALENE	NA	140	**4,210**	**5,140**	**5,020**	**3,580**	**3,680**	**4,670**	**4,580**	**3,450**	**3,330**	**3,150**	**3,570**	**4,080**	**2,950**	**3,410**	22.4	403	0.971	1.95	5.59	**154**	<1.09
NITROBENZENE	NA	NA	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
PENTACHLOROPHENOL	1	1	**1.38**	**2.36**	**2.14**	<0.86	**1.23**	<0.87	<0.87	<0.84	<0.88	**1.75**	**1.75**	**1.47**	<0.87	<0.84	**<5.0**	**<5.0**	<0.962	<1.01	**3.42**	<1.01	<1.09
PHENANTHRENE	NA	40	43.7	39.1	**114**	**41.1**	**80.7**	**47.3**	**55.8**	**58.0**	**56.4**	**53.6**	**54.7**	**66.5**	**46.5**	**54.9**	<5.0	11.5	<0.962	25.9	<1.08	5.71	<1.09
PHENOL	NA	1000	<9.3	<9.3	<9.3	<9.5	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	<1.01	<1.08	<1.01	<1.09
PYRENE	NA	60	1.61	1.59	9.69	1.20	<9.3	<9.7	<9.6	<9.3	<9.8	<9.3	<9.3	<9.4	<9.6	<9.3	<5.0	<5.0	<0.962	1.59	<1.08	<1.01	<1.09
Total Semi Volatiles			*5,697*	*6,758*	*6,833*	*4,741*	*5,156*	*5,769*	*5,768*	*4,398*	*4,279*	*4,031*	*4,545*	*5,399*	*3,819*	*4,305*	*29.9*	*523*	*0.971*	*29.4*	*22.80*	*213*	*ND*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8	EW-8 (FD)	EW-8	EW-8 (FD)	EW8	EW-8 (FD)	EW8	EW8	EW8	EW-9	FD-1	EW-9	EW-9	EW-9	EW-9	EW-9
Date Sampled			3/31/2017	6/23/2017	8/30/2017	12/5/2017	3/27/2018	6/28/2018	6/28/2018	09/04/2018	09/04/2018	12/18/2018	12/18/2018	03/26/2019	06/21/2019	08/22/2019	8/6/2007	8/6/2007	9/28/2007	12/18/2007	3/18/2008	6/25/2008	9/16/2008
VOC (ug/L)																							
1,2,3-TRICHLOROPROPANE		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	---	<5.0	---	---	<5.00	<5.00	<5.00
1,2,4-TRIMETHYLBENZENE	NA	NA	415	318	406	365	378	417	402	**332**	**340**	303	313	313	324	**277**	<5.0	64.3	<5.00	<5.00	<5.00	107	<5.00
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5**	**<5**	<5	<5	<5	<5	<5	**---**	**<5.0**	**---**	**---**	**<5.00**	**<5.00**	**<5.00**
1,2-DICHLOROBENZENE		600	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	---		---	---	<5.00	<5.00	<5.00
1,3,5-TRIMETHYLBENZENE	NA	NA	136	133	134	123	136	142	133	109	111	98.0	103	106	106	91.0	<5.0	15.2	<5.00	<5.00	<5.00	36.3	<5.00
2-CHLOROTOLUENE	NA	NA	<1.0	<1.0	29.8	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.0	<5.0	<5.00	<5.0	<5.00	<5.00	<5.00
4-CHLOROTOLUENE	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.0	<5.0	<5.00	<5.0	<5.00	<5.00	<5.00
4-ISOPROPYLTOLUENE	NA	NA	71.6	69.8	74.8	58.7	70.0	85.4	84.4	90.6	95.5	78.8	77.0	91.4	82.8	74.7	<5.0	16.5	<5.00	<5.00	<5.00	6.53	<5.00
4-METHYL-2-PENTANONE	NA	NA	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	<10	<10	<10	<10	<25	<25	<5.00	<5.00	<5.00	<5.00	<5.00
BENZENE	5	5	1.7	1.1	1.4	1.1	1.2	1.2	1.2	1.1	1.2	1.0	1.0	<1	<1	<1	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
CARBON DISULFIDE	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.0		<5.00	<5.00	<5.00	<5.00	<5.00
CHLOROBENZENE	100	100	2.0	1.8	2.6	1.7	2.0	1.9	1.9	2.0	2.0	2.3	2.2	2.5	1.8	1.8	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
CIS-1,2-DICHLOROETHENE	70	70	9.8	5.8	5.4	6.9	6.6	5.1	4.7	3.7	4.2	4.3	4.0	3.2	2.8	2.6	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
ETHYLBENZENE	700	700	200	189	228	164	194	207	188	183	188	190	194	199	202	169	<5.0	58.7	<5.00	<5.00	<5.00	105	<5.00
ISOPROPYLBENZENE	NA	NA	40.4	35.6	38.1	31.4	36.9	42.9	43.1	33.3	31.0	30.9	30.6	33	32.1	31.7	<5.0	6.75	<5.00	<5.00	<5.00	10.9	<5.00
MTBE	NA	70	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
NAPHTHALENE	NA	140	**8,040**	**7,860**	**6,480**	**6,750**	**7,440**	**6,620**	**6,860**	**5,560**	**5,830**	**7,030**	**7,170**	**7,070**	**5,610**	**5,740**	56.4	**1,190**	<20.0	<5.0	**441**	**232**	<20.0
n-BUTYLBENZENE	NA	NA	18.5	<1.0	16.6	15.5	18.8	<1.0	<1.0	15.0	17.6	15.6	14.8	16.1	14.7	12.6	<5.0	<5.0	<5.00	<5.0	<5.00	<5.00	<5.00
n-PROPLYBENZENE	NA	NA	34.8	28.1	32.9	26.6	30.3	32.6	32.0	26.6	23.6	24.6	24.1	25.1	24.8	23	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
sec-BUTYLBENZENE	NA	NA	3.8	3.7	4.4	4.0	4.8	5.5	5.2	4.9	4.3	3.6	3.5	5.0	4.4	3.9	---	<5.0	---	---	<5.00	<5.00	<5.00
STYRENE	100	100	1.5	1.7	1.8	<1.0	1.7	1.3	1.2	1.5	1.4	2.1	2.2	2.2	1.3	2.1	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
TERT-BUTYLBENZENE	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
TETRACHLOROETHENE	5	5	1.2	1.3	1.2	1.5	1.2	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.0	<5.0	<5.00	<5.00	<5.00	<5.00	<5.00
TOLUENE	1,000	1,000	47.5	35.1	37.3	25.0	34.6	30.3	29.6	35.7	35.8	40.3	37.5	35.5	36.1	26.5	<5.0	16.0	<5.00	<5.00	<5.00	40.7	<5.00
TRANS-1,2-DICHLOROETHENE	100	100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1	<5.0		<5.00	<5.00	<5.00	<5.00	<5.00
TOTAL XYLENES	10,000	10,000	779	671	834	615	795	767	710	644	650	732	732	747	719	636	<5.0	184	<5.00	<5.00	<5.00	408	<5.00
Total Volatiles			*9,803*	*9,355*	*8,328*	*8,189*	*9,151*	*8,359*	*8,496*	*7,042*	*7,336*	*8,557*	*8,709*	*7,902*	*7,162*	*7,092*	*56.4*	*1,551*	*ND*	*ND*	*441*	*946*	*ND*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9
Date Sampled			12/22/2008	3/19/2009	6/11/2009	9/15/2009	12/17/2009	3/19/2010	6/10/2010	9/17/2010	12/21/2010	3/16/2011	12/23/2011	3/15/2012	6/18/2012	12/18/2012	3/20/2013	6/14/2013	9/18/2014	12/9/2014	4/1/2015	6/17/2015	9/1/2015
METALS (mg/L)																						
ARSENIC (TOTAL)	0.05	0.01	<0.0100	**0.070**	**0.115**	0.021	**0.365**	**0.123**	**0.056**	**0.337**	**3.00**	**53.8**	**4.46**	**0.132**	**5.30**	**0.486**	**4.94**	**16.4**	**4.64**	**6.16**	**2.91**	**20.5**	**10.4**
PESTICIDES (ug/L)															SH								
4 4-DDD	NA	0.2	<0.0260	**0.697**	<0.100	<0.101	**0.305**	<0.102	<0.105	<0.101	<0.102	**0.625**	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	**0.303**	**<0.25**	0.047	<0.052	<0.020	0.059
4 4'-DDE	NA	0.05	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.0510	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	**<0.25**	<0.050	<0.047	<0.005	<0.050
4 4'-DDT	NA	0.3	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	<0.25	<0.054	<0.052	<0.005	<0.050
ALDRIN	NA	0.5	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	<0.008	<0.005	<0.003	<0.002	<0.002
ALPHA-BHC	NA	NA	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	<0.13	<0.027	<0.026	<0.005	<0.025
ALPHA-CHLORDANE	NA	NA	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	0.178	---	---	---	---	---	---	---	---	---	---	---
BETA-BHC	NA	NA	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	<0.025	<0.005	<0.005	<0.005	<0.005
CHLORDANE	2	2	<0.510	0.450	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	<1.5	<0.050	0.10	<0.050	0.15
DELTA-BHC	NA	NA	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	<0.13	<0.027	<0.026	<0.005	<0.025
DIELDRIN	NA	0.1	0.046	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	**0.388**	<0.102	<0.0251	<0.0250	0.0347	0.0465	0.0528	0.027	**0.16**	0.026	0.028	0.035
ENDOSULFAN I	NA	10	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	<0.25	<0.054	<0.052	<0.005	<0.050
ENDOSULFAN II	NA	10	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	<0.25	<0.054	<0.052	<0.005	<0.050
ENDRIN	2	2	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	0.0561	<0.0269	**<0.25**	<0.005	<0.052	<0.005	<0.050
ENDRIN KETONE	NA	NA	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	<0.25	<0.054	<0.052	<0.020	<0.050
GAMMA-BHC	NA	NA	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	<0.13	<0.027	<0.026	<0.005	<0.025
GAMMA-CHLORDANE	NA	NA	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	0.131	---	---	---	---	---	---	---	---	---	---	---
HEPTACHLOR	0.4	0.4	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	<0.13	<0.027	<0.026	<0.005	<0.025
HEPTACHLOR EPOXIDE	0.2	0.2	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	0.0447	0.0707	<0.13	<0.050	<0.026	<0.020	<0.025
HEXACHLOROBENZENE	1	1	---	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	---	---	---	---	---
METHOXYCHLOR	40	40	<0.0260	<0.103	<0.100	<0.101	<0.104	<0.102	<0.105	<0.101	<0.102	<0.106	<0.102	<0.0251	<0.0250	<0.0260	<0.0260	<0.0269	<0.51	<0.11	<0.10	<0.010	<0.10
TOXAPHENE	3	NA	<2.55	<2.05	<2.00	<2.01	<2.08	<2.04	<2.11	<2.02	<2.04	<2.13	<2.04	<2.01	<2.00	<2.08	<2.08	<2.15	**<5.1**	<1.1	<1.0	<0.20	<1.0
Total Pesticides			*0.046*	*1.147*	*ND*	*ND*	*0.305*	*ND*	*ND*	*ND*	*ND*	*1.322*	*ND*	*ND*	*ND*	*0.0347*	*0.1473*	*0.427*	*0.027*	*0.21*	*0.126*	*0.028*	*0.244*
SEMI VOLATILES (ug/L)					(SH)		(SL)			(SH)					SL		SL		SL	SL	SL	SL	SL
2,4,6-TRICHLOROPHENOL	NA	10	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
2,4-DICHLOROPHENOL	NA	10	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
2,4-DIMETHYLPHENOL	NA	60	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
2,4-DINITROPHENOL	NA	200	<5.05	<5.00	<5.05	<5.00	<5.68	<5.05	<5.05	<5.05	<5.05	<5.52	<5.00	<5.10	<5.00	<5.15	<5.38	<27.2	<5.05	<5.26	<5.38	<5.00	<5.05
2,4-DINITROTOLUENE	NA	30	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
2-CHLORONAPHTHALENE	NA	NA	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	1.36	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
2-METHYLNAPHTHALENE	NA	10	**10.0**	1.78	9.79	<1.00	**15.0**	1.18	1.22	6.37	<1.01	**11.3**	<1.00	<1.02	**56.2**	<1.03	3.98	<1.09	<1.01	1.95	<1.08	<1.00	<1.01
2-METHYLPHENOL	NA	10	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
2-NITROANILINE	NA	NA	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
2-NITROPHENOL	NA	NA	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
3/4-METHYLPHENOL	NA	NA																					
3-NITROANILINE	NA	NA	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
4-CHLORO-3-METHYLPHENOL	NA	NA	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
4-CHLOROANILINE	NA	20	<1.01	<1.00	<2.53	<2.50	<2.84	<2.53	<2.53	<2.53	<2.53	<2.76	<2.50	<2.55	<2.50	<2.58	<2.69	<2.72	<2.53	<2.63	<2.69	<2.50	<2.53
4-NITROANILINE	NA	NA	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
4-NITROPHENOL	NA	NA	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	5.48	<1.01	<1.05	<1.08	<1.00	<1.01
ACENAPHTHENE	NA	20	2.57	<1.00	1.99	<1.00	3.97	<1.01	<1.01	1.34	<1.01	2.94	<1.00	<1.02	**42.2**	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
ACENAPHTHYLENE	NA	30	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
ACETOPHENONE	NA	NA	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
ANTHRACENE	NA	60	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	2.04	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
BENZO (A) ANTHRACENE	NA	1	<0.10	<0.100	<0.101	<0.100	<0.114	<0.101	<0.101	<0.101	<0.101	<0.110	<0.100	<0.102	<0.100	<0.103	<0.108	<0.109	<0.101	<0.105	<0.108	<0.100	<0.101
BENZO (A) PYRENE	0.2	0.2	<0.101	0.160	<0.101	<0.100	<0.114	<0.101	<0.101	<0.101	<0.101	<0.110	<0.100	<0.102	<0.100	<0.103	<0.108	<0.109	<0.101	<0.105	<0.108	<0.100	<0.101
BENZO (B) FLUORANTHENE	NA	1	<0.505	<0.500	<0.101	<0.100	<0.114	<0.101	<0.101	<0.101	<0.101	<0.110	<0.100	<0.102	<0.100	<0.103	<0.108	<0.109	<0.101	<0.105	<0.108	<0.100	<0.101
BENZO (K) FLUORANTHENE	NA	1	<0.505	<0.500	<0.101	<0.100	<0.114	<0.101	<0.101	<0.101	<0.101	<0.110	<0.100	<0.102	<0.100	<0.103	<0.108	<0.109	<0.101	<0.105	<0.108	<0.100	<0.101
BENZYL ALCOHOL	NA	NA	<1.01	11.9	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
BIS(2-CHLOROETHYL)ETHER	NA	30	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	3.62	<1.03	<1.08	2.77	<1.01	<1.05	<1.08	<1.00	<1.01
CARBAZOLE	NA	NA	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	2.78	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
CHRYSENE	NA	2	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
DIBENZOFURAN	NA	NA	1.03	<1.00	1.03	<1.00	2.07	<1.01	<1.01	<1.01	<1.01	1.47	<1.00	<1.02	12.8	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
DIETHYLPHTHALATE	NA	2000	<1.01	<1.00	3.57	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
FLUORANTHENE	NA	90	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	1.30	<1.00	<1.02	2.20	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
FLUORENE	NA	30	1.05	<1.00	<1.01	<1.00	1.93	<1.01	<1.01	<1.01	<1.01	1.15	<1.00	<1.02	17.9	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
HEXACHLOROETHANE	NA	8	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.101	<0.100	<0.101	<0.100	<0.114	<0.101	<0.101	<0.101	<0.101	<0.110	<0.100	<0.102	<0.100	<0.103	<0.108	<0.109	<0.101	<0.105	<0.108	<0.100	<0.101
NAPHTHALENE	NA	140	38.0	5.28	42.2	<1.00	47.1	3.61	3.62	24.1	6.55	55.9	3.44	<1.02	**371**	2.59	10.9	3.75	<1.01	5.62	<1.08	*1.70*	*4.58*
NITROBENZENE	NA	NA	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
PENTACHLOROPHENOL	1	1	<1.01	<1.00	<0.505	<1.00	<1.14	<1.00	<1.01	<2.53	<2.53	<1.10	<0.600	<0.612	<0.600	0.619	<0.645	<0.649	<1.00	<1.00	<1.00	<1.00	<1.00
PHENANTHRENE	NA	40	1.53	<1.00	2.84	<1.00	3.12	<1.01	<1.01	<1.01	<1.01	1.48	<1.00	<1.02	16.6	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
PHENOL	NA	1000	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	<1.00	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
PYRENE	NA	60	<1.01	<1.00	<1.01	<1.00	<1.14	<1.01	<1.01	<1.01	<1.01	<1.10	<1.00	<1.02	2.49	<1.03	<1.08	<1.09	<1.01	<1.05	<1.08	<1.00	<1.01
Total Semi Volatiles			*54.2*	*19.1*	*61.4*	*ND*	*73.2*	*4.79*	*4.84*	*31.8*	*6.55*	*75.5*	*3.44*	*ND*	*531*	*3.83*	*14.9*	*12.00*	*ND*	*7.57*	*ND*	*1.70*	*4.58*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9
Date Sampled			12/22/2008	3/19/2009	6/11/2009	9/15/2009	12/17/2009	3/19/2010	6/10/2010	9/17/2010	12/21/2010	3/16/2011	12/23/2011	3/15/2012	6/18/2012	12/18/2012	3/20/2013	6/14/2013	9/18/2014	12/9/2014	4/1/2015	6/17/2015	9/1/2015
VOC (ug/L)																		SH					
1,2,3-TRICHLOROPROPANE		NA	<2.00	---	---	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
1,2,4-TRIMETHYLBENZENE	NA	NA	7.10	<5.00	<5.00	<2.00	---	---	---	---	---	7.21	<2.00	2.34	<2.00	<2.00	<2.00	<2.00	<2.00	3.41	<2.00	<2.00	<2.00
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**<2.00**	**---**	**---**	**<2.00**	**---**	**---**	**---**	**---**	**---**	**4.32**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**
1,2-DICHLOROBENZENE		600	<2.00	---	---	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
1,3,5-TRIMETHYLBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
2-CHLOROTOLUENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-CHLOROTOLUENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-ISOPROPYLTOLUENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-METHYL-2-PENTANONE	NA	NA	<5.00	<5.00	<5.00	<5.00	---	---	---	---	---	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BENZENE	5	5	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
CARBON DISULFIDE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
CHLOROBENZENE	100	100	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
CIS-1,2-DICHLOROETHENE	70	70	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
ETHYLBENZENE	700	700	6.13	<5.00	<5.00	<2.00	---	---	---	---	---	5.30	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
ISOPROPYLBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
MTBE	NA	70	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
NAPHTHALENE	NA	140	130	<5.00	**766**	<20.0	---	---	---	---	---	**1,040**	<2.00	**1,460**	**1,870**	<2.00	<2.00	<2.00	3.58	**6,230**	**644**	**5,270**	**233**
n-BUTYLBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
n-PROPLYBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
sec-BUTYLBENZENE	NA	NA	<2.00	---	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
STYRENE	100	100	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TERT-BUTYLBENZENE	NA	NA	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TETRACHLOROETHENE	5	5	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TOLUENE	1,000	1,000	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TRANS-1,2-DICHLOROETHENE	100	100	<5.00	<5.00	<5.00	<2.00	---	---	---	---	---	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
TOTAL XYLENES	10,000	10,000	24.8	<5.00	<5.00	<2.00	---	---	---	---	---	17.5	<2.00	2.64	<2.00	<2.00	<2.00	<2.00	<2.00	3.68	<2.00	<2.00	<2.00
Total Volatiles			*168*	*ND*	*766*	*ND*	---	---	---	---	---	*1,074*	*ND*	*1,465*	*1,870*	*ND*	*ND*	*ND*	*3.58*	*6,237*	*644*	*5,270*	*233*

Shaded = Compound detected in the laboratory analysis
BOLD = Compound was detected at or above Federal MCL or when no MCL is listed, above MCP Method 1 Standard
mg/L = milligram per liter
ug/L = mircrogram per liter
SH = Spike Recovery greater than recovery limits
SL = Spike recovery less than recovery limits
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW9	EW9	EW9	EW-10	EW-10	EW-10	EW-10	EW-10	EW-10	EW-10	EW-10	EW-10	EW-10	EW-10
Date Sampled			3/28/2016	6/17/2016	12/6/2016	3/31/2017	6/23/2017	8/30/2017	03/26/2019	06/21/2019	08/22/2019	6/16/2014	9/18/2014	12/9/2014	4/1/2015	3/20/2013	9/1/2015	12/10/2015	3/28/2016	6/17/2016	12/6/2016	3/31/2017	6/23/2017
METALS (mg/L)																							
ARSENIC (TOTAL)	0.05	0.01	**13.6**	**2.22**	**1.60**	**2.10**	**1.46**	**3.04**	**0.0728**	**3.520**	**14.8**	**0.123**	**0.0580**	**0.161**	**0.190**	**0.331**	**0.242**	**0.596**	**2.58**	**1.65**	**0.520**	**5.17**	**1.65**
PESTICIDES (ug/L)																SL	SL	SL					
4 4-DDD	NA	0.2	<0.050	<0.050	<0.050	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.050	**<0.26**	0.082	<0.10	**0.20**	**0.35**	0.11	0.18	**2.5**	0.14	**0.320**	**0.306**
4 4'-DDE	NA	0.05	<0.050	<0.050	<0.050	<0.050	<0.047	<0.047	<0.048	<0.047	<0.047	<0.050	**<0.26**	<0.020	<0.020	<0.050	**<0.51**	<0.050	<0.050	**0.24**	<0.050	<0.050	<0.048
4 4'-DDT	NA	0.3	<0.050	<0.050	<0.050	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.050	<0.26	<0.051	<0.10	<0.050	**<0.51**	<0.050	<0.050	<0.025	<0.050	<0.100	<0.048
ALDRIN	NA	0.5	<0.010	<0.002	<0.050	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.002	<0.008	<0.050	<0.005	<0.015	<0.015	<0.015	<0.015	0.30	<0.010	<0.100	<0.048
ALPHA-BHC	NA	NA	<0.025	<0.025	<0.025	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.025	<0.13	<0.025	<0.051	<0.050	<0.26	<0.050	<0.050	<0.025	<0.025	<0.100	<0.048
ALPHA-CHLORDANE	NA	NA	---	---	---	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	---	---	---	---	---	---	---	---	---	---	0.217	0.339
BETA-BHC	NA	NA	<0.005	<0.005	<0.005	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.005	<0.026	<0.005	<0.010	<0.050	<0.051	<0.050	<0.050	<0.025	<0.005	<0.100	<0.048
CHLORDANE	2	2	<0.050	<0.050	<0.050	<0.400	<0.187	<0.187	<0.192	<0.187	<0.187	<0.30	<1.5	0.58	0.43	<0.50	**<3.1**	<0.50	0.70	**2.8**	0.51	1.03	<0.190
DELTA-BHC	NA	NA	<0.025	<0.025	<0.025	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.025	<0.13	<0.025	<0.051	<0.050	<0.26	<0.050	<0.050	<0.025	<0.025	<0.100	<0.048
DIELDRIN	NA	0.1	<0.010	<0.002	<0.002	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	0.090	0.033	**0.19**	**0.21**	**0.20**	**0.23**	**0.16**	**0.23**	**0.62**	<0.002	**0.440**	**0.552**
ENDOSULFAN I	NA	10	<0.050	<0.050	<0.050	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.050	<0.26	<0.051	<0.10	<0.050	<0.51	<0.050	<0.050	<0.051	<0.050	<0.100	<0.048
ENDOSULFAN II	NA	10	<0.050	<0.050	<0.050	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.050	<0.26	<0.051	<0.10	<0.050	<0.51	<0.050	<0.050	<0.025	<0.050	<0.100	<0.048
ENDRIN	2	2	<0.050	<0.050	<0.050	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.050	**<0.26**	<0.010	<0.10	<0.050	<0.51	<0.050	<0.050	<0.025	<0.050	<0.100	<0.048
ENDRIN KETONE	NA	NA	<0.050	<0.050	<0.050	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.050	<0.26	<0.051	<0.10	<0.050	<0.51	<0.050	<0.050	<0.025	<0.050	<0.100	<0.048
GAMMA-BHC	NA	NA	<0.025	<0.050	<0.025	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.025	<0.13	<0.025	<0.051	<0.050	<0.26	<0.050	<0.050	<0.025	<0.025	0.129	<0.048
GAMMA-CHLORDANE	NA	NA	---	---	---	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	---	---	---	---	---	---	---	---		---	<0.100	0.220
HEPTACHLOR	0.4	0.4	<0.025	<0.025	<0.025	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.025	<0.13	<0.025	<0.051	<0.050	<0.26	<0.050	<0.050	<0.025	<0.025	<0.100	<0.048
HEPTACHLOR EPOXIDE	0.2	0.2	<0.025	<0.025	<0.025	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.025	<0.13	<0.025	<0.051	<0.050	**<0.26**	<0.050	<0.050	<0.025	<0.025	<0.100	<0.048
HEXACHLOROBENZENE	1	1	---	---	<0.005	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	---	---	---	---	---	---	---	---		<0.005	<0.100	<0.048
METHOXYCHLOR	40	40	<0.10	<0.10	<0.10	<0.100	<0.047	<0.047	<0.048	<0.047	<0.047	<0.10	<0.51	<0.10	<0.20	<0.10	<1.0	<0.050	<0.050	<0.025	<0.10	<0.100	<0.048
TOXAPHENE	3	NA	<1.0	<1.0	<1.0	---	<1.21	<1.21	<1.25	<1.21	<1.21	<1.0	**<5.1**	<1.0	<2.0	<2.0	**<10**	**<10**	**<10**	<1.0	<1.0	---	<1.24
Total Pesticides			*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*0.033*	*0.85*	*0.64*	*0.40*	*0.58*	*0.27*	*1.11*	*6.5*	*0.65*	*2.14*	*1.417*
SEMI VOLATILES (ug/L)					SH		SL					SL	SL	SL	SL	SL	SL				SH/SL		
2,4,6-TRICHLOROPHENOL	NA	10	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	**<10.2**	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
2,4-DICHLOROPHENOL	NA	10	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	**<10.2**	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
2,4-DIMETHYLPHENOL	NA	60	<1.02	<1.05	<1.00	<47.6	<46.7	<46.7	<51	<47.2	<46.7	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<46.7	<48.5
2,4-DINITROPHENOL	NA	200	<5.10	<5.26	<5.00	<47.6	<46.7	<46.7	<51	<47.2	<46.7	<5.05	<5.05	<5.32	<5.32	<5.26	<5.05	<5.00	<5.15	<5.38	<5.00	<46.7	<48.5
2,4-DINITROTOLUENE	NA	30	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
2-CHLORONAPHTHALENE	NA	NA	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
2-METHYLNAPHTHALENE	NA	10	1.06	<1.05	<1.00	<0.20	1.70	0.52	**70.7**	0.26	0.21	<1.01	<1.01	<1.06	<1.06	<1.05	**23.2**	1.36	<1.03	6.15	<1.00	4.75	9.68
2-METHYLPHENOL	NA	10	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	**<10.2**	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
2-NITROANILINE	NA	NA	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
2-NITROPHENOL	NA	NA	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
3/4-METHYLPHENOL	NA	NA				<19.0	<18.7	<18.7	<20.4	<18.9	<18.7											<18.7	<19.4
3-NITROANILINE	NA	NA	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
4-CHLORO-3-METHYLPHENOL	NA	NA	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
4-CHLOROANILINE	NA	20	<2.55	<2.63	<2.50	<19.0	<18.7	<18.7	**<20.4**	<18.9	<18.7	<2.53	<2.53	<2.66	<2.66	<2.63	<2.53	<2.50	<2.58	<2.69	<2.50	<18.7	<19.4
4-NITROANILINE	NA	NA	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
4-NITROPHENOL	NA	NA	<1.02	<1.05	<1.00	<47.6	<46.7	<46.7	<51	<47.2	<46.7	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<46.7	<48.5
ACENAPHTHENE	NA	20	<1.02	<1.05	<1.00	<0.20	<0.19	<0.19	**23.4**	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	5.17	<1.00	<1.03	3.58	<1.00	2.20	0.76
ACENAPHTHYLENE	NA	30	<1.02	<1.05	<1.00	<0.20	<0.19	<0.19	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	3.46	<1.00	<0.19	<0.19
ACETOPHENONE	NA	NA	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
ANTHRACENE	NA	60	<1.02	<1.05	<1.00	<0.20	0.20	<0.19	21.7	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	8.85	<1.00	<1.03	1.76	<1.00	<0.19	2.52
BENZO (A) ANTHRACENE	NA	1	<0.102	<0.105	<0.100	<0.05	<0.05	<0.05	0.46	<0.05	<0.05	<0.101	<0.101	<0.106	<0.106	<0.105	<0.101	<0.100	<0.103	0.575	<0.100	<0.05	0.07
BENZO (A) PYRENE	0.2	0.2	<0.102	<0.105	<0.100	<0.05	<0.05	<0.02	0.1	<0.05	<0.05	<0.101	<0.101	<0.106	<0.106	<0.105	<0.101	<0.100	<0.103	<0.108	<0.100	<0.05	<0.05
BENZO (B) FLUORANTHENE	NA	1	<0.102	<0.105	<0.100	<0.05	<0.05	<0.05	0.15	<0.05	<0.05	<0.101	<0.101	<0.106	<0.106	<0.105	<0.101	<0.100	<0.103	<0.108	<0.100	<0.05	<0.05
BENZO (K) FLUORANTHENE	NA	1	<0.102	<0.105	<0.100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.101	<0.101	<0.106	<0.106	<0.105	<0.101	<0.100	<0.103	<0.108	<0.100	<0.05	<0.05
BENZYL ALCOHOL	NA	NA	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
BIS(2-CHLOROETHYL)ETHER	NA	30	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	1.70	<1.05	<1.00	6.9	<5.6	<5.6	**<6.1**	<5.7	<5.6	1.22	<1.01	<1.06	<1.06	<1.05	<1.01	1.22	1.56	<1.08	<1.00	<5.6	<5.8
CARBAZOLE	NA	NA	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	3.39	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
CHRYSENE	NA	2	<1.02	<1.05	<1.00	<0.05	<0.05	<0.05	0.39	<0.05	<0.05	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<0.05	0.05
DIBENZOFURAN	NA	NA	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	19.9	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	4.47	<1.00	<1.03	2.20	<1.00	<9.3	<9.7
DIETHYLPHTHALATE	NA	2000	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
FLUORANTHENE	NA	90	<1.02	<1.05	<1.00	<0.20	<0.19	<0.19	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	2.65	<1.00	<1.03	3.10	<1.00	<0.19	0.49
FLUORENE	NA	30	<1.02	<1.05	<1.00	<0.20	0.86	0.54	**62.5**	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	13.5	<1.00	<1.03	2.62	<1.00	0.84	9.84
HEXACHLOROETHANE	NA	8	<1.02	<1.05	<1.00	<4.8	<4.7	<4.7	<5.1	<4.7	<4.7	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<4.7	<4.9
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.102	<0.105	<0.100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.101	<0.101	<0.106	<0.106	<0.105	<0.101	<0.100	<0.103	<0.108	<0.100	<0.05	<0.05
NAPHTHALENE	NA	140	<1.02	1.84	<1.00	<0.20	5.27	0.97	139	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	48.7	6.64	<1.03	2.71	2.02	18.1	11.2
NITROBENZENE	NA	NA	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
PENTACHLOROPHENOL	1	1	<1.00	<1.00	<1.00	<0.90	<0.90	<0.30	<0.92	<0.85	<0.84	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.645	<1.00	<0.84	<0.87
PHENANTHRENE	NA	40	<1.02	<1.05	<1.00	<0.20	0.20	<0.19	**46.2**	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	10.2	<1.00	<1.03	8.03	<1.00	0.37	2.14
PHENOL	NA	1000	<1.02	<1.05	<1.00	<9.5	<9.3	<9.3	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	<1.01	<1.00	<1.03	<1.08	<1.00	<9.3	<9.7
PYRENE	NA	60	<1.02	<1.05	<1.00	<0.20	<0.19	<0.19	<10.2	<9.4	<9.3	<1.01	<1.01	<1.06	<1.06	<1.05	1.82	<1.00	<1.03	2.92	<1.00	<0.19	0.38
Total Semi Volatiles			*2.76*	*1.84*	*ND*	*6.9*	*8.23*	*2.03*	*385*	*0.26*	*0.21*	*1.22*	*ND*	*ND*	*ND*	*ND*	*122.0*	*9.22*	*1.56*	*37.11*	*2.02*	*26.3*	*37.1*

Shaded = Compound detected in the laboratory analysis
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SH = Spike Recovery greater than recovery limits
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--- = not reported
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laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-9	EW-9	EW-9	EW-9	EW-9	EW-9	EW9	EW9	EW9	EW-10	EW-10	EW-10	EW-10	EW-10	EW-10	EW-10	EW-10	EW-10	EW-10	EW-10
Date Sampled			3/28/2016	6/17/2016	12/6/2016	3/31/2017	6/23/2017	8/30/2017	03/26/2019	06/21/2019	08/22/2019	6/16/2014	9/18/2014	12/9/2014	4/1/2015	3/20/2013	9/1/2015	12/10/2015	3/28/2016	6/17/2016	12/6/2016	3/31/2017	6/23/2017
VOC (ug/L)			SH													SH			SH				
1,2,3-TRICHLOROPROPANE		NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
1,2,4-TRIMETHYLBENZENE	NA	NA	<2.00	5.21	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**<2.00**	**<2.00**	**<2.00**	**<5.0**	**<5.0**	**<5.0**	<5	<5	<5	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<2.00**	**<5.0**	**<5.0**
1,2-DICHLOROBENZENE		600	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
1,3,5-TRIMETHYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
2-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
4-CHLOROTOLUENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
4-ISOPROPYLTOLUENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
4-METHYL-2-PENTANONE	NA	NA	<5.00	<5.00	<5.00	<10.0	<10.0	<10.0	<10	<10	<10	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<10.0	<10.0
BENZENE	5	5	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
CARBON DISULFIDE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
CHLOROBENZENE	100	100	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
CIS-1,2-DICHLOROETHENE	70	70	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
ETHYLBENZENE	700	700	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
ISOPROPYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
MTBE	NA	70	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
NAPHTHALENE	NA	140	2.70	**680**	<2.00	1.0	<1.0	<1.0	58.5	<1	1.4	3.38	**501**	**165**	127	<2.00	4.80	**29,000**	<2.00	**156**	<2.00	7.7	11.8
n-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
n-PROPLYBENZENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
sec-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
STYRENE	100	100	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
TERT-BUTYLBENZENE	NA	NA	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
TETRACHLOROETHENE	5	5	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
TOLUENE	1,000	1,000	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.0	<1.0
TRANS-1,2-DICHLOROETHENE	100	100	<2.00	<2.00	<2.00	<1.0	<1.0	<1.0	<1	<1	<1	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<0.270	<2.00	<2.00	<2.00	<1.0	<1.0
TOTAL XYLENES	10,000	10,000	<2.00	<2.00	<2.00	<2.0	<2.0	<2.0	<2	<2	<2	<2.00	2.11	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.0	<2.0
Total Volatiles			*2.70*	*685*	*ND*	*1.0*	*ND*	*ND*	*58.5*	*ND*	*1.4*	*3.38*	*503*	*165*	*127*	*ND*	*4.80*	*29,000*	*ND*	*ND*	*ND*	*7.7*	*11.8*

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laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-10	EW-10	EW10	EW10
Date Sampled			3/27/2018	6/28/2018	09/04/2018	08/22/2019
METALS (mg/L)						
ARSENIC (TOTAL)	0.05	0.01	**0.163**	**0.099**	**0.146**	**0.906**
PESTICIDES (ug/L)				SH		
4 4-DDD	NA	0.2	0.096	**0.326**	**0.427**	<0.048
4 4'-DDE	NA	0.05	<0.048	<0.047	<0.048	<0.048
4 4'-DDT	NA	0.3	<0.048	<0.047	<0.048	<0.048
ALDRIN	NA	0.5	<0.048	<0.047	<0.048	<0.048
ALPHA-BHC	NA	NA	<0.048	<0.047	<0.048	<0.048
ALPHA-CHLORDANE	NA	NA	0.165	<0.047	0.304	0.169
BETA-BHC	NA	NA	<0.048	<0.047	<0.048	<0.048
CHLORDANE	2	2	0.787	<0.187	**4.40**	1.36
DELTA-BHC	NA	NA	<0.048	<0.047	<0.048	<0.048
DIELDRIN	NA	0.1	**0.276**	**0.186**	**0.705**	**0.426**
ENDOSULFAN I	NA	10	<0.048	<0.047	<0.048	<0.048
ENDOSULFAN II	NA	10	<0.048	<0.047	<0.048	<0.048
ENDRIN	2	2	<0.048	<0.047	<0.048	<0.048
ENDRIN KETONE	NA	NA	<0.048	<0.047	<0.048	<0.048
GAMMA-BHC	NA	NA	<0.048	<0.047	<0.048	<0.048
GAMMA-CHLORDANE	NA	NA	0.080	<0.047	0.176	0.094
HEPTACHLOR	0.4	0.4	<0.048	<0.047	<0.048	<0.048
HEPTACHLOR EPOXIDE	0.2	0.2	<0.048	<0.047	<0.048	<0.048
HEXACHLOROBENZENE	1	1	<0.048	<0.047	<0.048	<0.048
METHOXYCHLOR	40	40	<0.048	<0.047	<0.048	<0.048
TOXAPHENE	3	NA	<1.24	<1.21	<1.25	<1.24
Total Pesticides			*1.404*	*0.512*	*6.01*	*2.05*
SEMI VOLATILES (ug/L)						
2,4,6-TRICHLOROPHENOL	NA	10	<9.6	<9.6	<9.7	<10
2,4-DICHLOROPHENOL	NA	10	<9.6	<9.6	<9.7	<10
2,4-DIMETHYLPHENOL	NA	60	<48.1	<48.1	<48.5	<50
2,4-DINITROPHENOL	NA	200	<48.1	<48.1	<48.5	<50
2,4-DINITROTOLUENE	NA	30	<9.6	<9.6	<9.7	<10
2-CHLORONAPHTHALENE	NA	NA	<9.6	<9.6	<9.7	<10
2-METHYLNAPHTHALENE	NA	10	0.23	0.78	**472**	0.39
2-METHYLPHENOL	NA	10	<9.6	<9.6	<9.7	<10
2-NITROANILINE	NA	NA	<9.6	<9.6	<9.7	<10
2-NITROPHENOL	NA	NA	<9.6	<9.6	<9.7	<10
3/4-METHYLPHENOL	NA	NA	<19.2	<19.2	<19.4	<20
3-NITROANILINE	NA	NA	<9.6	<9.6	<9.7	<10
4-CHLORO-3-METHYLPHENOL	NA	NA	<9.6	<9.6	<9.7	<10
4-CHLOROANILINE	NA	20	<19.2	<19.2	<19.4	<20
4-NITROANILINE	NA	NA	<9.6	<9.6	<9.7	<10
4-NITROPHENOL	NA	NA	<48.1	<48.1	<48.5	<50
ACENAPHTHENE	NA	20	<9.6	<9.6	**28.5**	<10
ACENAPHTHYLENE	NA	30	<9.6	<9.6	<9.7	<10
ACETOPHENONE	NA	NA	<9.6	<9.6	<9.7	<10
ANTHRACENE	NA	60	<9.6	<9.6	**126**	<10
BENZO (A) ANTHRACENE	NA	1	<0.05	<0.05	**1.53**	<0.05
BENZO (A) PYRENE	0.2	0.2	<0.05	<0.05	**0.33**	<0.05
BENZO (B) FLUORANTHENE	NA	1	<0.05	<0.05	0.29	<0.05
BENZO (K) FLUORANTHENE	NA	1	<0.05	<0.05	0.17	<0.05
BENZYL ALCOHOL	NA	NA	<9.6	<9.6	<9.7	<10
BIS(2-CHLOROETHOXY)METHANE	NA	NA	<9.6	<9.6	<9.7	<10
BIS(2-CHLOROETHYL)ETHER	NA	30	<9.6	<9.6	<9.7	<10
BIS-(2-ETHYLHEXYL) PHTHALATE	6	6	<5.8	<5.8	<5.8	**22.8**
CARBAZOLE	NA	NA	<9.6	<9.6	69.0	<10
CHRYSENE	NA	2	<0.05	<0.05	1.07	<0.05
DIBENZOFURAN	NA	NA	<9.6	<9.6	139	<10
DIETHYLPHTHALATE	NA	2000	<9.6	<9.6	<9.7	<10
FLUORANTHENE	NA	90	<9.6	<9.6	24.1	<10
FLUORENE	NA	30	<9.6	<9.6	**397**	<10
HEXACHLOROETHANE	NA	8	<4.8	<4.8	<4.9	<5
INDENO (1,2,3-CD) PYRENE	NA	0.5	<0.05	<0.05	0.09	<0.05
NAPHTHALENE	NA	140	<9.6	<9.6	**954**	<10
NITROBENZENE	NA	NA	<9.6	<9.6	<9.7	<10
PENTACHLOROPHENOL	1	1	<0.87	<0.87	<0.87	<0.9
PHENANTHRENE	NA	40	<9.6	<9.6	**108**	<10
PHENOL	NA	1000	<9.6	<9.6	<9.7	<10
PYRENE	NA	60	<9.6	<9.6	20.9	<10
Total Semi Volatiles			*0.23*	*0.78*	*2,342*	*27.3*

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laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

Table 7
Extraction Well Analytical Results

WELL	1989 MCL Standard	MCP Method 1 GW-1 Standard	EW-10	EW-10	EW10	EW10
Date Sampled			3/27/2018	6/28/2018	09/04/2018	08/22/2019
VOC (ug/L)						
1,2,3-TRICHLOROPROPANE		NA	<1.0	<1.0	<1	<1
1,2,4-TRIMETHYLBENZENE	NA	NA	<1.0	1.1	<1	<1
1,2-DIBROMO-3-CHLOROPROPANE	0.2	NA	**<5.0**	**<5.0**	**<5**	<5
1,2-DICHLOROBENZENE		600	<1.0	<1.0	<1	<1
1,3,5-TRIMETHYLBENZENE	NA	NA	<1.0	<1.0	<1	<1
2-CHLOROTOLUENE	NA	NA	<1.0	<1.0	<1	<1
4-CHLOROTOLUENE	NA	NA	<1.0	<1.0	<1	<1
4-ISOPROPYLTOLUENE	NA	NA	<1.0	<1.0	<1	<1
4-METHYL-2-PENTANONE	NA	NA	<10.0	<10.0	<10	<10
BENZENE	5	5	<1.0	<1.0	<1	<1
CARBON DISULFIDE	NA	NA	<1.0	<1.0	<1	<1
CHLOROBENZENE	100	100	<1.0	<1.0	<1	<1
CIS-1,2-DICHLOROETHENE	70	70	<1.0	<1.0	<1	<1
ETHYLBENZENE	700	700	<1.0	1.2	<1	<1
ISOPROPYLBENZENE	NA	NA	<1.0	<1.0	<1	<1
MTBE	NA	70	<1.0	<1.0	<1	<1
NAPHTHALENE	NA	140	<1.0	17.3	43.9	2.6
n-BUTYLBENZENE	NA	NA	<1.0	<1.0	<1	<1
n-PROPLYBENZENE	NA	NA	<1.0	<1.0	<1	<1
sec-BUTYLBENZENE	NA	NA	<1.0	<1.0	<1	<1
STYRENE	100	100	<1.0	<1.0	<1	<1
TERT-BUTYLBENZENE	NA	NA	<1.0	<1.0	<1	<1
TETRACHLOROETHENE	5	5	<1.0	<1.0	<1	<1
TOLUENE	1,000	1,000	<1.0	<1.0	<1	<1
TRANS-1,2-DICHLOROETHENE	100	100	<1.0	<1.0	<1	<1
TOTAL XYLENES	10,000	10,000	<2.0	4.3	<2	<2
Total Volatiles			*ND*	*23.9*	*43.9*	*2.6*

Shaded = Compound detected in the laboratory analysis
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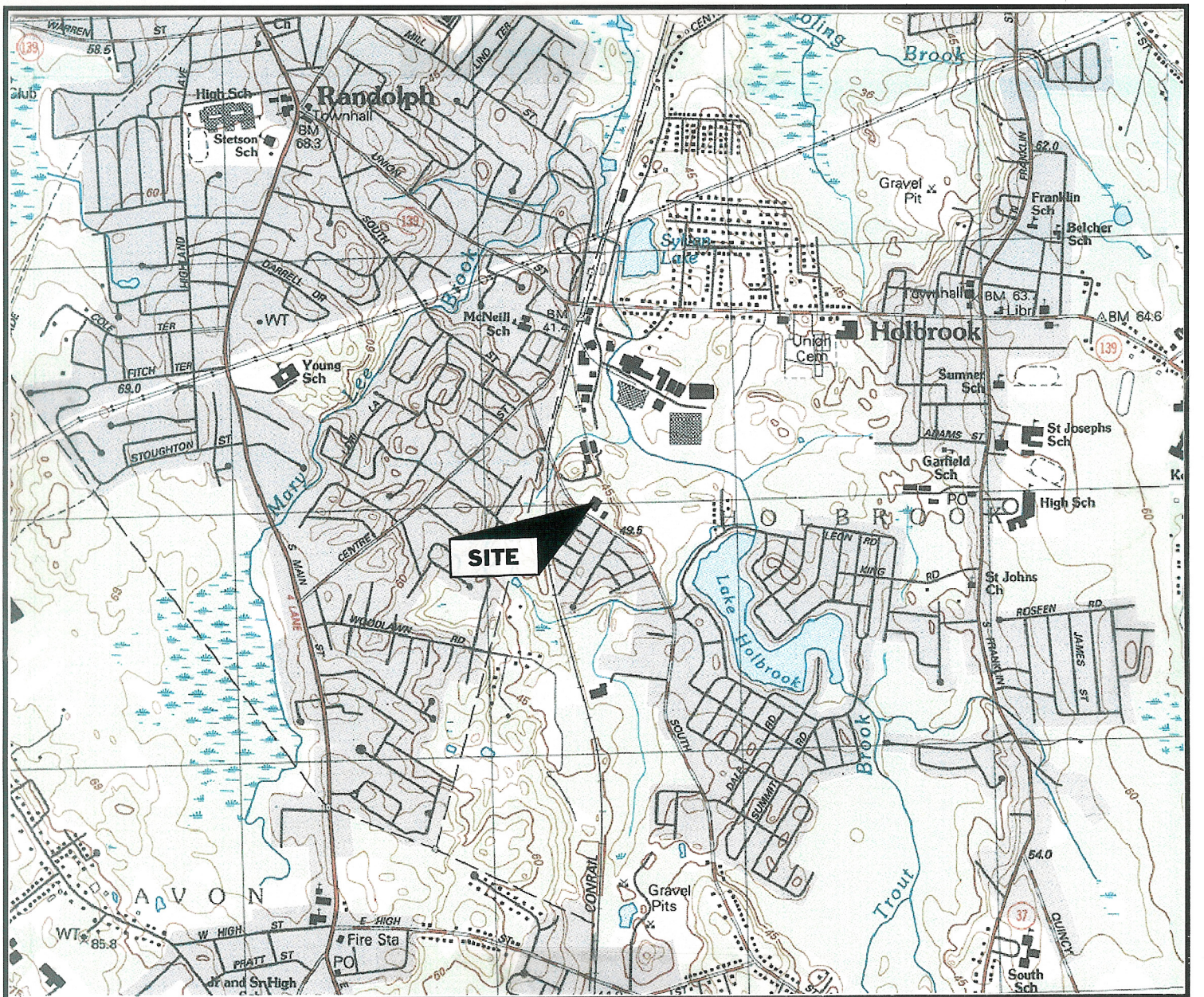
--- = not reported
NA = No applicable standard
laboratory analysis conducted by Geolabs through December 2016, and ESS thereafter.

TABLE 8
EXTRACTION WELL ANALYTICAL QA/QC EVALUATION
BAIRD & MCGUIRE SUPERFUND SITE
3rd Quarter 2019

WELL	EW-6A PRIMARY	EW-6A DUPLICATE	Average Concentration	Difference	Relative Percent Difference
METALS (mg/L)					
ARSENIC (TOTAL)	0.138	0.144	0.141	0.006	4%
PESTICIDES (ug/L)					
4 4-DDD	0.133	0.078	0.106	0.055	52%
ALPHA-CHLORDANE	0.161	0.145	0.153	0.016	10%
CHLORDANE	1.20	0.983	1.09	0.22	20%
DIELDRIN	0.054	0.072	0.063	0.018	29%
GAMMA-CHLORDANE	0.153	0.150	0.152	0.003	2%
SEMI VOLATILES (ug/L)					
2-METHYLNAPHTHALENE	101	79.4	90	22	24%
ACENAPHTHENE	31.5	26.3	28.9	5.2	18%
DIBENZOFURAN	17.1	13.1	15.1	4.0	26%
NAPHTHALENE	457	379	418	78	19%
PENTACHLOROPHENOL	1.23	1.55	1.39	0.32	23%
PHENANTHRENE	12.4	10.1	11.3	2.3	20%
VOC (ug/L)					
1,2,4-TRIMETHYLBENZENE	78.7	80.4	79.6	1.7	2%
1,3,5-TRIMETHYLBENZENE	15.7	13.9	14.8	1.8	12%
4-ISOPROPYLTOLUENE	13.3	12.7	13.0	0.6	5%
CHLOROBENZENE	1.1	1.2	1.2	0.1	9%
ETHYLBENZENE	130	134	132	4	3%
ISOPROPYLBENZENE	6.3	4.9	5.6	1.4	25%
NAPHTHALENE	712	705	709	7	1%
n-BUTYLBENZENE	3.3	3.4	3.4	0.1	3%
n-PROPLYBENZENE	6.8	5.6	6.2	1.2	19%
sec-BUTYLBENZENE	1.7	1.6	1.7	0.1	6%
STYRENE	1.6	1.4	1.5	0.2	13%
TOLUENE	19.7	23.3	21.5	3.6	17%
TOTAL XYLENES	217.6	235	226	17	8%

Relative Percent Difference calculated for compounds that have detections in both the primary and duplicate samples
mg/L = milligram per liter
ug/L = mircrogram per liter



MASS.

SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

N

COORDINATES	A	RTN 3-0333	LI	C JM	C JM	1/08
UTM; NAD83 332494mE; 4668219mN	ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE

BASE MAP: USGS TOPOGRAPHIC MAP PRINTED FROM TOPO! 1998 WILDFLOWER PRODUCTIONS

CleanHarbors
ENVIRONMENTAL SERVICES
REMEDIAL INVESTIGATIONS
42 Longwater Drive
Norwell, Massachusetts 02061
Telephone (781) 792-5000

BAIRD & MCGUIRE SUPERFUND SITE
775 SOUTH STREET
HOLBROOK, MASSACHUSETTS

LOCUS MAP

PROJECT NO. E01604547	DWG. NO. 4547-A-01	FIGURE 1
SCALE AS NOTED		

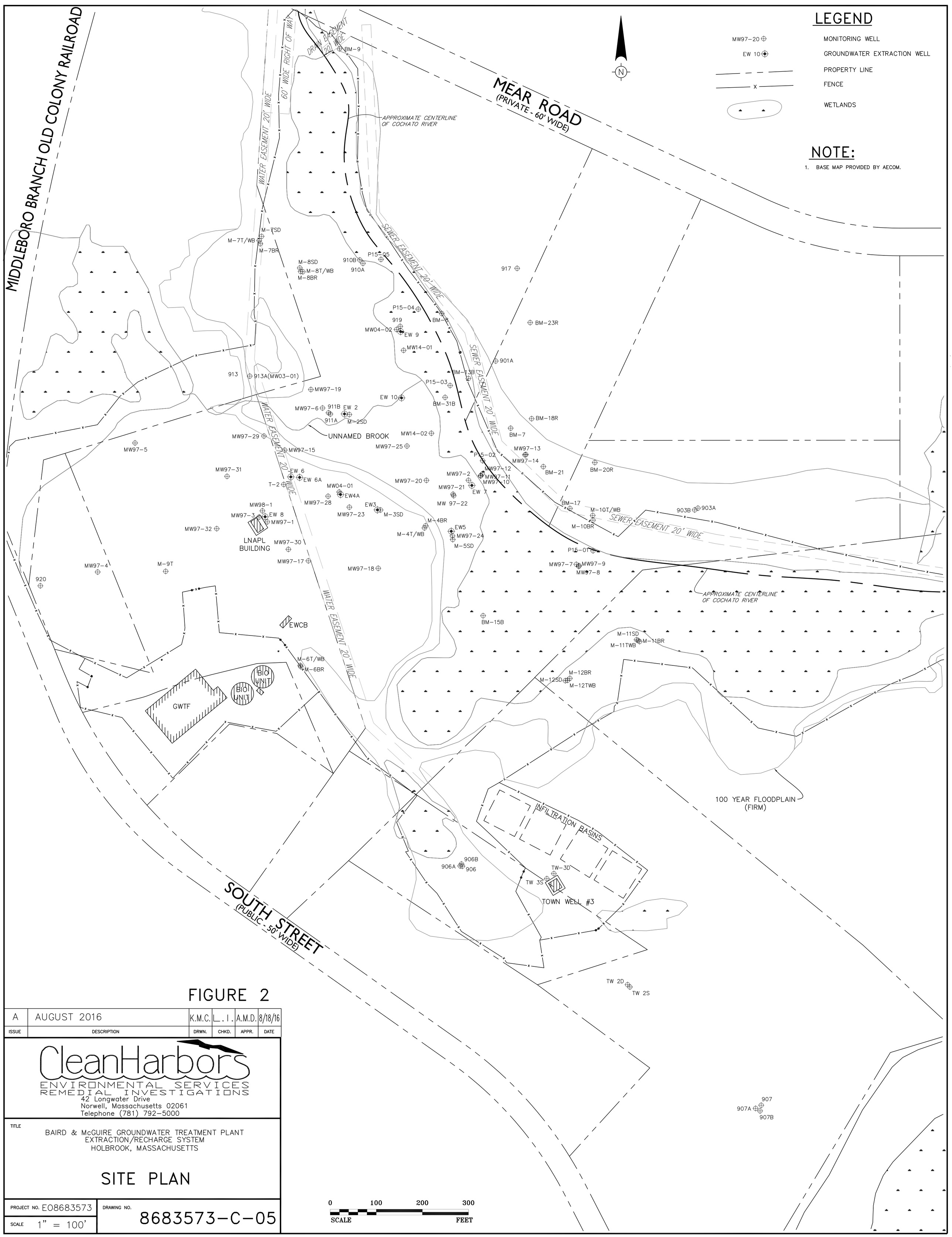


FIGURE 2

ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
A	AUGUST 2016	K.M.C.	L. I.	A.M.D.	8/18/16

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REMEDIAL INVESTIGATIONS
42 Longwater Drive
Norwell, Massachusetts 02061
Telephone (781) 792-5000

TITLE

BAIRD & McGUIRE GROUNDWATER TREATMENT PLANT
EXTRACTION/RECHARGE SYSTEM
HOLBROOK, MASSACHUSETTS

SITE PLAN

PROJECT NO. E08683573

DRAWING NO. 8683573-C-05

SCALE 1" = 100'

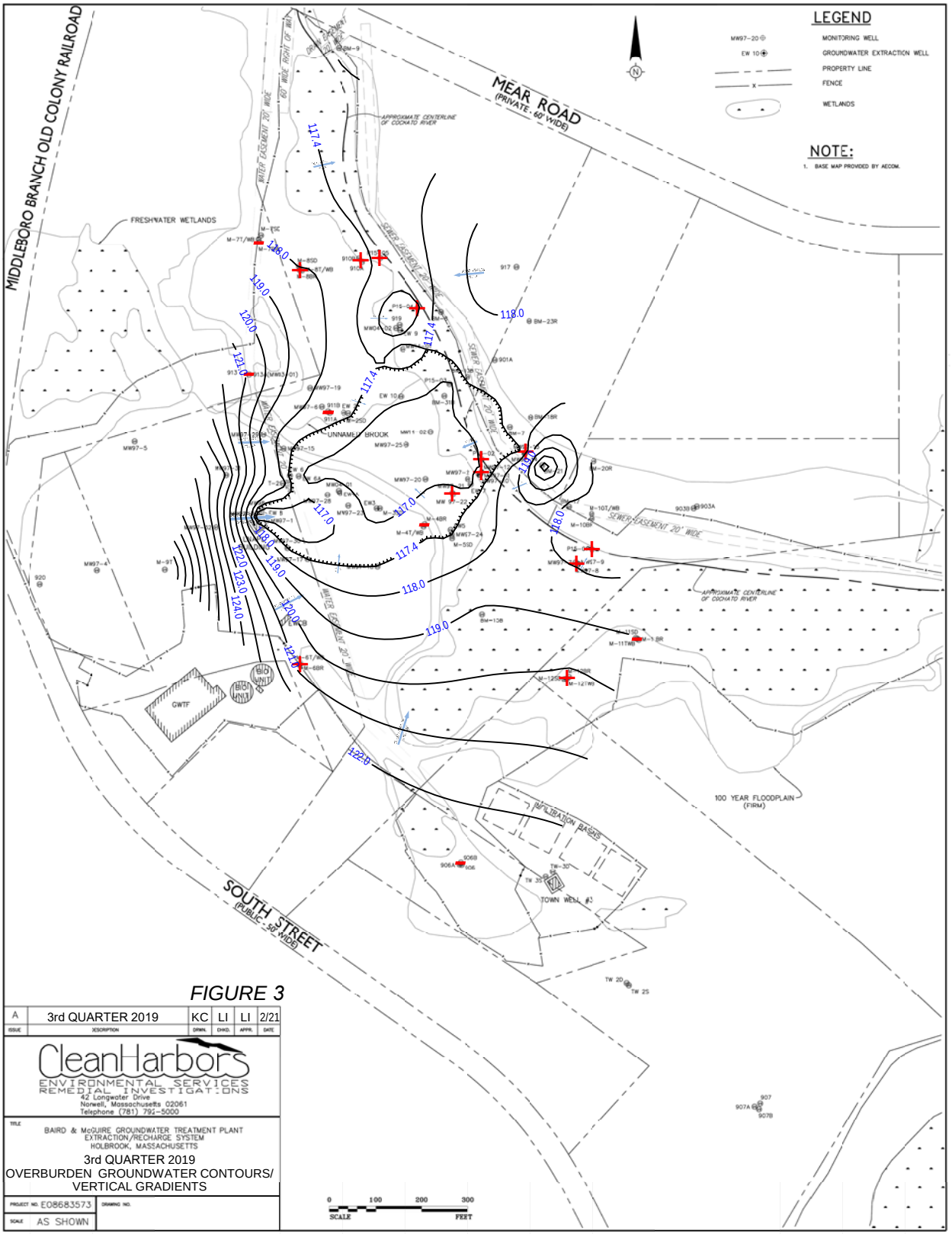


FIGURE 3

ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
A	3rd QUARTER 2019	KC	LI	LI	2/21

Clean Harbors
ENVIRONMENTAL SERVICES
REMEDIAL INVESTIGATIONS
42 Longwater Drive
Norwell, Massachusetts 02061
Telephone (781) 792-5000

TITLE
BAIRD & McGUIRE GROUNDWATER TREATMENT PLANT
EXTRACTION/RECHARGE SYSTEM
HOLBROOK, MASSACHUSETTS

3rd QUARTER 2019
OVERBURDEN GROUNDWATER CONTOURS/
VERTICAL GRADIENTS

PROJECT NO. E08683573 DRAWING NO.
SCALE AS SHOWN

JULY EXTRACTION WELL FLOW RATES
BAIRD MCGUIRE SUPERFUND SITE

	GW INF FLOW FT1	GW INF FLOW FT1A	TOTAL INFLUENT	EW-3 TOTAL FLOW	EW-4A TOTAL FLOW	EW-6A TOTAL FLOW	EW-7 TOTAL FLOW	EW-8 TOTAL FLOW	EW-9 TOTAL FLOW	EW-10 TOTAL FLOW	EFF TOTAL FLOW
Date	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K
7/1/2019	80.60	15.15	86.80	25.24	30.23	3.5	20.21	10.10	1.57	0.00	78.10
7/2/2019	90.00	16.86	98.10	28.11	33.73	4.0	22.48	11.24	1.62	0.00	89.70
7/3/2019	89.90	16.87	89.00	28.10	33.72	4.2	22.49	11.25	1.44	0.00	87.00
7/4/2019	89.90	16.85	94.10	28.09	33.69	4.2	22.46	11.23	1.41	0.00	89.10
7/5/2019	89.90	16.86	94.10	28.11	33.73	4.2	22.49	11.24	1.40	0.00	87.10
7/6/2019	89.90	16.86	92.40	28.10	33.53	4.2	22.48	11.25	1.41	0.00	86.60
7/7/2019	90.00	16.87	87.40	28.11	33.42	4.2	22.49	11.24	1.41	0.00	85.60
7/8/2019	90.00	16.87	87.40	28.11	33.42	4.2	22.49	11.24	1.41	0.00	85.60
7/9/2019	90.00	16.87	87.40	28.11	33.42	4.2	22.49	11.24	1.41	0.00	85.60
7/10/2019	90.00	16.87	87.40	28.11	33.42	4.2	22.49	11.24	1.41	0.00	85.60
7/11/2019	90.00	16.87	87.40	28.11	33.42	4.2	22.49	11.24	1.41	0.00	85.60
7/12/2019	90.00	16.87	87.40	28.11	33.42	4.2	22.49	11.24	1.41	0.00	85.60
7/13/2019	90.00	16.87	87.40	28.11	33.42	4.2	22.49	11.24	1.41	0.00	85.60
7/14/2019	90.00	16.87	87.40	28.11	33.42	4.2	22.49	11.24	1.41	0.00	85.60
7/15/2019	90.00	16.87	87.40	28.11	33.42	4.2	22.49	11.24	1.41	0.00	85.60
7/16/2019	90.00	16.87	87.40	28.11	33.42	4.2	22.49	11.24	1.41	0.00	85.60
7/17/2019	90.00	16.87	87.40	28.11	33.42	4.2	22.49	11.24	1.41	0.00	85.60
7/18/2019	90.00	16.87	87.40	28.11	33.42	4.2	22.49	11.24	1.41	0.00	85.60
7/19/2019	89.90	16.85	87.40	28.09	33.70	4.1	22.47	11.24	1.55	0.00	86.20
7/20/2019	89.90	16.86	87.60	28.10	33.73	4.2	22.48	11.24	1.41	0.00	87.80
7/21/2019	89.90	16.86	86.30	28.11	33.71	4.2	22.49	11.24	1.41	0.00	85.50
7/22/2019	67.90	12.71	68.70	21.23	25.39	3.1	17.00	8.48	1.13	0.00	66.50
7/23/2019	89.90	16.86	92.90	28.10	33.70	4.1	22.48	11.24	1.49	0.00	84.50
7/24/2019	78.60	14.74	106.20	24.57	29.48	3.5	19.66	9.83	1.36	0.00	78.50
7/25/2019	87.50	16.44	97.30	27.40	32.86	3.8	21.92	10.96	1.72	0.00	87.80
7/26/2019	89.90	16.85	93.60	28.09	33.71	4.1	22.47	11.24	1.46	0.00	85.50
7/27/2019	89.90	16.87	97.20	28.10	33.72	4.2	22.48	11.24	1.41	0.00	87.60
7/28/2019	90.00	16.86	98.40	28.11	33.65	4.2	22.49	11.24	1.41	0.00	87.30
7/29/2019	89.90	16.86	89.70	28.11	33.73	4.2	22.48	11.24	1.41	0.00	87.30
7/30/2019	89.90	16.87	86.60	28.10	33.65	4.2	22.49	11.25	1.40	0.00	84.90
7/31/2019	89.90	16.94	95.30	28.09	33.55	4.1	22.47	11.23	1.41	0.25	89.10
	AVERAGE	GPD/K	90.02	27.65	33.04	4.10	22.12	11.06	1.43	0.01	
		GPM	62.51	19.20	22.94	2.85	15.36	7.68	0.99	0.01	

Notes:

K = 1000

GPD = Gallons per day

GPM = Gallons per minute

Data copied directly from SCADA and into excel where calculations were made. These flows were generated outside of the OPS32 program. EW-6A flows are not being reported in SCADA; therefore, EW-6A flow was derived by subtracting EW-8, EW-9, and EW-10 flows from the FT-1A totalizer flow.

Clean Harbors
2/20/2020

AUGUST EXTRACTION WELL FLOW RATES
BAIRD MCGUIRE SUPERFUND SITE

	GW INF FLOW FT1	GW INF FLOW FT1A	TOTAL INFLUENT	EW-3 TOTAL FLOW	EW-4A TOTAL FLOW	EW-6A TOTAL FLOW	EW-7 TOTAL FLOW	EW-8 TOTAL FLOW	EW-9 TOTAL FLOW	EW-10 TOTAL FLOW	EFF TOTAL FLOW
Date	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K
8/1/2019	90.00	16.86	88.20	28.10	33.61	2.81	22.48	11.24	1.40	1.40	87.30
8/2/2019	89.90	16.87	89.40	28.11	33.62	2.91	22.48	11.24	1.41	1.32	82.70
8/3/2019	89.90	16.86	96.40	28.10	33.58	2.96	22.49	11.25	1.41	1.24	90.10
8/4/2019	89.90	17.09	93.10	28.09	33.58	3.23	22.47	11.23	1.40	1.22	88.40
8/5/2019	43.10	8.71	49.50	13.52	16.14	1.97	10.81	5.40	0.69	0.64	38.30
8/6/2019	26.90	5.52	29.70	8.45	10.01	1.24	6.75	3.37	0.48	0.43	30.90
8/7/2019	89.90	18.11	97.00	28.10	33.63	4.17	22.48	11.25	1.47	1.22	88.90
8/8/2019	90.00	17.90	94.30	28.11	33.58	4.07	22.49	11.24	1.41	1.18	87.40
8/9/2019	89.90	17.69	91.40	28.09	33.67	3.87	22.47	11.23	1.40	1.19	87.80
8/10/2019	89.90	17.71	89.40	28.10	33.64	3.91	22.48	11.25	1.41	1.14	87.10
8/11/2019	89.90	17.78	93.30	28.11	33.50	4.03	22.49	11.24	1.40	1.11	87.20
8/12/2019	90.00	17.77	93.70	28.10	33.48	4.08	22.48	11.24	1.41	1.04	86.70
8/13/2019	89.90	17.61	95.70	28.11	33.54	4.07	22.48	11.24	1.40	0.90	88.30
8/14/2019	89.90	16.86	93.20	28.08	33.59	2.97	22.47	11.24	1.40	1.25	85.30
8/15/2019	89.90	16.87	94.20	28.11	33.62	2.94	22.49	11.24	1.41	1.28	87.10
8/16/2019	90.00	16.86	92.10	28.10	33.60	2.88	22.48	11.24	1.41	1.34	84.10
8/17/2019	89.90	16.86	91.90	28.11	33.55	3.28	22.49	11.24	1.40	0.94	89.50
8/18/2019	89.90	16.85	85.30	28.09	33.59	3.44	22.47	11.24	1.40	0.77	86.20
8/19/2019	89.90	16.87	90.80	28.10	33.60	3.52	22.48	11.24	1.41	0.71	86.40
8/20/2019	89.90	16.86	91.30	28.11	33.62	3.51	22.48	11.24	1.41	0.70	84.50
8/21/2019	90.00	16.86	113.60	28.10	33.61	3.51	22.49	11.24	1.41	0.71	107.90
8/22/2019	89.90	16.86	92.70	28.09	33.58	3.51	22.47	11.24	1.40	0.70	85.20
8/23/2019	89.00	16.78	87.40	27.90	33.39	3.52	22.37	11.16	1.40	0.71	82.50
8/24/2019	90.00	16.86	121.90	28.11	33.69	3.52	22.49	11.24	1.39	0.70	90.30
8/25/2019	89.90	16.87	89.80	28.10	33.61	3.85	22.48	11.25	1.06	0.71	84.90
8/26/2019	86.20	16.16	81.70	26.93	32.18	3.61	21.55	10.77	1.01	0.77	81.40
8/27/2019	89.80	16.85	85.40	28.09	33.61	3.79	22.47	11.23	1.05	0.77	82.10
8/28/2019	90.00	16.86	95.50	28.11	33.61	3.76	22.48	11.25	1.05	0.80	96.80
8/29/2019	89.90	16.87	86.20	28.10	33.61	3.94	22.49	11.24	0.85	0.84	87.20
8/30/2019	89.90	16.86	92.50	28.11	33.59	4.09	22.48	11.24	0.73	0.79	82.50
8/31/2019	90.00	16.86	86.50	28.10	33.64	4.01	22.48	11.24	0.73	0.88	85.70
	AVERAGE	GPD/K	89.45	26.95	32.22	3.45	21.56	10.78	1.25	0.95	
		GPM	62.12	18.72	22.38	2.40	14.97	7.49	0.86	0.66	

Notes:

K = 1000

GPD = Gallons per day

GPM = Gallons per minute

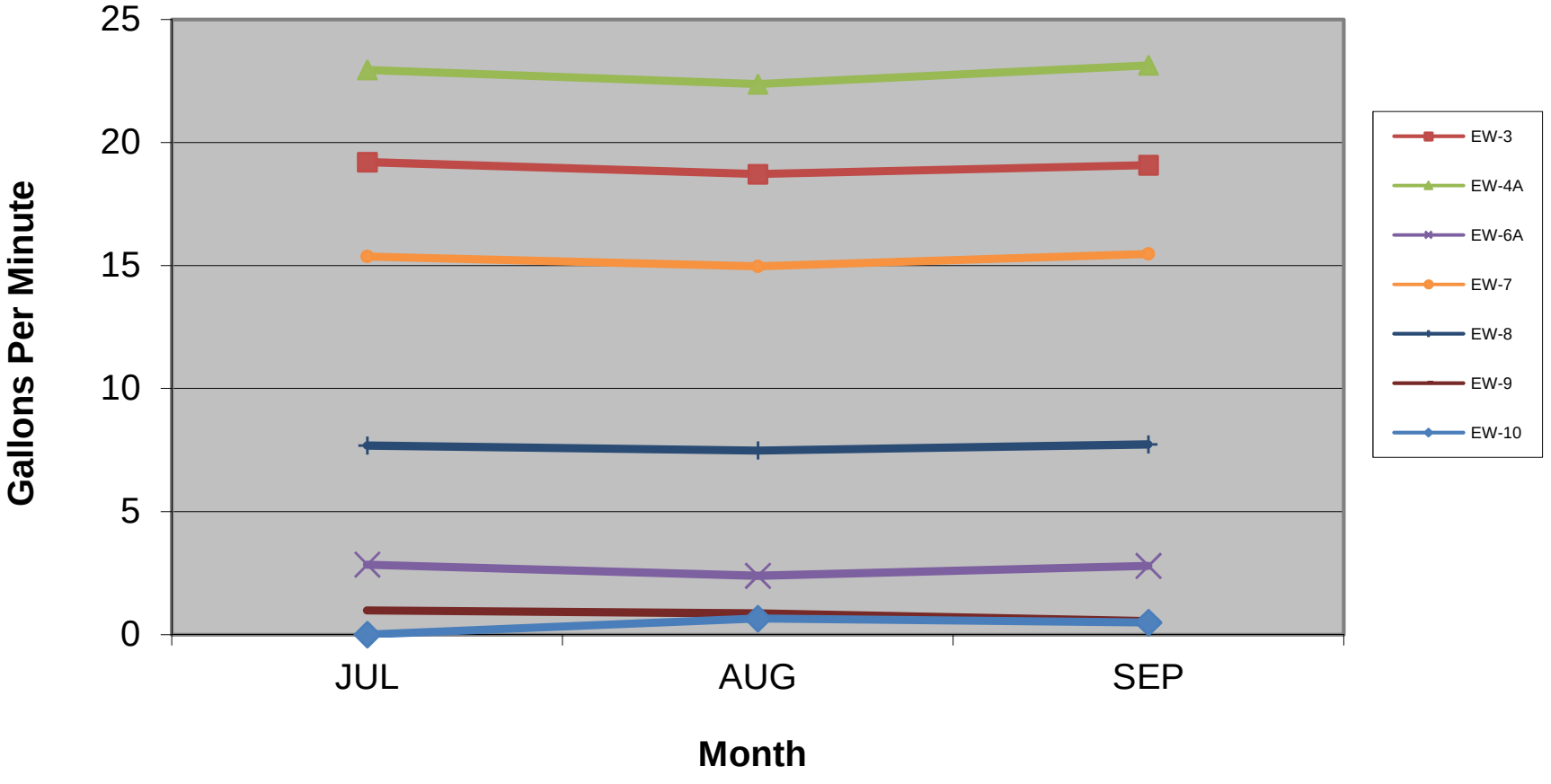
Data copied directly from SCADA and into excel where calculations were made. These flows were generated outside of the OPS32 program. EW-6A flows are not being reported in SCADA; therefore, EW-6A flow was derived by subtracting EW-8, EW-9, and EW-10 flows from the FT-1A totalizer flow.

Clean Harbors
2/20/2020

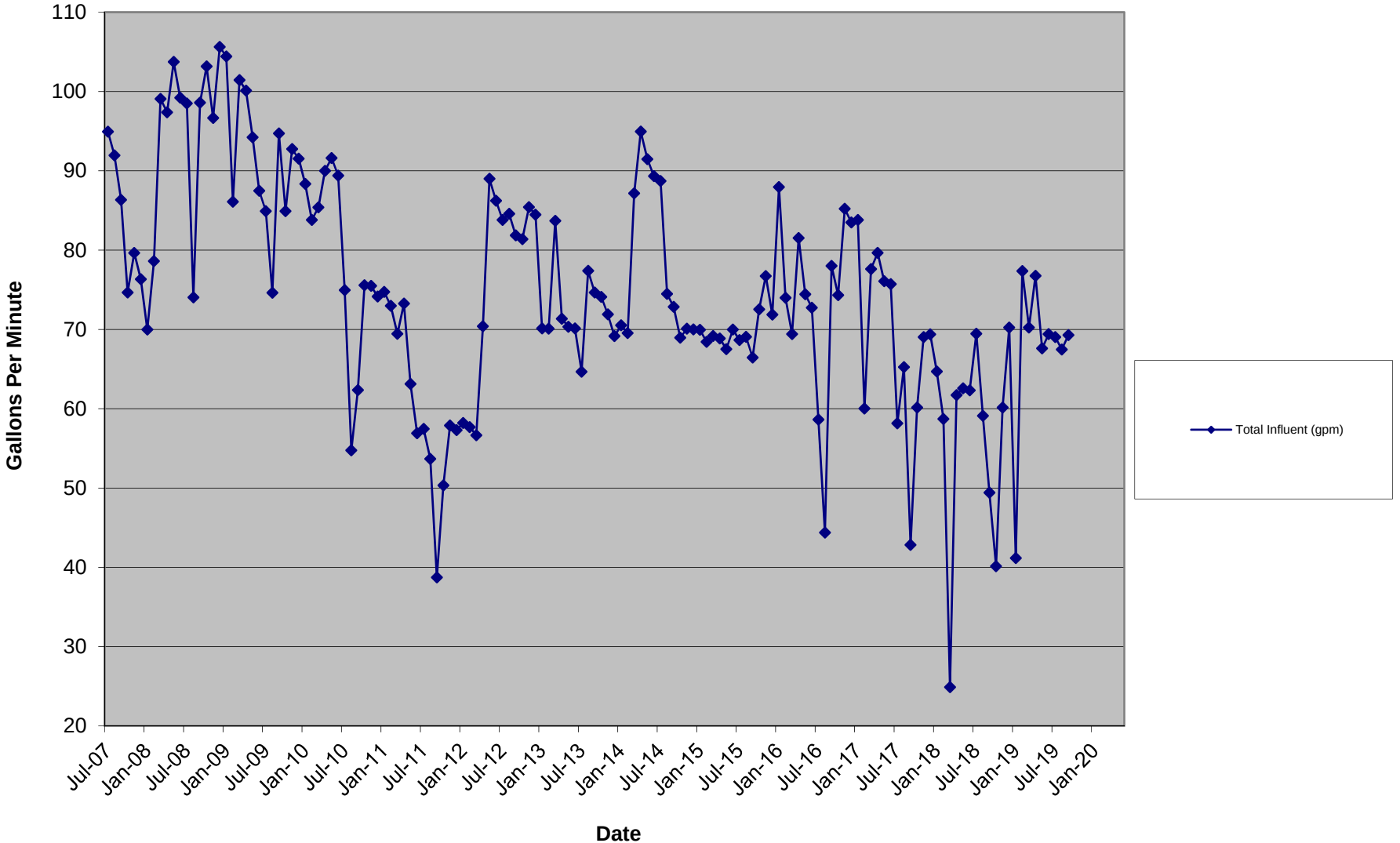
SEPTEMBER EXTRACTION WELL FLOW RATES
BAIRD MCGUIRE SUPERFUND SITE

	GW INF FLOW FT1	GW INF FLOW FT1A	TOTAL INFLUENT	EW-3 TOTAL FLOW	EW-4A TOTAL FLOW	EW-6A TOTAL FLOW	EW-7 TOTAL FLOW	EW-8 TOTAL FLOW	EW-9 TOTAL FLOW	EW-10 TOTAL FLOW	EFF TOTAL FLOW
Date	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K	GPD/K
9/1/2019	89.90	16.85	92.90	28.09	33.55	4.05	22.47	11.24	0.73	0.83	85.20
9/2/2019	89.90	16.87	90.20	28.10	33.62	4.14	22.49	11.24	0.73	0.76	83.60
9/3/2019	89.90	16.86	98.40	28.11	33.60	4.09	22.48	11.24	0.77	0.76	90.10
9/4/2019	90.00	16.86	90.50	28.10	33.62	4.09	22.49	11.24	0.74	0.79	83.90
9/5/2019	89.80	16.86	100.30	28.09	33.62	4.17	22.46	11.24	0.73	0.72	86.20
9/6/2019	90.00	16.86	92.80	28.11	33.57	4.17	22.49	11.24	0.73	0.72	85.00
9/7/2019	89.90	16.86	95.40	28.10	33.59	4.15	22.48	11.24	0.76	0.71	87.10
9/8/2019	90.00	16.87	98.00	28.11	33.61	4.20	22.49	11.25	0.71	0.71	88.10
9/9/2019	89.80	16.85	87.70	28.08	33.53	4.21	22.47	11.23	0.70	0.70	85.10
9/10/2019	90.00	16.86	95.80	28.11	33.61	4.21	22.48	11.24	0.70	0.71	86.40
9/11/2019	89.90	16.86	95.30	28.10	33.61	4.21	22.49	11.24	0.70	0.70	82.80
9/12/2019	89.90	16.87	99.30	28.11	33.62	4.18	22.48	11.25	0.70	0.74	90.20
9/13/2019	89.90	16.85	94.30	28.09	33.54	4.16	22.47	11.23	0.70	0.76	85.70
9/14/2019	90.00	16.86	98.10	28.10	33.58	4.18	22.48	11.24	0.70	0.74	85.20
9/15/2019	89.90	16.86	88.90	28.11	33.51	4.18	22.49	11.25	0.70	0.73	84.70
9/16/2019	89.90	16.87	102.60	28.10	33.61	4.16	22.48	11.24	0.70	0.76	84.30
9/17/2019	90.00	16.86	96.50	28.11	33.62	4.12	22.49	11.24	0.70	0.80	86.40
9/18/2019	89.80	16.85	91.90	28.08	33.57	4.16	22.46	11.23	0.70	0.76	85.20
9/19/2019	90.00	16.86	95.50	28.11	33.61	4.18	22.49	11.25	0.70	0.72	84.60
9/20/2019	89.90	16.86	89.30	28.10	33.51	4.21	22.48	11.24	0.70	0.71	73.80
9/21/2019	78.50	14.77	87.50	24.58	29.50	3.37	19.66	9.82	0.92	0.66	86.20
9/22/2019	89.90	16.85	93.00	28.09	33.70	3.94	22.47	11.24	0.96	0.70	83.60
9/23/2019	89.90	16.86	93.70	28.10	33.70	4.08	22.48	11.24	0.84	0.70	84.90
9/24/2019	90.00	16.85	96.10	28.11	33.50	3.87	22.49	11.24	1.04	0.70	85.20
9/25/2019	89.90	16.86	96.50	28.10	33.70	3.86	22.48	11.24	1.05	0.70	84.00
9/26/2019	89.90	16.86	97.10	28.11	33.80	3.85	22.49	11.24	1.05	0.71	83.60
9/27/2019	89.90	16.83	116.00	28.09	33.60	3.82	22.46	11.24	1.05	0.72	78.90
9/28/2019	90.00	16.86	90.90	27.55	33.80	3.862	22.49	11.24	1.05	0.70	86.60
9/29/2019	89.90	16.83	100.9	22.48	33.70	3.87	22.48	11.24	1.01	0.71	89.50
9/30/2019	76.50	14.21	97.60	19.13	28.70	3.191	19.14	9.57	0.84	0.61	77.60
	AVERAGE	GPD/K	95.43	27.48	33.31	4.03	22.28	11.14	0.81	0.72	
		GPM	66.27	19.08	23.13	2.80	15.47	7.73	0.56	0.50	
Notes:											
K = 1000											
GPD = Gallons per day											
GPM = Gallons per minute											
Data copied directly from SCADA and into excel where calculations were made. These flows were generated outside of the OPS32 program. EW-6A flows are not being reported in SCADA; therefore, EW-6A flow was derived by subtracting EW-8, EW-9, and EW-10 flows from the FT-1A totalizer flow.											

Monthly Average Total Flow Rates for Extraction Wells
3rd Quarter 2019



Average Monthly Total Influent Flow (July 2007 to present)
3rd Quarter 2019



CERTIFICATE OF ANALYSIS

Lisa Irwin
Clean Harbors
42 Longwater Drive
Norwell, MA 02061-9149

RE: Baird & McGuire Holbrook MA - Quarterly (1602905463)
ESS Laboratory Work Order Number: 19H0809

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 4:39 pm, Sep 05, 2019

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly

ESS Laboratory Work Order: 19H0809

SAMPLE RECEIPT

The following samples were received on August 26, 2019 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

Question I: All samples for VOA, SVOA and Metals were analyzed for a subset of the required MCP list per the client's request.

Lab Number	Sample Name	Matrix	Analysis
19H0809-01	EW3	Ground Water	6010C, 8081B, 8260B, 8270D, 8270D SIM
19H0809-02	EW4A	Ground Water	6010C, 8081B, 8260B, 8270D, 8270D SIM
19H0809-03	EW6A	Ground Water	6010C, 8081B, 8260B, 8270D, 8270D SIM
19H0809-04	EW7	Ground Water	6010C, 8081B, 8260B, 8270D, 8270D SIM
19H0809-05	EW8	Ground Water	6010C, 8081B, 8260B, 8270D, 8270D SIM
19H0809-06	EW9	Ground Water	6010C, 8081B, 8260B, 8270D, 8270D SIM
19H0809-07	FD	Ground Water	6010C, 8081B, 8260B, 8270D, 8270D SIM
19H0809-08	EW10	Ground Water	6010C, 8081B, 8260B, 8270D, 8270D SIM
19H0809-09	Trip Blank	Aqueous	8260B

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

PROJECT NARRATIVE

8081B Organochlorine Pesticides

19H0809-03 **Lower value is used due to matrix interferences (LC).**
alpha-Chlordane [2C] , Chlordane (Total) , Dieldrin

19H0809-03 **Percent difference between primary and confirmation results exceeds 40% (P).**
alpha-Chlordane [2C] , Chlordane (Total) , Dieldrin

19H0809-03 **Surrogate recovery(ies) outside of criteria due to matrix (UCM/coelution/matrix is present) (SM).**
Tetrachloro-m-xylene [2C] (194% @ 30-150%)

19H0809-05 **Lower value is used due to matrix interferences (LC).**
Dieldrin

19H0809-05 **Percent difference between primary and confirmation results exceeds 40% (P).**
Dieldrin

19H0809-05 **Surrogate recovery(ies) outside of criteria due to matrix (UCM/coelution/matrix is present) (SM).**
Tetrachloro-m-xylene [2C] (167% @ 30-150%)

19H0809-07 **Lower value is used due to matrix interferences (LC).**
4,4´-DDD , alpha-Chlordane [2C] , Chlordane (Total)

19H0809-07 **Percent difference between primary and confirmation results exceeds 40% (P).**
4,4´-DDD , alpha-Chlordane [2C] , Chlordane (Total)

19H0809-07 **Surrogate recovery(ies) outside of criteria due to matrix (UCM/coelution/matrix is present) (SM).**
Tetrachloro-m-xylene [2C] (178% @ 30-150%)

8260B Volatile Organic Compounds

C9H0544-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,2-Dichloropropane (22% @ 20%), 2-Chloroethyl vinyl ether (36% @ 30%), Bromomethane (30% @ 20%)

CH92723-BS1 **Blank Spike recovery is above upper control limit (B+).**
Bromomethane (142% @ 70-130%)

8270D Semi-Volatile Organic Compounds

C9H0587-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (109% @ 80-120%), 4,6-Dinitro-2-Methylphenol (112% @ 80-120%), Benzoic Acid (71% @ 80-120%)

C9H0587-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
2-Nitroaniline (27% @ 20%), 4-Nitrophenol (30% @ 20%), Benzoic Acid (29% @ 20%), N-Nitrosodimethylamine (21% @ 20%)

C9H0587-CCV1 **Initial Calibration Verification recovery is below lower control limit (ICV-).**
Benzidine

C9I0031-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (82% @ 80-120%), 4,6-Dinitro-2-Methylphenol (86% @ 80-120%), Benzoic Acid (72% @ 80-120%)

C9I0031-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
2-Nitroaniline (24% @ 20%), Benzoic Acid (28% @ 20%)

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

8270D(SIM) Semi-Volatile Organic Compounds

19H0809-05 **Internal Standard(s) outside of criteria due to matrix (UCM/coelution is present) (IM).**
Naphthalene-d8 (48% @ 50-200%)

C9H0588-CCV1 **Calibration required quadratic regression (Q).**
Pentachlorophenol (64% @ 80-120%)

C9H0588-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Pentachlorophenol (36% @ 20%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
ESS Laboratory Work Order: 19H0809

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
ESS Laboratory Work Order: 19H0809

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **19H0809-01 through 19H0809-09**

Matrices: (X) Ground Water/Surface Water ( ) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

CAM Protocol (check all that apply below):

(X) 8260 VOC CAM II A	( ) 7470/7471 Hg CAM III B	( ) MassDEP VPH (GC/PID/FID) CAM IV A	( ) 8082 PCB CAM V A	( ) 9014 Total Cyanide/PAC CAM VI A	( ) 6860 Perchlorate CAM VIII B
(X) 8270 SVOC CAM II B	( ) 7010 Metals CAM III C	( ) MassDEP VPH (GC/MS) CAM IV C	(X) 8081 Pesticides CAM V B	( ) 7196 Hex Cr CAM VI B	( ) MassDEP APH CAM IX A
(X) 6010 Metals CAM III A	( ) 6020 Metals CAM III D	( ) MassDEP EPH CAM IV B	( ) 8151 Herbicides CAM V C	( ) Explosives CAM VIII A	( ) TO-15 VOC CAM IX B

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes (X) No ( )
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes (X) No ( )
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	Yes (X) No ( )
D	Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes (X) No ( )
E	VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	Yes ( ) No ( )
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes ( ) No ( )
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	Yes (X) No ( )

Responses to Questions G, H and I below are required for '"Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? ***Data User Note:*** ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.***	Yes (X) No ( )*
H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	Yes ( ) No (X)*
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ( ) No (X)*

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Laurel Stoddard Date: September 05, 2019

Printed Name: Laurel Stoddard Position: Laboratory Director

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW3
Date Sampled: 08/22/19 10:20
Percent Solids: N/A

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**335** (25.0)		6010C		1	KJK	08/28/19 0:06	50	25	CH92741

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW3
Date Sampled: 08/22/19 10:20
Percent Solids: N/A
Initial Volume: 1030
Final Volume: 5
Extraction Method: 3510C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: DMC
Prepared: 8/27/19 11:02

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
4,4´-DDE	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
4,4´-DDT	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Aldrin	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
alpha-BHC	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
alpha-Chlordane	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
beta-BHC [2C]	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Chlordane (Total)	ND (0.194)		8081B		1	08/28/19 14:01	C9H0558	CH92701
delta-BHC	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Dieldrin	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Endosulfan I	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Endosulfan II	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Endosulfan Sulfate	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Endrin	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Endrin Aldehyde	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Endrin Ketone	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
gamma-BHC (Lindane)	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
gamma-Chlordane	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Heptachlor	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Heptachlor Epoxide	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Hexachlorobenzene	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Methoxychlor	ND (0.049)		8081B		1	08/28/19 14:01	C9H0558	CH92701
Toxaphene	ND (1.26)		8081B		1	08/28/19 14:01	C9H0558	CH92701

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*81 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*82 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*71 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*100 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW3
Date Sampled: 08/22/19 10:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,1,1-Trichloroethane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,1,2-Trichloroethane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,1-Dichloroethane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,1-Dichloroethene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,1-Dichloropropene	ND (2.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,2,3-Trichloropropane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,2,4-Trimethylbenzene	**59.6** (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,2-Dibromoethane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,2-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,2-Dichloroethane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,3,5-Trimethylbenzene	**19.8** (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,3-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,3-Dichloropropane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
1,4-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
2,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
2-Butanone	ND (10.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
2-Chloroethyl vinyl ether	ND (10.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
2-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
2-Hexanone	ND (10.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
4-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
4-Isopropyltoluene	**20.8** (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Acetone	ND (10.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Acrolein	ND (5.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Acrylonitrile	ND (5.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Benzene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW3
Date Sampled: 08/22/19 10:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (2.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Bromochloromethane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Bromodichloromethane	ND (0.6)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Bromoform	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Bromomethane	ND (2.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Carbon Disulfide	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Carbon Tetrachloride	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Chlorobenzene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Chloroethane	ND (2.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Chloroform	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Chloromethane	ND (2.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Dibromochloromethane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Dibromomethane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Dichlorodifluoromethane	ND (2.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Ethylbenzene	**37.8** (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Hexachlorobutadiene	ND (0.6)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Isopropylbenzene	**4.3** (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Methylene Chloride	ND (2.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Naphthalene	**1110** (50.0)		8260B		50	08/28/19 15:11	C9H0544	CH92723
n-Butylbenzene	**2.9** (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
n-Propylbenzene	**2.0** (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
sec-Butylbenzene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Styrene	**1.2** (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
tert-Butylbenzene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Tetrachloroethene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Toluene	**6.4** (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Trichloroethene	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW3
Date Sampled: 08/22/19 10:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Trichlorofluoromethane	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Vinyl Acetate	ND (5.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Vinyl Chloride	ND (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Xylene O	**39.1** (1.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723
Xylene P,M	**111** (2.0)		8260B		1	08/27/19 17:40	C9H0544	CH92723

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*91 %*		*70-130*
Surrogate: 1,2-Dichloroethane-d4	*91 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*101 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*101 %*		*70-130*
Surrogate: Dibromofluoromethane	*90 %*		*70-130*
Surrogate: Dibromofluoromethane	*90 %*		*70-130*
Surrogate: Toluene-d8	*104 %*		*70-130*
Surrogate: Toluene-d8	*104 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW3
Date Sampled: 08/22/19 10:20
Percent Solids: N/A
Initial Volume: 1030
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
1,2-Dichlorobenzene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
1,3-Dichlorobenzene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
1,4-Dichlorobenzene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
2,4,5-Trichlorophenol	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
2,4,6-Trichlorophenol	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
2,4-Dichlorophenol	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
2,4-Dimethylphenol	ND (48.5)		8270D		1	08/28/19 18:47	C9H0587	CH92708
2,4-Dinitrophenol	ND (48.5)		8270D		1	08/28/19 18:47	C9H0587	CH92708
2,4-Dinitrotoluene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
2,6-Dinitrotoluene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
2-Chloronaphthalene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
2-Chlorophenol	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
2-Methylphenol	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
2-Nitroaniline	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
2-Nitrophenol	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
3,3′-Dichlorobenzidine	ND (19.4)		8270D		1	08/28/19 18:47	C9H0587	CH92708
3+4-Methylphenol	ND (19.4)		8270D		1	08/28/19 18:47	C9H0587	CH92708
3-Nitroaniline	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
4,6-Dinitro-2-Methylphenol	ND (48.5)		8270D		1	08/28/19 18:47	C9H0587	CH92708
4-Bromophenyl-phenylether	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
4-Chloro-3-Methylphenol	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
4-Chloroaniline	ND (19.4)		8270D		1	08/28/19 18:47	C9H0587	CH92708
4-Nitroaniline	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
4-Nitrophenol	ND (48.5)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Acenaphthene	**56.4** (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Acenaphthylene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Acetophenone	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Aniline	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Anthracene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Azobenzene	ND (19.4)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Benzidine	ND (48.5)		8270D		1	08/28/19 18:47	C9H0587	CH92708

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW3
Date Sampled: 08/22/19 10:20
Percent Solids: N/A
Initial Volume: 1030
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Benzo(g,h,i)perylene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Benzoic Acid	ND (97.1)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Benzyl Alcohol	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
bis(2-Chloroethoxy)methane	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
bis(2-Chloroethyl)ether	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
bis(2-chloroisopropyl)Ether	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
bis(2-Ethylhexyl)phthalate	ND (5.8)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Butylbenzylphthalate	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Carbazole	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Dibenzofuran	**19.1** (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Diethylphthalate	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Dimethylphthalate	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Di-n-butylphthalate	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Di-n-octylphthalate	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Fluoranthene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Fluorene	**36.0** (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Hexachlorobutadiene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Hexachlorocyclopentadiene	ND (24.3)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Hexachloroethane	ND (4.9)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Isophorone	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Naphthalene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Nitrobenzene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
N-Nitrosodimethylamine	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
N-Nitroso-Di-n-Propylamine	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
N-nitrosodiphenylamine	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Phenanthrene	**14.3** (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Phenol	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Pyrene	ND (9.7)		8270D		1	08/28/19 18:47	C9H0587	CH92708
Pyridine	ND (97.1)		8270D		1	08/28/19 18:47	C9H0587	CH92708

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*68 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW3
Date Sampled: 08/22/19 10:20
Percent Solids: N/A
Initial Volume: 1030
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2,4,6-Tribromophenol		*93 %*		*15-110*				
Surrogate: 2-Chlorophenol-d4		*69 %*		*15-110*				
Surrogate: 2-Fluorobiphenyl		*80 %*		*30-130*				
Surrogate: 2-Fluorophenol		*64 %*		*15-110*				
Surrogate: Nitrobenzene-d5		*70 %*		*30-130*				
Surrogate: Phenol-d6		*68 %*		*15-110*				
Surrogate: p-Terphenyl-d14		*99 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW3
Date Sampled: 08/22/19 10:20
Percent Solids: N/A
Initial Volume: 1030
Final Volume: 0.25
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 8/27/19 18:05

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	**11.9** (0.19)		8270D SIM		1	08/29/19 5:31	C9H0588	CH92708
Benzo(a)anthracene	ND (0.05)		8270D SIM		1	08/29/19 5:31	C9H0588	CH92708
Benzo(a)pyrene	ND (0.05)		8270D SIM		1	08/29/19 5:31	C9H0588	CH92708
Benzo(b)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 5:31	C9H0588	CH92708
Benzo(k)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 5:31	C9H0588	CH92708
Chrysene	ND (0.05)		8270D SIM		1	08/29/19 5:31	C9H0588	CH92708
Dibenzo(a,h)Anthracene	ND (0.05)		8270D SIM		1	08/29/19 5:31	C9H0588	CH92708
Hexachlorobenzene	ND (0.19)		8270D SIM		1	08/29/19 5:31	C9H0588	CH92708
Indeno(1,2,3-cd)Pyrene	ND (0.05)		8270D SIM		1	08/29/19 5:31	C9H0588	CH92708
Pentachlorophenol	ND (0.87)		8270D SIM		1	08/29/19 5:31	C9H0588	CH92708

%Recovery	Qualifier	Limits

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW4A
Date Sampled: 08/22/19 10:40
Percent Solids: N/A

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-02
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**326** (25.0)		6010C		1	KJK	08/28/19 0:25	50	25	CH92741

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW4A
Date Sampled: 08/22/19 10:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 5
Extraction Method: 3510C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: DMC
Prepared: 8/27/19 11:02

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
4,4´-DDE	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
4,4´-DDT	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Aldrin	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
alpha-BHC	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
alpha-Chlordane	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
beta-BHC	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Chlordane (Total)	ND (0.187)		8081B		1	08/28/19 14:32	C9H0558	CH92701
delta-BHC	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Dieldrin	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Endosulfan I	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Endosulfan II	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Endosulfan Sulfate	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Endrin	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Endrin Aldehyde	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Endrin Ketone	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
gamma-BHC (Lindane)	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
gamma-Chlordane	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Heptachlor	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Heptachlor Epoxide	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Hexachlorobenzene	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Methoxychlor	ND (0.047)		8081B		1	08/28/19 14:32	C9H0558	CH92701
Toxaphene	ND (1.21)		8081B		1	08/28/19 14:32	C9H0558	CH92701

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*71 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*73 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*65 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*96 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW4A
Date Sampled: 08/22/19 10:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,1,1-Trichloroethane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,1,2-Trichloroethane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,1-Dichloroethane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,1-Dichloroethene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,1-Dichloropropene	ND (2.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,2,3-Trichloropropane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,2,4-Trimethylbenzene	**29.6** (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,2-Dibromoethane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,2-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,2-Dichloroethane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,3,5-Trimethylbenzene	**9.5** (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,3-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,3-Dichloropropane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
1,4-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
2,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
2-Butanone	ND (10.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
2-Chloroethyl vinyl ether	ND (10.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
2-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
2-Hexanone	ND (10.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
4-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
4-Isopropyltoluene	**11.2** (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Acetone	ND (10.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Acrolein	ND (5.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Acrylonitrile	ND (5.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Benzene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW4A
Date Sampled: 08/22/19 10:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (2.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Bromochloromethane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Bromodichloromethane	ND (0.6)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Bromoform	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Bromomethane	ND (2.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Carbon Disulfide	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Carbon Tetrachloride	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Chlorobenzene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Chloroethane	ND (2.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Chloroform	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Chloromethane	ND (2.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Dibromochloromethane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Dibromomethane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Dichlorodifluoromethane	ND (2.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Ethylbenzene	**41.3** (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Hexachlorobutadiene	ND (0.6)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Isopropylbenzene	**3.8** (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Methylene Chloride	ND (2.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Naphthalene	**524** (50.0)		8260B		50	08/28/19 14:45	C9H0544	CH92723
n-Butylbenzene	**2.3** (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
n-Propylbenzene	**2.5** (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
sec-Butylbenzene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Styrene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
tert-Butylbenzene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Tetrachloroethene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Toluene	**8.3** (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Trichloroethene	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW4A
Date Sampled: 08/22/19 10:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Trichlorofluoromethane	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Vinyl Acetate	ND (5.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Vinyl Chloride	ND (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Xylene O	**33.0** (1.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723
Xylene P,M	**78.4** (2.0)		8260B		1	08/27/19 18:05	C9H0544	CH92723

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*81 %*		*70-130*
Surrogate: 1,2-Dichloroethane-d4	*81 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*102 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*102 %*		*70-130*
Surrogate: Dibromofluoromethane	*82 %*		*70-130*
Surrogate: Dibromofluoromethane	*82 %*		*70-130*
Surrogate: Toluene-d8	*104 %*		*70-130*
Surrogate: Toluene-d8	*104 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW4A
Date Sampled: 08/22/19 10:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
1,2-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
1,3-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
1,4-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
2,4,5-Trichlorophenol	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
2,4,6-Trichlorophenol	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
2,4-Dichlorophenol	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
2,4-Dimethylphenol	ND (46.7)		8270D		1	08/28/19 19:14	C9H0587	CH92708
2,4-Dinitrophenol	ND (46.7)		8270D		1	08/28/19 19:14	C9H0587	CH92708
2,4-Dinitrotoluene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
2,6-Dinitrotoluene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
2-Chloronaphthalene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
2-Chlorophenol	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
2-Methylphenol	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
2-Nitroaniline	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
2-Nitrophenol	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
3,3′-Dichlorobenzidine	ND (18.7)		8270D		1	08/28/19 19:14	C9H0587	CH92708
3+4-Methylphenol	ND (18.7)		8270D		1	08/28/19 19:14	C9H0587	CH92708
3-Nitroaniline	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
4,6-Dinitro-2-Methylphenol	ND (46.7)		8270D		1	08/28/19 19:14	C9H0587	CH92708
4-Bromophenyl-phenylether	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
4-Chloro-3-Methylphenol	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
4-Chloroaniline	ND (18.7)		8270D		1	08/28/19 19:14	C9H0587	CH92708
4-Nitroaniline	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
4-Nitrophenol	ND (46.7)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Acenaphthene	**49.8** (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Acenaphthylene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Acetophenone	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Aniline	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Anthracene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Azobenzene	ND (18.7)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Benzidine	ND (46.7)		8270D		1	08/28/19 19:14	C9H0587	CH92708

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW4A
Date Sampled: 08/22/19 10:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Benzo(g,h,i)perylene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Benzoic Acid	ND (93.5)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Benzyl Alcohol	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
bis(2-Chloroethoxy)methane	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
bis(2-Chloroethyl)ether	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
bis(2-chloroisopropyl)Ether	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
bis(2-Ethylhexyl)phthalate	ND (5.6)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Butylbenzylphthalate	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Carbazole	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Dibenzofuran	**18.1** (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Diethylphthalate	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Dimethylphthalate	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Di-n-butylphthalate	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Di-n-octylphthalate	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Fluoranthene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Fluorene	**17.0** (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Hexachlorobutadiene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Hexachlorocyclopentadiene	ND (23.4)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Hexachloroethane	ND (4.7)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Isophorone	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Naphthalene	**331** (93.5)		8270D		10	08/29/19 18:09	C9H0587	CH92708
Nitrobenzene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
N-Nitrosodimethylamine	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
N-Nitroso-Di-n-Propylamine	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
N-nitrosodiphenylamine	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Phenanthrene	**11.8** (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Phenol	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Pyrene	ND (9.3)		8270D		1	08/28/19 19:14	C9H0587	CH92708
Pyridine	ND (93.5)		8270D		1	08/28/19 19:14	C9H0587	CH92708

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*76 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW4A
Date Sampled: 08/22/19 10:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2,4,6-Tribromophenol		*85 %*		*15-110*				
Surrogate: 2-Chlorophenol-d4		*73 %*		*15-110*				
Surrogate: 2-Fluorobiphenyl		*83 %*		*30-130*				
Surrogate: 2-Fluorophenol		*59 %*		*15-110*				
Surrogate: Nitrobenzene-d5		*81 %*		*30-130*				
Surrogate: Phenol-d6		*70 %*		*15-110*				
Surrogate: p-Terphenyl-d14		*89 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW4A
Date Sampled: 08/22/19 10:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 0.25
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 8/27/19 18:05

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	**49.1** (1.87)		8270D SIM		10	08/29/19 14:18	C9H0588	CH92708
Benzo(a)anthracene	ND (0.05)		8270D SIM		1	08/29/19 6:18	C9H0588	CH92708
Benzo(a)pyrene	ND (0.05)		8270D SIM		1	08/29/19 6:18	C9H0588	CH92708
Benzo(b)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 6:18	C9H0588	CH92708
Benzo(k)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 6:18	C9H0588	CH92708
Chrysene	ND (0.05)		8270D SIM		1	08/29/19 6:18	C9H0588	CH92708
Dibenzo(a,h)Anthracene	ND (0.05)		8270D SIM		1	08/29/19 6:18	C9H0588	CH92708
Hexachlorobenzene	ND (0.19)		8270D SIM		1	08/29/19 6:18	C9H0588	CH92708
Indeno(1,2,3-cd)Pyrene	ND (0.05)		8270D SIM		1	08/29/19 6:18	C9H0588	CH92708
Pentachlorophenol	ND (0.84)		8270D SIM		1	08/29/19 6:18	C9H0588	CH92708

%Recovery	Qualifier	Limits

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW6A
Date Sampled: 08/22/19 11:00
Percent Solids: N/A

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-03
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**138** (25.0)		6010C		1	KJK	08/28/19 0:28	50	25	CH92741

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW6A
Date Sampled: 08/22/19 11:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 5
Extraction Method: 3510C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-03
Sample Matrix: Ground Water
Units: ug/L
Analyst: DMC
Prepared: 8/27/19 11:02

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD [2C]	**0.133** (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
4,4´-DDE	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
4,4´-DDT	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Aldrin	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
alpha-BHC	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
alpha-Chlordane [2C]	**P, LC 0.161** (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
beta-BHC	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Chlordane (Total)	**P, LC 1.20** (0.187)		8081B		1	08/29/19 18:28	C9H0599	CH92939
delta-BHC	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Dieldrin	**P, LC 0.054** (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Endosulfan I	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Endosulfan II	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Endosulfan Sulfate	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Endrin	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Endrin Aldehyde	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Endrin Ketone	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
gamma-BHC (Lindane)	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
gamma-Chlordane [2C]	**0.153** (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Heptachlor	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Heptachlor Epoxide	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Hexachlorobenzene	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Methoxychlor	ND (0.047)		8081B		1	08/29/19 18:28	C9H0599	CH92939
Toxaphene	ND (1.21)		8081B		1	08/29/19 18:28	C9H0599	CH92939

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*79 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*85 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*72 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*194 %*	*SM*	*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW6A
Date Sampled: 08/22/19 11:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-03
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,1,1-Trichloroethane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,1,2-Trichloroethane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,1-Dichloroethane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,1-Dichloroethene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,1-Dichloropropene	ND (2.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,2,3-Trichloropropane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,2,4-Trimethylbenzene	**78.7** (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,2-Dibromoethane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,2-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,2-Dichloroethane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,3,5-Trimethylbenzene	**15.7** (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,3-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,3-Dichloropropane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
1,4-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
2,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
2-Butanone	ND (10.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
2-Chloroethyl vinyl ether	ND (10.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
2-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
2-Hexanone	ND (10.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
4-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
4-Isopropyltoluene	**13.3** (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Acetone	ND (10.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Acrolein	ND (5.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Acrylonitrile	ND (5.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Benzene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW6A
Date Sampled: 08/22/19 11:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-03
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (2.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Bromochloromethane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Bromodichloromethane	ND (0.6)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Bromoform	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Bromomethane	ND (2.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Carbon Disulfide	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Carbon Tetrachloride	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Chlorobenzene	**1.1** (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Chloroethane	ND (2.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Chloroform	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Chloromethane	ND (2.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Dibromochloromethane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Dibromomethane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Dichlorodifluoromethane	ND (2.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Ethylbenzene	**130** (50.0)		8260B		50	08/28/19 15:37	C9H0544	CH92723
Hexachlorobutadiene	ND (0.6)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Isopropylbenzene	**6.3** (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Methylene Chloride	ND (2.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Naphthalene	**712** (50.0)		8260B		50	08/28/19 15:37	C9H0544	CH92723
n-Butylbenzene	**3.3** (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
n-Propylbenzene	**6.8** (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
sec-Butylbenzene	**1.7** (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Styrene	**1.6** (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
tert-Butylbenzene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Tetrachloroethene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Toluene	**19.7** (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Trichloroethene	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW6A
Date Sampled: 08/22/19 11:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-03
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Trichlorofluoromethane	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Vinyl Acetate	ND (5.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Vinyl Chloride	ND (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Xylene O	**92.6** (1.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723
Xylene P,M	**125** (2.0)		8260B		1	08/27/19 18:31	C9H0544	CH92723

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*77 %*		*70-130*
Surrogate: 1,2-Dichloroethane-d4	*77 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*101 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*101 %*		*70-130*
Surrogate: Dibromofluoromethane	*80 %*		*70-130*
Surrogate: Dibromofluoromethane	*80 %*		*70-130*
Surrogate: Toluene-d8	*105 %*		*70-130*
Surrogate: Toluene-d8	*105 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW6A
Date Sampled: 08/22/19 11:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-03
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
1,2-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
1,3-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
1,4-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
2,4,5-Trichlorophenol	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
2,4,6-Trichlorophenol	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
2,4-Dichlorophenol	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
2,4-Dimethylphenol	ND (46.7)		8270D		1	08/28/19 19:40	C9H0587	CH92708
2,4-Dinitrophenol	ND (46.7)		8270D		1	08/28/19 19:40	C9H0587	CH92708
2,4-Dinitrotoluene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
2,6-Dinitrotoluene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
2-Chloronaphthalene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
2-Chlorophenol	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
2-Methylphenol	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
2-Nitroaniline	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
2-Nitrophenol	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
3,3′-Dichlorobenzidine	ND (18.7)		8270D		1	08/28/19 19:40	C9H0587	CH92708
3+4-Methylphenol	ND (18.7)		8270D		1	08/28/19 19:40	C9H0587	CH92708
3-Nitroaniline	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
4,6-Dinitro-2-Methylphenol	ND (46.7)		8270D		1	08/28/19 19:40	C9H0587	CH92708
4-Bromophenyl-phenylether	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
4-Chloro-3-Methylphenol	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
4-Chloroaniline	ND (18.7)		8270D		1	08/28/19 19:40	C9H0587	CH92708
4-Nitroaniline	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
4-Nitrophenol	ND (46.7)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Acenaphthene	**31.5** (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Acenaphthylene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Acetophenone	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Aniline	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Anthracene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Azobenzene	ND (18.7)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Benzidine	ND (46.7)		8270D		1	08/28/19 19:40	C9H0587	CH92708

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW6A
Date Sampled: 08/22/19 11:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-03
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Benzo(g,h,i)perylene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Benzoic Acid	ND (93.5)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Benzyl Alcohol	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
bis(2-Chloroethoxy)methane	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
bis(2-Chloroethyl)ether	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
bis(2-chloroisopropyl)Ether	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
bis(2-Ethylhexyl)phthalate	ND (5.6)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Butylbenzylphthalate	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Carbazole	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Dibenzofuran	**17.1** (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Diethylphthalate	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Dimethylphthalate	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Di-n-butylphthalate	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Di-n-octylphthalate	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Fluoranthene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Fluorene	**14.9** (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Hexachlorobutadiene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Hexachlorocyclopentadiene	ND (23.4)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Hexachloroethane	ND (4.7)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Isophorone	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Naphthalene	**457** (93.5)		8270D		10	08/29/19 18:37	C9H0587	CH92708
Nitrobenzene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
N-Nitrosodimethylamine	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
N-Nitroso-Di-n-Propylamine	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
N-nitrosodiphenylamine	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Phenanthrene	**12.4** (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Phenol	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Pyrene	ND (9.3)		8270D		1	08/28/19 19:40	C9H0587	CH92708
Pyridine	ND (93.5)		8270D		1	08/28/19 19:40	C9H0587	CH92708

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*83 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW6A
Date Sampled: 08/22/19 11:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-03
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2,4,6-Tribromophenol		*101 %*		*15-110*				
Surrogate: 2-Chlorophenol-d4		*83 %*		*15-110*				
Surrogate: 2-Fluorobiphenyl		*88 %*		*30-130*				
Surrogate: 2-Fluorophenol		*73 %*		*15-110*				
Surrogate: Nitrobenzene-d5		*88 %*		*30-130*				
Surrogate: Phenol-d6		*79 %*		*15-110*				
Surrogate: p-Terphenyl-d14		*110 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW6A
Date Sampled: 08/22/19 11:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 0.25
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-03
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 8/27/19 18:05

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	**101** (1.87)		8270D SIM		10	08/29/19 15:06	C9H0588	CH92708
Benzo(a)anthracene	**0.07** (0.05)		8270D SIM		1	08/29/19 7:04	C9H0588	CH92708
Benzo(a)pyrene	ND (0.05)		8270D SIM		1	08/29/19 7:04	C9H0588	CH92708
Benzo(b)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 7:04	C9H0588	CH92708
Benzo(k)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 7:04	C9H0588	CH92708
Chrysene	**0.07** (0.05)		8270D SIM		1	08/29/19 7:04	C9H0588	CH92708
Dibenzo(a,h)Anthracene	ND (0.05)		8270D SIM		1	08/29/19 7:04	C9H0588	CH92708
Hexachlorobenzene	ND (0.19)		8270D SIM		1	08/29/19 7:04	C9H0588	CH92708
Indeno(1,2,3-cd)Pyrene	ND (0.05)		8270D SIM		1	08/29/19 7:04	C9H0588	CH92708
Pentachlorophenol	**1.23** (0.84)		8270D SIM		1	08/29/19 7:04	C9H0588	CH92708

%Recovery	Qualifier	Limits

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW7
Date Sampled: 08/22/19 11:20
Percent Solids: N/A

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-04
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**249** (25.0)		6010C		1	KJK	08/28/19 0:32	50	25	CH92741

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW7
Date Sampled: 08/22/19 11:20
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 5
Extraction Method: 3510C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-04
Sample Matrix: Ground Water
Units: ug/L
Analyst: DMC
Prepared: 8/27/19 11:02

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
4,4´-DDE	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
4,4´-DDT	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Aldrin	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
alpha-BHC	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
alpha-Chlordane	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
beta-BHC	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Chlordane (Total)	ND (0.187)		8081B		1	08/28/19 15:33	C9H0558	CH92701
delta-BHC	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Dieldrin	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Endosulfan I	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Endosulfan II	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Endosulfan Sulfate	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Endrin	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Endrin Aldehyde	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Endrin Ketone	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
gamma-BHC (Lindane)	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
gamma-Chlordane	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Heptachlor	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Heptachlor Epoxide	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Hexachlorobenzene	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Methoxychlor	ND (0.047)		8081B		1	08/28/19 15:33	C9H0558	CH92701
Toxaphene	ND (1.21)		8081B		1	08/28/19 15:33	C9H0558	CH92701

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*76 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*79 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*74 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*81 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW7
Date Sampled: 08/22/19 11:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-04
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,1,1-Trichloroethane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,1,2-Trichloroethane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,1-Dichloroethane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,1-Dichloroethene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,1-Dichloropropene	ND (2.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,2,3-Trichloropropane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,2-Dibromoethane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,2-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,2-Dichloroethane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,3-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,3-Dichloropropane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
1,4-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
2,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
2-Butanone	ND (10.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
2-Chloroethyl vinyl ether	ND (10.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
2-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
2-Hexanone	ND (10.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
4-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
4-Isopropyltoluene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Acetone	ND (10.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Acrolein	ND (5.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Acrylonitrile	ND (5.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Benzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW7
Date Sampled: 08/22/19 11:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-04
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (2.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Bromochloromethane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Bromodichloromethane	ND (0.6)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Bromoform	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Bromomethane	ND (2.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Carbon Disulfide	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Carbon Tetrachloride	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Chlorobenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Chloroethane	ND (2.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Chloroform	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Chloromethane	ND (2.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Dibromochloromethane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Dibromomethane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Dichlorodifluoromethane	ND (2.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Ethylbenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Hexachlorobutadiene	ND (0.6)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Isopropylbenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Methylene Chloride	ND (2.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Naphthalene	**5.1** (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
n-Butylbenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
n-Propylbenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
sec-Butylbenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Styrene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
tert-Butylbenzene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Tetrachloroethene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Toluene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Trichloroethene	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW7
Date Sampled: 08/22/19 11:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-04
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Trichlorofluoromethane	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Vinyl Acetate	ND (5.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Vinyl Chloride	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Xylene O	ND (1.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723
Xylene P,M	ND (2.0)		8260B		1	08/27/19 15:58	C9H0544	CH92723

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*70-130*
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Toluene-d8	*93 %*		*70-130*
Surrogate: Toluene-d8	*93 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW7
Date Sampled: 08/22/19 11:20
Percent Solids: N/A
Initial Volume: 1040
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-04
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
1,2-Dichlorobenzene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
1,3-Dichlorobenzene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
1,4-Dichlorobenzene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
2,4,5-Trichlorophenol	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
2,4,6-Trichlorophenol	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
2,4-Dichlorophenol	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
2,4-Dimethylphenol	ND (48.1)		8270D		1	08/28/19 20:06	C9H0587	CH92708
2,4-Dinitrophenol	ND (48.1)		8270D		1	08/28/19 20:06	C9H0587	CH92708
2,4-Dinitrotoluene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
2,6-Dinitrotoluene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
2-Chloronaphthalene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
2-Chlorophenol	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
2-Methylphenol	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
2-Nitroaniline	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
2-Nitrophenol	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
3,3′-Dichlorobenzidine	ND (19.2)		8270D		1	08/28/19 20:06	C9H0587	CH92708
3+4-Methylphenol	ND (19.2)		8270D		1	08/28/19 20:06	C9H0587	CH92708
3-Nitroaniline	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
4,6-Dinitro-2-Methylphenol	ND (48.1)		8270D		1	08/28/19 20:06	C9H0587	CH92708
4-Bromophenyl-phenylether	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
4-Chloro-3-Methylphenol	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
4-Chloroaniline	ND (19.2)		8270D		1	08/28/19 20:06	C9H0587	CH92708
4-Nitroaniline	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
4-Nitrophenol	ND (48.1)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Acenaphthene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Acenaphthylene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Acetophenone	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Aniline	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Anthracene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Azobenzene	ND (19.2)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Benzidine	ND (48.1)		8270D		1	08/28/19 20:06	C9H0587	CH92708

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW7
Date Sampled: 08/22/19 11:20
Percent Solids: N/A
Initial Volume: 1040
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-04
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Benzo(g,h,i)perylene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Benzoic Acid	ND (96.2)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Benzyl Alcohol	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
bis(2-Chloroethoxy)methane	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
bis(2-Chloroethyl)ether	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
bis(2-chloroisopropyl)Ether	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
bis(2-Ethylhexyl)phthalate	ND (5.8)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Butylbenzylphthalate	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Carbazole	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Dibenzofuran	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Diethylphthalate	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Dimethylphthalate	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Di-n-butylphthalate	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Di-n-octylphthalate	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Fluoranthene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Fluorene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Hexachlorobutadiene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Hexachlorocyclopentadiene	ND (24.0)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Hexachloroethane	ND (4.8)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Isophorone	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Naphthalene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Nitrobenzene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
N-Nitrosodimethylamine	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
N-Nitroso-Di-n-Propylamine	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
N-nitrosodiphenylamine	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Phenanthrene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Phenol	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Pyrene	ND (9.6)		8270D		1	08/28/19 20:06	C9H0587	CH92708
Pyridine	ND (96.2)		8270D		1	08/28/19 20:06	C9H0587	CH92708

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*76 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW7
Date Sampled: 08/22/19 11:20
Percent Solids: N/A
Initial Volume: 1040
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-04
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2,4,6-Tribromophenol		*89 %*		*15-110*				
Surrogate: 2-Chlorophenol-d4		*71 %*		*15-110*				
Surrogate: 2-Fluorobiphenyl		*84 %*		*30-130*				
Surrogate: 2-Fluorophenol		*57 %*		*15-110*				
Surrogate: Nitrobenzene-d5		*79 %*		*30-130*				
Surrogate: Phenol-d6		*69 %*		*15-110*				
Surrogate: p-Terphenyl-d14		*93 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW7
Date Sampled: 08/22/19 11:20
Percent Solids: N/A
Initial Volume: 1040
Final Volume: 0.25
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-04
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 8/27/19 18:05

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	**0.62** (0.19)		8270D SIM		1	08/29/19 7:51	C9H0588	CH92708
Benzo(a)anthracene	ND (0.05)		8270D SIM		1	08/29/19 7:51	C9H0588	CH92708
Benzo(a)pyrene	ND (0.05)		8270D SIM		1	08/29/19 7:51	C9H0588	CH92708
Benzo(b)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 7:51	C9H0588	CH92708
Benzo(k)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 7:51	C9H0588	CH92708
Chrysene	ND (0.05)		8270D SIM		1	08/29/19 7:51	C9H0588	CH92708
Dibenzo(a,h)Anthracene	ND (0.05)		8270D SIM		1	08/29/19 7:51	C9H0588	CH92708
Hexachlorobenzene	ND (0.19)		8270D SIM		1	08/29/19 7:51	C9H0588	CH92708
Indeno(1,2,3-cd)Pyrene	ND (0.05)		8270D SIM		1	08/29/19 7:51	C9H0588	CH92708
Pentachlorophenol	ND (0.87)		8270D SIM		1	08/29/19 7:51	C9H0588	CH92708

	%Recovery	Qualifier	Limits

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW8
Date Sampled: 08/22/19 11:40
Percent Solids: N/A

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-05
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**296** (25.0)		6010C		1	KJK	08/28/19 0:47	50	25	CH92741

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW8
Date Sampled: 08/22/19 11:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 5
Extraction Method: 3510C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-05
Sample Matrix: Ground Water
Units: ug/L
Analyst: DMC
Prepared: 8/27/19 11:02

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD [2C]	**0.326** (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
4,4´-DDE	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
4,4´-DDT	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Aldrin [2C]	**0.060** (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
alpha-BHC	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
alpha-Chlordane	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
beta-BHC	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Chlordane (Total)	**0.244** (0.187)		8081B		1	08/28/19 16:04	C9H0558	CH92701
delta-BHC	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Dieldrin	**P, LC 0.104** (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Endosulfan I	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Endosulfan II	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Endosulfan Sulfate	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Endrin	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Endrin Aldehyde	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Endrin Ketone	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
gamma-BHC (Lindane) [2C]	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
gamma-Chlordane	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Heptachlor	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Heptachlor Epoxide	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Hexachlorobenzene	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Methoxychlor	ND (0.047)		8081B		1	08/28/19 16:04	C9H0558	CH92701
Toxaphene	ND (1.21)		8081B		1	08/28/19 16:04	C9H0558	CH92701

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*66 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*67 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*66 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*167 %*	*SM*	*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW8
Date Sampled: 08/22/19 11:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-05
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,1,1-Trichloroethane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,1,2-Trichloroethane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,1-Dichloroethane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,1-Dichloroethene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,1-Dichloropropene	ND (2.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,2,3-Trichloropropane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,2,4-Trimethylbenzene	**277** (100)		8260B		100	08/28/19 16:27	C9H0544	CH92723
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,2-Dibromoethane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,2-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,2-Dichloroethane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,3,5-Trimethylbenzene	**91.0** (50.0)		8260B		100	08/28/19 16:27	C9H0544	CH92723
1,3-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,3-Dichloropropane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
1,4-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
2,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
2-Butanone	ND (10.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
2-Chloroethyl vinyl ether	ND (10.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
2-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
2-Hexanone	ND (10.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
4-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
4-Isopropyltoluene	**74.7** (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Acetone	ND (10.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Acrolein	ND (5.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Acrylonitrile	ND (5.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Benzene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW8
Date Sampled: 08/22/19 11:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-05
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (2.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Bromochloromethane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Bromodichloromethane	ND (0.6)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Bromoform	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Bromomethane	ND (2.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Carbon Disulfide	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Carbon Tetrachloride	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Chlorobenzene	**1.8** (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Chloroethane	ND (2.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Chloroform	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Chloromethane	ND (2.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
cis-1,2-Dichloroethene	**2.6** (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Dibromochloromethane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Dibromomethane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Dichlorodifluoromethane	ND (2.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Ethylbenzene	**169** (100)		8260B		100	08/28/19 16:27	C9H0544	CH92723
Hexachlorobutadiene	ND (0.6)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Isopropylbenzene	**31.7** (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Methylene Chloride	ND (2.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Naphthalene	**5740** (100)		8260B		100	08/28/19 16:27	C9H0544	CH92723
n-Butylbenzene	**12.6** (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
n-Propylbenzene	**23.0** (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
sec-Butylbenzene	**3.9** (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Styrene	**2.1** (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
tert-Butylbenzene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Tetrachloroethene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Toluene	**26.5** (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Trichloroethene	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW8
Date Sampled: 08/22/19 11:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-05
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Trichlorofluoromethane	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Vinyl Acetate	ND (5.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Vinyl Chloride	ND (1.0)		8260B		1	08/27/19 18:56	C9H0544	CH92723
Xylene O	**180** (100)		8260B		100	08/28/19 16:27	C9H0544	CH92723
Xylene P,M	**456** (200)		8260B		100	08/28/19 16:27	C9H0544	CH92723

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*74 %*		*70-130*
Surrogate: 1,2-Dichloroethane-d4	*74 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*102 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*102 %*		*70-130*
Surrogate: Dibromofluoromethane	*78 %*		*70-130*
Surrogate: Dibromofluoromethane	*78 %*		*70-130*
Surrogate: Toluene-d8	*103 %*		*70-130*
Surrogate: Toluene-d8	*103 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW8
Date Sampled: 08/22/19 11:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-05
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
1,2-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
1,3-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
1,4-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
2,4,5-Trichlorophenol	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
2,4,6-Trichlorophenol	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
2,4-Dichlorophenol	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
2,4-Dimethylphenol	ND (46.7)		8270D		1	08/28/19 20:32	C9H0587	CH92708
2,4-Dinitrophenol	ND (46.7)		8270D		1	08/28/19 20:32	C9H0587	CH92708
2,4-Dinitrotoluene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
2,6-Dinitrotoluene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
2-Chloronaphthalene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
2-Chlorophenol	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
2-Methylphenol	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
2-Nitroaniline	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
2-Nitrophenol	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
3,3′-Dichlorobenzidine	ND (18.7)		8270D		1	08/28/19 20:32	C9H0587	CH92708
3+4-Methylphenol	ND (18.7)		8270D		1	08/28/19 20:32	C9H0587	CH92708
3-Nitroaniline	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
4,6-Dinitro-2-Methylphenol	ND (46.7)		8270D		1	08/28/19 20:32	C9H0587	CH92708
4-Bromophenyl-phenylether	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
4-Chloro-3-Methylphenol	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
4-Chloroaniline	ND (18.7)		8270D		1	08/28/19 20:32	C9H0587	CH92708
4-Nitroaniline	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
4-Nitrophenol	ND (46.7)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Acenaphthene	**139** (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Acenaphthylene	**9.7** (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Acetophenone	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Aniline	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Anthracene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Azobenzene	ND (18.7)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Benzidine	ND (46.7)		8270D		1	08/28/19 20:32	C9H0587	CH92708

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW8
Date Sampled: 08/22/19 11:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-05
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Benzo(g,h,i)perylene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Benzoic Acid	ND (93.5)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Benzyl Alcohol	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
bis(2-Chloroethoxy)methane	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
bis(2-Chloroethyl)ether	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
bis(2-chloroisopropyl)Ether	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
bis(2-Ethylhexyl)phthalate	ND (5.6)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Butylbenzylphthalate	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Carbazole	**11.9** (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Dibenzofuran	**77.0** (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Diethylphthalate	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Dimethylphthalate	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Di-n-butylphthalate	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Di-n-octylphthalate	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Fluoranthene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Fluorene	**58.2** (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Hexachlorobutadiene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Hexachlorocyclopentadiene	ND (23.4)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Hexachloroethane	ND (4.7)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Isophorone	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Naphthalene	**3410** (935)		8270D		100	08/31/19 0:08	C9H0587	CH92708
Nitrobenzene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
N-Nitrosodimethylamine	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
N-Nitroso-Di-n-Propylamine	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
N-nitrosodiphenylamine	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Phenanthrene	**54.9** (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Phenol	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Pyrene	ND (9.3)		8270D		1	08/28/19 20:32	C9H0587	CH92708
Pyridine	ND (93.5)		8270D		1	08/28/19 20:32	C9H0587	CH92708

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*70 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW8
Date Sampled: 08/22/19 11:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-05
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2,4,6-Tribromophenol		*99 %*		*15-110*				
Surrogate: 2-Chlorophenol-d4		*75 %*		*15-110*				
Surrogate: 2-Fluorobiphenyl		*81 %*		*30-130*				
Surrogate: 2-Fluorophenol		*68 %*		*15-110*				
Surrogate: Nitrobenzene-d5		*95 %*		*30-130*				
Surrogate: Phenol-d6		*72 %*		*15-110*				
Surrogate: p-Terphenyl-d14		*87 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW8
Date Sampled: 08/22/19 11:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 0.25
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-05
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 8/27/19 18:05

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	**543** (18.7)		8270D SIM		100	08/29/19 16:40	C9H0588	CH92708
Benzo(a)anthracene	**0.10** (0.05)		8270D SIM		1	08/29/19 8:37	C9H0588	CH92708
Benzo(a)pyrene	ND (0.05)		8270D SIM		1	08/29/19 8:37	C9H0588	CH92708
Benzo(b)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 8:37	C9H0588	CH92708
Benzo(k)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 8:37	C9H0588	CH92708
Chrysene	**0.08** (0.05)		8270D SIM		1	08/29/19 8:37	C9H0588	CH92708
Dibenzo(a,h)Anthracene	ND (0.05)		8270D SIM		1	08/29/19 8:37	C9H0588	CH92708
Hexachlorobenzene	ND (0.19)		8270D SIM		1	08/29/19 8:37	C9H0588	CH92708
Indeno(1,2,3-cd)Pyrene	ND (0.05)		8270D SIM		1	08/29/19 8:37	C9H0588	CH92708
Pentachlorophenol	ND (0.84)		8270D SIM		1	08/29/19 8:37	C9H0588	CH92708

%Recovery	Qualifier	Limits

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW9
Date Sampled: 08/22/19 12:00
Percent Solids: N/A

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-06
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**14800** (500)		6010C		20	KJK	08/28/19 16:01	50	25	CH92741

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW9
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 5
Extraction Method: 3510C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-06
Sample Matrix: Ground Water
Units: ug/L
Analyst: DMC
Prepared: 8/27/19 11:02

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
4,4´-DDE	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
4,4´-DDT	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Aldrin	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
alpha-BHC	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
alpha-Chlordane	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
beta-BHC	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Chlordane (Total)	ND (0.187)		8081B		1	08/28/19 16:34	C9H0558	CH92701
delta-BHC	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Dieldrin	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Endosulfan I	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Endosulfan II	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Endosulfan Sulfate	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Endrin	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Endrin Aldehyde	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Endrin Ketone	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
gamma-BHC (Lindane)	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
gamma-Chlordane	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Heptachlor	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Heptachlor Epoxide	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Hexachlorobenzene	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Methoxychlor	ND (0.047)		8081B		1	08/28/19 16:34	C9H0558	CH92701
Toxaphene	ND (1.21)		8081B		1	08/28/19 16:34	C9H0558	CH92701

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*44 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*43 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*75 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*75 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW9
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-06
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,1,1-Trichloroethane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,1,2-Trichloroethane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,1-Dichloroethane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,1-Dichloroethene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,1-Dichloropropene	ND (2.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,2,3-Trichloropropane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,2-Dibromoethane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,2-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,2-Dichloroethane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,3-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,3-Dichloropropane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
1,4-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
2,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
2-Butanone	ND (10.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
2-Chloroethyl vinyl ether	ND (10.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
2-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
2-Hexanone	ND (10.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
4-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
4-Isopropyltoluene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Acetone	ND (10.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Acrolein	ND (5.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Acrylonitrile	ND (5.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Benzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW9
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-06
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (2.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Bromochloromethane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Bromodichloromethane	ND (0.6)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Bromoform	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Bromomethane	ND (2.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Carbon Disulfide	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Carbon Tetrachloride	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Chlorobenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Chloroethane	ND (2.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Chloroform	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Chloromethane	ND (2.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Dibromochloromethane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Dibromomethane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Dichlorodifluoromethane	ND (2.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Ethylbenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Hexachlorobutadiene	ND (0.6)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Isopropylbenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Methylene Chloride	ND (2.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Naphthalene	**1.4** (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
n-Butylbenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
n-Propylbenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
sec-Butylbenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Styrene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
tert-Butylbenzene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Tetrachloroethene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Toluene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Trichloroethene	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW9
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-06
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Trichlorofluoromethane	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Vinyl Acetate	ND (5.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Vinyl Chloride	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Xylene O	ND (1.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723
Xylene P,M	ND (2.0)		8260B		1	08/27/19 16:24	C9H0544	CH92723

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70-130*
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*90 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*90 %*		*70-130*
Surrogate: Dibromofluoromethane	*100 %*		*70-130*
Surrogate: Dibromofluoromethane	*100 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW9
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-06
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
1,2-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
1,3-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
1,4-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
2,4,5-Trichlorophenol	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
2,4,6-Trichlorophenol	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
2,4-Dichlorophenol	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
2,4-Dimethylphenol	ND (46.7)		8270D		1	08/28/19 20:58	C9H0587	CH92708
2,4-Dinitrophenol	ND (46.7)		8270D		1	08/28/19 20:58	C9H0587	CH92708
2,4-Dinitrotoluene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
2,6-Dinitrotoluene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
2-Chloronaphthalene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
2-Chlorophenol	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
2-Methylphenol	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
2-Nitroaniline	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
2-Nitrophenol	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
3,3′-Dichlorobenzidine	ND (18.7)		8270D		1	08/28/19 20:58	C9H0587	CH92708
3+4-Methylphenol	ND (18.7)		8270D		1	08/28/19 20:58	C9H0587	CH92708
3-Nitroaniline	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
4,6-Dinitro-2-Methylphenol	ND (46.7)		8270D		1	08/28/19 20:58	C9H0587	CH92708
4-Bromophenyl-phenylether	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
4-Chloro-3-Methylphenol	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
4-Chloroaniline	ND (18.7)		8270D		1	08/28/19 20:58	C9H0587	CH92708
4-Nitroaniline	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
4-Nitrophenol	ND (46.7)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Acenaphthene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Acenaphthylene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Acetophenone	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Aniline	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Anthracene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Azobenzene	ND (18.7)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Benzidine	ND (46.7)		8270D		1	08/28/19 20:58	C9H0587	CH92708

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW9
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-06
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Benzo(g,h,i)perylene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Benzoic Acid	ND (93.5)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Benzyl Alcohol	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
bis(2-Chloroethoxy)methane	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
bis(2-Chloroethyl)ether	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
bis(2-chloroisopropyl)Ether	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
bis(2-Ethylhexyl)phthalate	ND (5.6)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Butylbenzylphthalate	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Carbazole	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Dibenzofuran	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Diethylphthalate	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Dimethylphthalate	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Di-n-butylphthalate	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Di-n-octylphthalate	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Fluoranthene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Fluorene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Hexachlorobutadiene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Hexachlorocyclopentadiene	ND (23.4)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Hexachloroethane	ND (4.7)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Isophorone	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Naphthalene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Nitrobenzene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
N-Nitrosodimethylamine	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
N-Nitroso-Di-n-Propylamine	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
N-nitrosodiphenylamine	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Phenanthrene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Phenol	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Pyrene	ND (9.3)		8270D		1	08/28/19 20:58	C9H0587	CH92708
Pyridine	ND (93.5)		8270D		1	08/28/19 20:58	C9H0587	CH92708

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*67 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW9
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-06
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2,4,6-Tribromophenol		*81 %*		*15-110*				
Surrogate: 2-Chlorophenol-d4		*70 %*		*15-110*				
Surrogate: 2-Fluorobiphenyl		*76 %*		*30-130*				
Surrogate: 2-Fluorophenol		*64 %*		*15-110*				
Surrogate: Nitrobenzene-d5		*72 %*		*30-130*				
Surrogate: Phenol-d6		*66 %*		*15-110*				
Surrogate: p-Terphenyl-d14		*46 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW9
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 0.25
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-06
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 8/27/19 18:05

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	**0.21** (0.19)		8270D SIM		1	08/29/19 9:23	C9H0588	CH92708
Benzo(a)anthracene	ND (0.05)		8270D SIM		1	08/29/19 9:23	C9H0588	CH92708
Benzo(a)pyrene	ND (0.05)		8270D SIM		1	08/29/19 9:23	C9H0588	CH92708
Benzo(b)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 9:23	C9H0588	CH92708
Benzo(k)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 9:23	C9H0588	CH92708
Chrysene	ND (0.05)		8270D SIM		1	08/29/19 9:23	C9H0588	CH92708
Dibenzo(a,h)Anthracene	ND (0.05)		8270D SIM		1	08/29/19 9:23	C9H0588	CH92708
Hexachlorobenzene	ND (0.19)		8270D SIM		1	08/29/19 9:23	C9H0588	CH92708
Indeno(1,2,3-cd)Pyrene	ND (0.05)		8270D SIM		1	08/29/19 9:23	C9H0588	CH92708
Pentachlorophenol	ND (0.84)		8270D SIM		1	08/29/19 9:23	C9H0588	CH92708

%Recovery	Qualifier	Limits

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: FD
Date Sampled: 08/22/19 12:00
Percent Solids: N/A

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-07
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**144** (25.0)		6010C		1	KJK	08/28/19 0:56	50	25	CH92741

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: FD
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 5
Extraction Method: 3510C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-07
Sample Matrix: Ground Water
Units: ug/L
Analyst: DMC
Prepared: 8/27/19 11:02

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD	**P, LC 0.078** (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
4,4´-DDE	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
4,4´-DDT	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Aldrin	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
alpha-BHC	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
alpha-Chlordane [2C]	**P, LC 0.145** (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
beta-BHC	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Chlordane (Total)	**P, LC 0.983** (0.187)		8081B		1	08/29/19 18:59	C9H0599	CH92939
delta-BHC	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Dieldrin [2C]	**0.072** (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Endosulfan I	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Endosulfan II	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Endosulfan Sulfate	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Endrin	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Endrin Aldehyde	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Endrin Ketone	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
gamma-BHC (Lindane)	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
gamma-Chlordane [2C]	**0.150** (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Heptachlor	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Heptachlor Epoxide	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Hexachlorobenzene	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Methoxychlor	ND (0.047)		8081B		1	08/29/19 18:59	C9H0599	CH92939
Toxaphene	ND (1.21)		8081B		1	08/29/19 18:59	C9H0599	CH92939

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*76 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*78 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*81 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*178 %*	*SM*	*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: FD
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-07
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,1,1-Trichloroethane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,1,2-Trichloroethane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,1-Dichloroethane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,1-Dichloroethene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,1-Dichloropropene	ND (2.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,2,3-Trichloropropane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,2,4-Trimethylbenzene	**80.4** (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,2-Dibromoethane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,2-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,2-Dichloroethane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,3,5-Trimethylbenzene	**13.9** (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,3-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,3-Dichloropropane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
1,4-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
2,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
2-Butanone	ND (10.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
2-Chloroethyl vinyl ether	ND (10.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
2-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
2-Hexanone	ND (10.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
4-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
4-Isopropyltoluene	**12.7** (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Acetone	ND (10.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Acrolein	ND (5.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Acrylonitrile	ND (5.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Benzene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: FD
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-07
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (2.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Bromochloromethane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Bromodichloromethane	ND (0.6)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Bromoform	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Bromomethane	ND (2.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Carbon Disulfide	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Carbon Tetrachloride	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Chlorobenzene	**1.2** (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Chloroethane	ND (2.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Chloroform	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Chloromethane	ND (2.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Dibromochloromethane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Dibromomethane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Dichlorodifluoromethane	ND (2.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Ethylbenzene	**134** (50.0)		8260B		50	08/28/19 16:02	C9H0544	CH92723
Hexachlorobutadiene	ND (0.6)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Isopropylbenzene	**4.9** (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Methylene Chloride	ND (2.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Naphthalene	**705** (50.0)		8260B		50	08/28/19 16:02	C9H0544	CH92723
n-Butylbenzene	**3.4** (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
n-Propylbenzene	**5.6** (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
sec-Butylbenzene	**1.6** (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Styrene	**1.4** (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
tert-Butylbenzene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Tetrachloroethene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Toluene	**23.3** (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Trichloroethene	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: FD
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-07
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Trichlorofluoromethane	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Vinyl Acetate	ND (5.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Vinyl Chloride	ND (1.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723
Xylene O	**90.0** (50.0)		8260B		50	08/28/19 16:02	C9H0544	CH92723
Xylene P,M	**145** (2.0)		8260B		1	08/27/19 17:15	C9H0544	CH92723

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*107 %*		*70-130*
Surrogate: 1,2-Dichloroethane-d4	*107 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*112 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*112 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: FD
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-07
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
1,2-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
1,3-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
1,4-Dichlorobenzene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
2,4,5-Trichlorophenol	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
2,4,6-Trichlorophenol	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
2,4-Dichlorophenol	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
2,4-Dimethylphenol	ND (46.7)		8270D		1	08/28/19 21:24	C9H0587	CH92708
2,4-Dinitrophenol	ND (46.7)		8270D		1	08/28/19 21:24	C9H0587	CH92708
2,4-Dinitrotoluene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
2,6-Dinitrotoluene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
2-Chloronaphthalene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
2-Chlorophenol	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
2-Methylphenol	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
2-Nitroaniline	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
2-Nitrophenol	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
3,3′-Dichlorobenzidine	ND (18.7)		8270D		1	08/28/19 21:24	C9H0587	CH92708
3+4-Methylphenol	ND (18.7)		8270D		1	08/28/19 21:24	C9H0587	CH92708
3-Nitroaniline	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
4,6-Dinitro-2-Methylphenol	ND (46.7)		8270D		1	08/28/19 21:24	C9H0587	CH92708
4-Bromophenyl-phenylether	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
4-Chloro-3-Methylphenol	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
4-Chloroaniline	ND (18.7)		8270D		1	08/28/19 21:24	C9H0587	CH92708
4-Nitroaniline	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
4-Nitrophenol	ND (46.7)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Acenaphthene	**26.3** (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Acenaphthylene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Acetophenone	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Aniline	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Anthracene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Azobenzene	ND (18.7)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Benzidine	ND (46.7)		8270D		1	08/28/19 21:24	C9H0587	CH92708

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: FD
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-07
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Benzo(g,h,i)perylene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Benzoic Acid	ND (93.5)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Benzyl Alcohol	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
bis(2-Chloroethoxy)methane	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
bis(2-Chloroethyl)ether	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
bis(2-chloroisopropyl)Ether	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
bis(2-Ethylhexyl)phthalate	ND (5.6)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Butylbenzylphthalate	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Carbazole	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Dibenzofuran	**13.1** (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Diethylphthalate	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Dimethylphthalate	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Di-n-butylphthalate	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Di-n-octylphthalate	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Fluoranthene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Fluorene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Hexachlorobutadiene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Hexachlorocyclopentadiene	ND (23.4)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Hexachloroethane	ND (4.7)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Isophorone	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Naphthalene	**379** (93.5)		8270D		10	08/29/19 19:33	C9H0587	CH92708
Nitrobenzene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
N-Nitrosodimethylamine	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
N-Nitroso-Di-n-Propylamine	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
N-nitrosodiphenylamine	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Phenanthrene	**10.1** (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Phenol	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Pyrene	ND (9.3)		8270D		1	08/28/19 21:24	C9H0587	CH92708
Pyridine	ND (93.5)		8270D		1	08/28/19 21:24	C9H0587	CH92708

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*64 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: FD
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-07
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2,4,6-Tribromophenol		*95 %*		*15-110*				
Surrogate: 2-Chlorophenol-d4		*67 %*		*15-110*				
Surrogate: 2-Fluorobiphenyl		*67 %*		*30-130*				
Surrogate: 2-Fluorophenol		*63 %*		*15-110*				
Surrogate: Nitrobenzene-d5		*72 %*		*30-130*				
Surrogate: Phenol-d6		*64 %*		*15-110*				
Surrogate: p-Terphenyl-d14		*79 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: FD
Date Sampled: 08/22/19 12:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 0.25
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-07
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 8/27/19 18:05

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	**79.4** (1.87)		8270D SIM		10	08/29/19 17:27	C9H0588	CH92708
Benzo(a)anthracene	ND (0.05)		8270D SIM		1	08/29/19 10:10	C9H0588	CH92708
Benzo(a)pyrene	ND (0.05)		8270D SIM		1	08/29/19 10:10	C9H0588	CH92708
Benzo(b)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 10:10	C9H0588	CH92708
Benzo(k)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 10:10	C9H0588	CH92708
Chrysene	ND (0.05)		8270D SIM		1	08/29/19 10:10	C9H0588	CH92708
Dibenzo(a,h)Anthracene	ND (0.05)		8270D SIM		1	08/29/19 10:10	C9H0588	CH92708
Hexachlorobenzene	ND (0.19)		8270D SIM		1	08/29/19 10:10	C9H0588	CH92708
Indeno(1,2,3-cd)Pyrene	ND (0.05)		8270D SIM		1	08/29/19 10:10	C9H0588	CH92708
Pentachlorophenol	**1.55** (0.84)		8270D SIM		1	08/29/19 10:10	C9H0588	CH92708

%Recovery	Qualifier	Limits

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW10
Date Sampled: 08/22/19 12:20
Percent Solids: N/A

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-08
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**906** (25.0)		6010C		1	KJK	08/28/19 1:00	50	25	CH92741

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW10
Date Sampled: 08/22/19 12:20
Percent Solids: N/A
Initial Volume: 1050
Final Volume: 5
Extraction Method: 3510C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-08
Sample Matrix: Ground Water
Units: ug/L
Analyst: DMC
Prepared: 8/27/19 11:02

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
4,4´-DDE	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
4,4´-DDT	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Aldrin	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
alpha-BHC	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
alpha-Chlordane	**0.169** (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
beta-BHC	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Chlordane (Total) [2C]	**1.36** (0.190)		8081B		1	08/28/19 17:36	C9H0558	CH92701
delta-BHC	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Dieldrin [2C]	**0.426** (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Endosulfan I [2C]	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Endosulfan II	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Endosulfan Sulfate	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Endrin	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Endrin Aldehyde	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Endrin Ketone	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
gamma-BHC (Lindane)	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
gamma-Chlordane	**0.094** (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Heptachlor	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Heptachlor Epoxide	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Hexachlorobenzene	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Methoxychlor	ND (0.048)		8081B		1	08/28/19 17:36	C9H0558	CH92701
Toxaphene	ND (1.24)		8081B		1	08/28/19 17:36	C9H0558	CH92701

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*92 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*78 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*73 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*77 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW10
Date Sampled: 08/22/19 12:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-08
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,1,1-Trichloroethane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,1,2-Trichloroethane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,1-Dichloroethane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,1-Dichloroethene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,1-Dichloropropene	ND (2.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,2,3-Trichloropropane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,2-Dibromoethane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,2-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,2-Dichloroethane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,3-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,3-Dichloropropane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
1,4-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
2,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
2-Butanone	ND (10.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
2-Chloroethyl vinyl ether	ND (10.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
2-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
2-Hexanone	ND (10.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
4-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
4-Isopropyltoluene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Acetone	ND (10.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Acrolein	ND (5.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Acrylonitrile	ND (5.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Benzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW10
Date Sampled: 08/22/19 12:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-08
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (2.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Bromochloromethane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Bromodichloromethane	ND (0.6)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Bromoform	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Bromomethane	ND (2.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Carbon Disulfide	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Carbon Tetrachloride	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Chlorobenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Chloroethane	ND (2.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Chloroform	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Chloromethane	ND (2.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Dibromochloromethane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Dibromomethane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Dichlorodifluoromethane	ND (2.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Ethylbenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Hexachlorobutadiene	ND (0.6)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Isopropylbenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Methylene Chloride	ND (2.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Naphthalene	**2.6** (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
n-Butylbenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
n-Propylbenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
sec-Butylbenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Styrene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
tert-Butylbenzene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Tetrachloroethene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Toluene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Trichloroethene	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW10
Date Sampled: 08/22/19 12:20
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-08
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Trichlorofluoromethane	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Vinyl Acetate	ND (5.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Vinyl Chloride	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Xylene O	ND (1.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723
Xylene P,M	ND (2.0)		8260B		1	08/27/19 16:49	C9H0544	CH92723

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*70-130*
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*90 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*90 %*		*70-130*
Surrogate: Dibromofluoromethane	*103 %*		*70-130*
Surrogate: Dibromofluoromethane	*103 %*		*70-130*
Surrogate: Toluene-d8	*102 %*		*70-130*
Surrogate: Toluene-d8	*102 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW10
Date Sampled: 08/22/19 12:20
Percent Solids: N/A
Initial Volume: 1000
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-08
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
1,2-Dichlorobenzene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
1,3-Dichlorobenzene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
1,4-Dichlorobenzene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
2,4,5-Trichlorophenol	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
2,4,6-Trichlorophenol	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
2,4-Dichlorophenol	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
2,4-Dimethylphenol	ND (50.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
2,4-Dinitrophenol	ND (50.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
2,4-Dinitrotoluene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
2,6-Dinitrotoluene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
2-Chloronaphthalene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
2-Chlorophenol	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
2-Methylphenol	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
2-Nitroaniline	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
2-Nitrophenol	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
3,3′-Dichlorobenzidine	ND (20.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
3+4-Methylphenol	ND (20.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
3-Nitroaniline	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
4,6-Dinitro-2-Methylphenol	ND (50.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
4-Bromophenyl-phenylether	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
4-Chloro-3-Methylphenol	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
4-Chloroaniline	ND (20.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
4-Nitroaniline	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
4-Nitrophenol	ND (50.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Acenaphthene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Acenaphthylene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Acetophenone	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Aniline	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Anthracene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Azobenzene	ND (20.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Benzidine	ND (50.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW10
Date Sampled: 08/22/19 12:20
Percent Solids: N/A
Initial Volume: 1000
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-08
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Benzo(g,h,i)perylene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Benzoic Acid	ND (100)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Benzyl Alcohol	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
bis(2-Chloroethoxy)methane	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
bis(2-Chloroethyl)ether	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
bis(2-chloroisopropyl)Ether	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
bis(2-Ethylhexyl)phthalate	**22.8** (6.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Butylbenzylphthalate	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Carbazole	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Dibenzofuran	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Diethylphthalate	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Dimethylphthalate	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Di-n-butylphthalate	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Di-n-octylphthalate	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Fluoranthene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Fluorene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Hexachlorobutadiene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Hexachlorocyclopentadiene	ND (25.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Hexachloroethane	ND (5.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Isophorone	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Naphthalene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Nitrobenzene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
N-Nitrosodimethylamine	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
N-Nitroso-Di-n-Propylamine	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
N-nitrosodiphenylamine	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Phenanthrene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Phenol	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Pyrene	ND (10.0)		8270D		1	08/28/19 21:50	C9H0587	CH92708
Pyridine	ND (100)		8270D		1	08/28/19 21:50	C9H0587	CH92708

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*71 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW10
Date Sampled: 08/22/19 12:20
Percent Solids: N/A
Initial Volume: 1000
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-08
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 8/27/19 18:05

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2,4,6-Tribromophenol		*88 %*		*15-110*				
Surrogate: 2-Chlorophenol-d4		*74 %*		*15-110*				
Surrogate: 2-Fluorobiphenyl		*80 %*		*30-130*				
Surrogate: 2-Fluorophenol		*63 %*		*15-110*				
Surrogate: Nitrobenzene-d5		*76 %*		*30-130*				
Surrogate: Phenol-d6		*71 %*		*15-110*				
Surrogate: p-Terphenyl-d14		*58 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: EW10
Date Sampled: 08/22/19 12:20
Percent Solids: N/A
Initial Volume: 1000
Final Volume: 0.25
Extraction Method: 3520C

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-08
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 8/27/19 18:05

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	**0.39** (0.20)		8270D SIM		1	08/29/19 10:58	C9H0588	CH92708
Benzo(a)anthracene	ND (0.05)		8270D SIM		1	08/29/19 10:58	C9H0588	CH92708
Benzo(a)pyrene	ND (0.05)		8270D SIM		1	08/29/19 10:58	C9H0588	CH92708
Benzo(b)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 10:58	C9H0588	CH92708
Benzo(k)fluoranthene	ND (0.05)		8270D SIM		1	08/29/19 10:58	C9H0588	CH92708
Chrysene	ND (0.05)		8270D SIM		1	08/29/19 10:58	C9H0588	CH92708
Dibenzo(a,h)Anthracene	ND (0.05)		8270D SIM		1	08/29/19 10:58	C9H0588	CH92708
Hexachlorobenzene	ND (0.20)		8270D SIM		1	08/29/19 10:58	C9H0588	CH92708
Indeno(1,2,3-cd)Pyrene	ND (0.05)		8270D SIM		1	08/29/19 10:58	C9H0588	CH92708
Pentachlorophenol	ND (0.90)		8270D SIM		1	08/29/19 10:58	C9H0588	CH92708

%Recovery	Qualifier	Limits

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: Trip Blank
Date Sampled: 08/22/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-09
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,1,1-Trichloroethane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,1,2,2-Tetrachloroethane	ND (0.5)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,1,2-Trichloroethane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,1-Dichloroethane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,1-Dichloroethene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,1-Dichloropropene	ND (2.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,2,3-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,2,3-Trichloropropane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,2,4-Trichlorobenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,2,4-Trimethylbenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,2-Dibromo-3-Chloropropane	ND (5.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,2-Dibromoethane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,2-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,2-Dichloroethane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,3,5-Trimethylbenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,3-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,3-Dichloropropane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
1,4-Dichlorobenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
2,2-Dichloropropane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
2-Butanone	ND (10.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
2-Chloroethyl vinyl ether	ND (10.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
2-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
2-Hexanone	ND (10.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
4-Chlorotoluene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
4-Isopropyltoluene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
4-Methyl-2-Pentanone	ND (10.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Acetone	ND (10.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Acrolein - Screen	ND (5.00)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Acrylonitrile	ND (5.00)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Benzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: Trip Blank
Date Sampled: 08/22/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-09
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (2.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Bromochloromethane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Bromodichloromethane	ND (0.6)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Bromoform	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Bromomethane	ND (2.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Carbon Disulfide	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Carbon Tetrachloride	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Chlorobenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Chloroethane	ND (2.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Chloroform	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Chloromethane	ND (2.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
cis-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Dibromochloromethane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Dibromomethane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Dichlorodifluoromethane	ND (2.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Ethylbenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Hexachlorobutadiene	ND (0.6)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Hexachloroethane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Isopropylbenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Methylene Chloride	ND (2.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Naphthalene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
n-Butylbenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
n-Propylbenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
sec-Butylbenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Styrene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
tert-Butylbenzene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Tetrachloroethene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Toluene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
trans-1,2-Dichloroethene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
trans-1,3-Dichloropropene	ND (0.4)		8260B		1	08/27/19 12:09	C9H0544	CH92723

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly
Client Sample ID: Trip Blank
Date Sampled: 08/22/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19H0809
ESS Laboratory Sample ID: 19H0809-09
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Trichloroethene	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Trichlorofluoromethane	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Vinyl Acetate	ND (5.00)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Vinyl Chloride	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Xylene O	ND (1.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723
Xylene P,M	ND (2.0)		8260B		1	08/27/19 12:09	C9H0544	CH92723

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*112 %*		*70-130*
Surrogate: 1,2-Dichloroethane-d4	*112 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*89 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*89 %*		*70-130*
Surrogate: Dibromofluoromethane	*106 %*		*70-130*
Surrogate: Dibromofluoromethane	*106 %*		*70-130*
Surrogate: Toluene-d8	*102 %*		*70-130*
Surrogate: Toluene-d8	*102 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CH92741 - 3005A/200.7										
Blank										
Arsenic	ND	25.0	ug/L							
LCS										
Arsenic	254	25.0	ug/L	250.0		101	80-120			
LCS Dup										
Arsenic	235	25.0	ug/L	250.0		94	80-120	8	20	
8081B Organochlorine Pesticides										
Batch CH92701 - 3510C										
Blank										
4,4´-DDD	ND	0.050	ug/L							
4,4´-DDD [2C]	ND	0.050	ug/L							
4,4´-DDE	ND	0.050	ug/L							
4,4´-DDE [2C]	ND	0.050	ug/L							
4,4´-DDT	ND	0.050	ug/L							
4,4´-DDT [2C]	ND	0.050	ug/L							
Aldrin	ND	0.050	ug/L							
Aldrin [2C]	ND	0.050	ug/L							
alpha-BHC	ND	0.050	ug/L							
alpha-BHC [2C]	ND	0.050	ug/L							
alpha-Chlordane	ND	0.050	ug/L							
alpha-Chlordane [2C]	ND	0.050	ug/L							
beta-BHC	ND	0.050	ug/L							
beta-BHC [2C]	ND	0.050	ug/L							
delta-BHC	ND	0.050	ug/L							
delta-BHC [2C]	ND	0.050	ug/L							
Dieldrin	ND	0.050	ug/L							
Dieldrin [2C]	ND	0.050	ug/L							
Endosulfan I	ND	0.050	ug/L							
Endosulfan I [2C]	ND	0.050	ug/L							
Endosulfan II	ND	0.050	ug/L							
Endosulfan II [2C]	ND	0.050	ug/L							
Endosulfan Sulfate	ND	0.050	ug/L							
Endosulfan Sulfate [2C]	ND	0.050	ug/L							
Endrin	ND	0.050	ug/L							
Endrin [2C]	ND	0.050	ug/L							
Endrin Aldehyde	ND	0.050	ug/L							
Endrin Aldehyde [2C]	ND	0.050	ug/L							
Endrin Ketone	ND	0.050	ug/L							
Endrin Ketone [2C]	ND	0.050	ug/L							
gamma-BHC (Lindane)	ND	0.050	ug/L							
gamma-BHC (Lindane) [2C]	ND	0.050	ug/L							
gamma-Chlordane	ND	0.050	ug/L							
gamma-Chlordane [2C]	ND	0.050	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch CH92701 - 3510C										
Heptachlor	ND	0.050	ug/L							
Heptachlor [2C]	ND	0.050	ug/L							
Heptachlor Epoxide	ND	0.050	ug/L							
Heptachlor Epoxide [2C]	ND	0.050	ug/L							
Hexachlorobenzene	ND	0.050	ug/L							
Hexachlorobenzene [2C]	ND	0.050	ug/L							
Methoxychlor	ND	0.050	ug/L							
Methoxychlor [2C]	ND	0.050	ug/L							
Toxaphene	ND	1.30	ug/L							
Toxaphene [2C]	ND	1.30	ug/L							
Surrogate: Decachlorobiphenyl	*0.209*		ug/L	*0.2500*		*84*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.209*		ug/L	*0.2500*		*84*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.193*		ug/L	*0.2500*		*77*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.191*		ug/L	*0.2500*		*76*	*30-150*			
LCS										
4,4´-DDD	0.221	0.050	ug/L	0.2500		88	40-140			
4,4´-DDD [2C]	0.221	0.050	ug/L	0.2500		88	40-140			
4,4´-DDE	0.226	0.050	ug/L	0.2500		90	40-140			
4,4´-DDE [2C]	0.221	0.050	ug/L	0.2500		88	40-140			
4,4´-DDT	0.215	0.050	ug/L	0.2500		86	40-140			
4,4´-DDT [2C]	0.201	0.050	ug/L	0.2500		81	40-140			
Aldrin	0.191	0.050	ug/L	0.2500		76	40-140			
Aldrin [2C]	0.191	0.050	ug/L	0.2500		76	40-140			
alpha-BHC	0.205	0.050	ug/L	0.2500		82	40-140			
alpha-BHC [2C]	0.206	0.050	ug/L	0.2500		83	40-140			
alpha-Chlordane	0.203	0.050	ug/L	0.2500		81	40-140			
alpha-Chlordane [2C]	0.210	0.050	ug/L	0.2500		84	40-140			
beta-BHC	0.210	0.050	ug/L	0.2500		84	40-140			
beta-BHC [2C]	0.206	0.050	ug/L	0.2500		83	40-140			
delta-BHC	0.154	0.050	ug/L	0.2500		62	40-140			
delta-BHC [2C]	0.152	0.050	ug/L	0.2500		61	40-140			
Dieldrin	0.227	0.050	ug/L	0.2500		91	40-140			
Dieldrin [2C]	0.230	0.050	ug/L	0.2500		92	40-140			
Endosulfan I	0.207	0.050	ug/L	0.2500		83	40-140			
Endosulfan I [2C]	0.212	0.050	ug/L	0.2500		85	40-140			
Endosulfan II	0.216	0.050	ug/L	0.2500		86	40-140			
Endosulfan II [2C]	0.213	0.050	ug/L	0.2500		85	40-140			
Endosulfan Sulfate	0.206	0.050	ug/L	0.2500		82	40-140			
Endosulfan Sulfate [2C]	0.210	0.050	ug/L	0.2500		84	40-140			
Endrin	0.220	0.050	ug/L	0.2500		88	40-140			
Endrin [2C]	0.226	0.050	ug/L	0.2500		90	40-140			
Endrin Aldehyde	0.138	0.050	ug/L	0.2500		55	40-140			
Endrin Aldehyde [2C]	0.222	0.050	ug/L	0.2500		89	40-140			
Endrin Ketone	0.237	0.050	ug/L	0.2500		95	40-140			

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

8081B Organochlorine Pesticides

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CH92701 - 3510C										
Endrin Ketone [2C]	0.234	0.050	ug/L	0.2500		94	40-140			
gamma-BHC (Lindane)	0.212	0.050	ug/L	0.2500		85	40-140			
gamma-BHC (Lindane) [2C]	0.210	0.050	ug/L	0.2500		84	40-140			
gamma-Chlordane	0.204	0.050	ug/L	0.2500		81	40-140			
gamma-Chlordane [2C]	0.209	0.050	ug/L	0.2500		84	40-140			
Heptachlor	0.189	0.050	ug/L	0.2500		76	40-140			
Heptachlor [2C]	0.189	0.050	ug/L	0.2500		76	40-140			
Heptachlor Epoxide	0.229	0.050	ug/L	0.2500		92	40-140			
Heptachlor Epoxide [2C]	0.228	0.050	ug/L	0.2500		91	40-140			
Hexachlorobenzene	0.212	0.050	ug/L	0.2500		85	40-140			
Hexachlorobenzene [2C]	0.205	0.050	ug/L	0.2500		82	40-140			
Methoxychlor	0.197	0.050	ug/L	0.2500		79	40-140			
Methoxychlor [2C]	0.214	0.050	ug/L	0.2500		86	40-140			
Surrogate: Decachlorobiphenyl	*0.198*		ug/L	*0.2500*		*79*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.201*		ug/L	*0.2500*		*80*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.184*		ug/L	*0.2500*		*73*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		ug/L	*0.2500*		*74*	*30-150*			
LCS Dup										
4,4´-DDD	0.219	0.050	ug/L	0.2500		88	40-140	0.6	20	
4,4´-DDD [2C]	0.218	0.050	ug/L	0.2500		87	40-140	1	20	
4,4´-DDE	0.224	0.050	ug/L	0.2500		90	40-140	0.9	20	
4,4´-DDE [2C]	0.218	0.050	ug/L	0.2500		87	40-140	1	20	
4,4´-DDT	0.218	0.050	ug/L	0.2500		87	40-140	1	20	
4,4´-DDT [2C]	0.201	0.050	ug/L	0.2500		80	40-140	0.4	20	
Aldrin	0.190	0.050	ug/L	0.2500		76	40-140	0.5	20	
Aldrin [2C]	0.190	0.050	ug/L	0.2500		76	40-140	0.05	20	
alpha-BHC	0.202	0.050	ug/L	0.2500		81	40-140	2	20	
alpha-BHC [2C]	0.200	0.050	ug/L	0.2500		80	40-140	3	20	
alpha-Chlordane	0.202	0.050	ug/L	0.2500		81	40-140	0.6	20	
alpha-Chlordane [2C]	0.209	0.050	ug/L	0.2500		84	40-140	0.3	20	
beta-BHC	0.203	0.050	ug/L	0.2500		81	40-140	3	20	
beta-BHC [2C]	0.199	0.050	ug/L	0.2500		80	40-140	4	20	
delta-BHC	0.151	0.050	ug/L	0.2500		60	40-140	2	20	
delta-BHC [2C]	0.148	0.050	ug/L	0.2500		59	40-140	3	20	
Dieldrin	0.223	0.050	ug/L	0.2500		89	40-140	1	20	
Dieldrin [2C]	0.225	0.050	ug/L	0.2500		90	40-140	2	20	
Endosulfan I	0.199	0.050	ug/L	0.2500		80	40-140	4	20	
Endosulfan I [2C]	0.208	0.050	ug/L	0.2500		83	40-140	2	20	
Endosulfan II	0.214	0.050	ug/L	0.2500		86	40-140	0.8	20	
Endosulfan II [2C]	0.211	0.050	ug/L	0.2500		84	40-140	1	20	
Endosulfan Sulfate	0.206	0.050	ug/L	0.2500		82	40-140	0.2	20	
Endosulfan Sulfate [2C]	0.211	0.050	ug/L	0.2500		84	40-140	0.5	20	
Endrin	0.216	0.050	ug/L	0.2500		86	40-140	2	20	
Endrin [2C]	0.219	0.050	ug/L	0.2500		88	40-140	3	20	

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

8081B Organochlorine Pesticides

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CH92701 - 3510C										
Endrin Aldehyde	0.135	0.050	ug/L	0.2500		54	40-140	3	20	
Endrin Aldehyde [2C]	0.220	0.050	ug/L	0.2500		88	40-140	0.8	20	
Endrin Ketone	0.238	0.050	ug/L	0.2500		95	40-140	0.5	20	
Endrin Ketone [2C]	0.235	0.050	ug/L	0.2500		94	40-140	0.3	20	
gamma-BHC (Lindane)	0.208	0.050	ug/L	0.2500		83	40-140	2	20	
gamma-BHC (Lindane) [2C]	0.207	0.050	ug/L	0.2500		83	40-140	2	20	
gamma-Chlordane	0.200	0.050	ug/L	0.2500		80	40-140	2	20	
gamma-Chlordane [2C]	0.203	0.050	ug/L	0.2500		81	40-140	3	20	
Heptachlor	0.189	0.050	ug/L	0.2500		76	40-140	0.1	20	
Heptachlor [2C]	0.188	0.050	ug/L	0.2500		75	40-140	0.7	20	
Heptachlor Epoxide	0.226	0.050	ug/L	0.2500		90	40-140	1	20	
Heptachlor Epoxide [2C]	0.226	0.050	ug/L	0.2500		90	40-140	1	20	
Hexachlorobenzene	0.212	0.050	ug/L	0.2500		85	40-140	0.4	20	
Hexachlorobenzene [2C]	0.206	0.050	ug/L	0.2500		82	40-140	0.2	20	
Methoxychlor	0.202	0.050	ug/L	0.2500		81	40-140	3	20	
Methoxychlor [2C]	0.214	0.050	ug/L	0.2500		86	40-140	0.08	20	
Surrogate: Decachlorobiphenyl	*0.199*		ug/L	*0.2500*		*80*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.199*		ug/L	*0.2500*		*80*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.172*		ug/L	*0.2500*		*69*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.175*		ug/L	*0.2500*		*70*	*30-150*			
Batch CH92939 - 3510C										
Blank										
4,4´-DDD	ND	0.050	ug/L							
4,4´-DDD [2C]	ND	0.050	ug/L							
4,4´-DDE	ND	0.050	ug/L							
4,4´-DDE [2C]	ND	0.050	ug/L							
4,4´-DDT	ND	0.050	ug/L							
4,4´-DDT [2C]	ND	0.050	ug/L							
Aldrin	ND	0.050	ug/L							
Aldrin [2C]	ND	0.050	ug/L							
alpha-BHC	ND	0.050	ug/L							
alpha-BHC [2C]	ND	0.050	ug/L							
alpha-Chlordane	ND	0.050	ug/L							
alpha-Chlordane [2C]	ND	0.050	ug/L							
beta-BHC	ND	0.050	ug/L							
beta-BHC [2C]	ND	0.050	ug/L							
delta-BHC	ND	0.050	ug/L							
delta-BHC [2C]	ND	0.050	ug/L							
Dieldrin	ND	0.050	ug/L							
Dieldrin [2C]	ND	0.050	ug/L							
Endosulfan I	ND	0.050	ug/L							
Endosulfan I [2C]	ND	0.050	ug/L							
Endosulfan II	ND	0.050	ug/L							
Endosulfan II [2C]	ND	0.050	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

8081B Organochlorine Pesticides

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CH92939 - 3510C										
Endosulfan Sulfate	ND	0.050	ug/L							
Endosulfan Sulfate [2C]	ND	0.050	ug/L							
Endrin	ND	0.050	ug/L							
Endrin [2C]	ND	0.050	ug/L							
Endrin Aldehyde	ND	0.050	ug/L							
Endrin Aldehyde [2C]	ND	0.050	ug/L							
Endrin Ketone	ND	0.050	ug/L							
Endrin Ketone [2C]	ND	0.050	ug/L							
gamma-BHC (Lindane)	ND	0.050	ug/L							
gamma-BHC (Lindane) [2C]	ND	0.050	ug/L							
gamma-Chlordane	ND	0.050	ug/L							
gamma-Chlordane [2C]	ND	0.050	ug/L							
Heptachlor	ND	0.050	ug/L							
Heptachlor [2C]	ND	0.050	ug/L							
Heptachlor Epoxide	ND	0.050	ug/L							
Heptachlor Epoxide [2C]	ND	0.050	ug/L							
Hexachlorobenzene	ND	0.050	ug/L							
Hexachlorobenzene [2C]	ND	0.050	ug/L							
Methoxychlor	ND	0.050	ug/L							
Methoxychlor [2C]	ND	0.050	ug/L							
Toxaphene	ND	1.30	ug/L							
Toxaphene [2C]	ND	1.30	ug/L							
Surrogate: Decachlorobiphenyl	*0.190*		ug/L	*0.2500*		*76*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.203*		ug/L	*0.2500*		*81*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.216*		ug/L	*0.2500*		*86*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.204*		ug/L	*0.2500*		*82*	*30-150*			
LCS										
4,4´-DDD	0.247	0.050	ug/L	0.2500		99	40-140			
4,4´-DDD [2C]	0.239	0.050	ug/L	0.2500		96	40-140			
4,4´-DDE	0.262	0.050	ug/L	0.2500		105	40-140			
4,4´-DDE [2C]	0.234	0.050	ug/L	0.2500		93	40-140			
4,4´-DDT	0.247	0.050	ug/L	0.2500		99	40-140			
4,4´-DDT [2C]	0.233	0.050	ug/L	0.2500		93	40-140			
Aldrin	0.217	0.050	ug/L	0.2500		87	40-140			
Aldrin [2C]	0.206	0.050	ug/L	0.2500		82	40-140			
alpha-BHC	0.242	0.050	ug/L	0.2500		97	40-140			
alpha-BHC [2C]	0.229	0.050	ug/L	0.2500		92	40-140			
alpha-Chlordane	0.231	0.050	ug/L	0.2500		93	40-140			
alpha-Chlordane [2C]	0.226	0.050	ug/L	0.2500		90	40-140			
beta-BHC	0.243	0.050	ug/L	0.2500		97	40-140			
beta-BHC [2C]	0.235	0.050	ug/L	0.2500		94	40-140			
delta-BHC	0.186	0.050	ug/L	0.2500		74	40-140			
delta-BHC [2C]	0.169	0.050	ug/L	0.2500		68	40-140			
Dieldrin	0.251	0.050	ug/L	0.2500		100	40-140			

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

8081B Organochlorine Pesticides

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CH92939 - 3510C										
Dieldrin [2C]	0.245	0.050	ug/L	0.2500		98	40-140			
Endosulfan I	0.224	0.050	ug/L	0.2500		90	40-140			
Endosulfan I [2C]	0.227	0.050	ug/L	0.2500		91	40-140			
Endosulfan II	0.235	0.050	ug/L	0.2500		94	40-140			
Endosulfan II [2C]	0.230	0.050	ug/L	0.2500		92	40-140			
Endosulfan Sulfate	0.225	0.050	ug/L	0.2500		90	40-140			
Endosulfan Sulfate [2C]	0.232	0.050	ug/L	0.2500		93	40-140			
Endrin	0.242	0.050	ug/L	0.2500		97	40-140			
Endrin [2C]	0.241	0.050	ug/L	0.2500		96	40-140			
Endrin Aldehyde	0.157	0.050	ug/L	0.2500		63	40-140			
Endrin Aldehyde [2C]	0.240	0.050	ug/L	0.2500		96	40-140			
Endrin Ketone	0.253	0.050	ug/L	0.2500		101	40-140			
Endrin Ketone [2C]	0.258	0.050	ug/L	0.2500		103	40-140			
gamma-BHC (Lindane)	0.250	0.050	ug/L	0.2500		100	40-140			
gamma-BHC (Lindane) [2C]	0.232	0.050	ug/L	0.2500		93	40-140			
gamma-Chlordane	0.228	0.050	ug/L	0.2500		91	40-140			
gamma-Chlordane [2C]	0.225	0.050	ug/L	0.2500		90	40-140			
Heptachlor	0.226	0.050	ug/L	0.2500		90	40-140			
Heptachlor [2C]	0.211	0.050	ug/L	0.2500		84	40-140			
Heptachlor Epoxide	0.256	0.050	ug/L	0.2500		103	40-140			
Heptachlor Epoxide [2C]	0.246	0.050	ug/L	0.2500		98	40-140			
Hexachlorobenzene	0.245	0.050	ug/L	0.2500		98	40-140			
Hexachlorobenzene [2C]	0.228	0.050	ug/L	0.2500		91	40-140			
Methoxychlor	0.231	0.050	ug/L	0.2500		93	40-140			
Methoxychlor [2C]	0.239	0.050	ug/L	0.2500		96	40-140			
Surrogate: Decachlorobiphenyl	*0.209*		ug/L	*0.2500*		*83*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.219*		ug/L	*0.2500*		*88*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.214*		ug/L	*0.2500*		*86*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.207*		ug/L	*0.2500*		*83*	*30-150*			
LCS Dup										
4,4´-DDD	0.239	0.050	ug/L	0.2500		96	40-140	3	20	
4,4´-DDD [2C]	0.227	0.050	ug/L	0.2500		91	40-140	5	20	
4,4´-DDE	0.251	0.050	ug/L	0.2500		100	40-140	5	20	
4,4´-DDE [2C]	0.228	0.050	ug/L	0.2500		91	40-140	2	20	
4,4´-DDT	0.234	0.050	ug/L	0.2500		94	40-140	5	20	
4,4´-DDT [2C]	0.217	0.050	ug/L	0.2500		87	40-140	7	20	
Aldrin	0.214	0.050	ug/L	0.2500		85	40-140	2	20	
Aldrin [2C]	0.203	0.050	ug/L	0.2500		81	40-140	1	20	
alpha-BHC	0.233	0.050	ug/L	0.2500		93	40-140	4	20	
alpha-BHC [2C]	0.221	0.050	ug/L	0.2500		88	40-140	4	20	
alpha-Chlordane	0.224	0.050	ug/L	0.2500		89	40-140	3	20	
alpha-Chlordane [2C]	0.218	0.050	ug/L	0.2500		87	40-140	4	20	
beta-BHC	0.240	0.050	ug/L	0.2500		96	40-140	1	20	
beta-BHC [2C]	0.211	0.050	ug/L	0.2500		85	40-140	10	20	

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch CH92939 - 3510C										
delta-BHC	0.182	0.050	ug/L	0.2500		73	40-140	2	20	
delta-BHC [2C]	0.162	0.050	ug/L	0.2500		65	40-140	5	20	
Dieldrin	0.240	0.050	ug/L	0.2500		96	40-140	5	20	
Dieldrin [2C]	0.235	0.050	ug/L	0.2500		94	40-140	4	20	
Endosulfan I	0.218	0.050	ug/L	0.2500		87	40-140	3	20	
Endosulfan I [2C]	0.218	0.050	ug/L	0.2500		87	40-140	4	20	
Endosulfan II	0.225	0.050	ug/L	0.2500		90	40-140	4	20	
Endosulfan II [2C]	0.222	0.050	ug/L	0.2500		89	40-140	4	20	
Endosulfan Sulfate	0.214	0.050	ug/L	0.2500		85	40-140	5	20	
Endosulfan Sulfate [2C]	0.220	0.050	ug/L	0.2500		88	40-140	6	20	
Endrin	0.234	0.050	ug/L	0.2500		93	40-140	4	20	
Endrin [2C]	0.230	0.050	ug/L	0.2500		92	40-140	5	20	
Endrin Aldehyde	0.149	0.050	ug/L	0.2500		60	40-140	5	20	
Endrin Aldehyde [2C]	0.228	0.050	ug/L	0.2500		91	40-140	5	20	
Endrin Ketone	0.243	0.050	ug/L	0.2500		97	40-140	4	20	
Endrin Ketone [2C]	0.244	0.050	ug/L	0.2500		98	40-140	6	20	
gamma-BHC (Lindane)	0.240	0.050	ug/L	0.2500		96	40-140	4	20	
gamma-BHC (Lindane) [2C]	0.225	0.050	ug/L	0.2500		90	40-140	3	20	
gamma-Chlordane	0.220	0.050	ug/L	0.2500		88	40-140	4	20	
gamma-Chlordane [2C]	0.210	0.050	ug/L	0.2500		84	40-140	7	20	
Heptachlor	0.217	0.050	ug/L	0.2500		87	40-140	4	20	
Heptachlor [2C]	0.205	0.050	ug/L	0.2500		82	40-140	3	20	
Heptachlor Epoxide	0.247	0.050	ug/L	0.2500		99	40-140	4	20	
Heptachlor Epoxide [2C]	0.237	0.050	ug/L	0.2500		95	40-140	4	20	
Hexachlorobenzene	0.241	0.050	ug/L	0.2500		97	40-140	2	20	
Hexachlorobenzene [2C]	0.225	0.050	ug/L	0.2500		90	40-140	2	20	
Methoxychlor	0.215	0.050	ug/L	0.2500		86	40-140	7	20	
Methoxychlor [2C]	0.223	0.050	ug/L	0.2500		89	40-140	7	20	
Surrogate: Decachlorobiphenyl	*0.190*		ug/L	*0.2500*		*76*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.197*		ug/L	*0.2500*		*79*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.198*		ug/L	*0.2500*		*79*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.191*		ug/L	*0.2500*		*77*	*30-150*			
8260B Volatile Organic Compounds										
Batch CH92723 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							
1,1,1-Trichloroethane	ND	1.0	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L							
1,1,2-Trichloroethane	ND	1.0	ug/L							
1,1-Dichloroethane	ND	1.0	ug/L							
1,1-Dichloroethene	ND	1.0	ug/L							
1,1-Dichloropropene	ND	2.0	ug/L							
1,2,3-Trichlorobenzene	ND	1.0	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CH92723 - 5030B										
1,2,3-Trichloropropane	ND	1.0	ug/L							
1,2,4-Trichlorobenzene	ND	1.0	ug/L							
1,2,4-Trimethylbenzene	ND	1.0	ug/L							
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L							
1,2-Dibromoethane	ND	1.0	ug/L							
1,2-Dichlorobenzene	ND	1.0	ug/L							
1,2-Dichloroethane	ND	1.0	ug/L							
1,2-Dichloropropane	ND	1.0	ug/L							
1,3,5-Trimethylbenzene	ND	1.0	ug/L							
1,3-Dichlorobenzene	ND	1.0	ug/L							
1,3-Dichloropropane	ND	1.0	ug/L							
1,4-Dichlorobenzene	ND	1.0	ug/L							
2,2-Dichloropropane	ND	1.0	ug/L							
2-Butanone	ND	10.0	ug/L							
2-Chloroethyl vinyl ether	ND	10.0	ug/L							
2-Chlorotoluene	ND	1.0	ug/L							
2-Hexanone	ND	10.0	ug/L							
4-Chlorotoluene	ND	1.0	ug/L							
4-Isopropyltoluene	ND	1.0	ug/L							
4-Methyl-2-Pentanone	ND	10.0	ug/L							
Acetone	ND	10.0	ug/L							
Acrolein	ND	5.0	ug/L							
Acrylonitrile	ND	5.0	ug/L							
Benzene	ND	1.0	ug/L							
Bromobenzene	ND	2.0	ug/L							
Bromochloromethane	ND	1.0	ug/L							
Bromodichloromethane	ND	0.6	ug/L							
Bromoform	ND	1.0	ug/L							
Bromomethane	ND	2.0	ug/L							
Carbon Disulfide	ND	1.0	ug/L							
Carbon Tetrachloride	ND	1.0	ug/L							
Chlorobenzene	ND	1.0	ug/L							
Chloroethane	ND	2.0	ug/L							
Chloroform	ND	1.0	ug/L							
Chloromethane	ND	2.0	ug/L							
cis-1,2-Dichloroethene	ND	1.0	ug/L							
cis-1,3-Dichloropropene	ND	0.4	ug/L							
Dibromochloromethane	ND	1.0	ug/L							
Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CH92723 - 5030B										
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.4	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Acetate	ND	5.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*27.7*		ug/L	*25.00*		*111*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*27.7*		ug/L	*25.00*		*111*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*21.8*		ug/L	*25.00*		*87*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*21.8*		ug/L	*25.00*		*87*	*70-130*			
Surrogate: Dibromofluoromethane	*26.4*		ug/L	*25.00*		*106*	*70-130*			
Surrogate: Dibromofluoromethane	*26.4*		ug/L	*25.00*		*106*	*70-130*			
Surrogate: Toluene-d8	*25.6*		ug/L	*25.00*		*102*	*70-130*			
Surrogate: Toluene-d8	*25.6*		ug/L	*25.00*		*102*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	9.4	1.0	ug/L	10.00		94	70-130			
1,1,1-Trichloroethane	10.4	1.0	ug/L	10.00		104	70-130			
1,1,2,2-Tetrachloroethane	9.9	0.5	ug/L	10.00		99	70-130			
1,1,2-Trichloroethane	9.4	1.0	ug/L	10.00		94	70-130			
1,1-Dichloroethane	10.2	1.0	ug/L	10.00		102	70-130			
1,1-Dichloroethene	9.8	1.0	ug/L	10.00		98	70-130			
1,1-Dichloropropene	9.8	2.0	ug/L	10.00		98	70-130			
1,2,3-Trichlorobenzene	9.5	1.0	ug/L	10.00		95	70-130			
1,2,3-Trichloropropane	9.5	1.0	ug/L	10.00		95	70-130			
1,2,4-Trichlorobenzene	8.7	1.0	ug/L	10.00		87	70-130			
1,2,4-Trimethylbenzene	9.3	1.0	ug/L	10.00		93	70-130			
1,2-Dibromo-3-Chloropropane	9.7	5.0	ug/L	10.00		97	70-130			
1,2-Dibromoethane	9.4	1.0	ug/L	10.00		94	70-130			
1,2-Dichlorobenzene	9.3	1.0	ug/L	10.00		93	70-130			
1,2-Dichloroethane	9.6	1.0	ug/L	10.00		96	70-130			
1,2-Dichloropropane	9.4	1.0	ug/L	10.00		94	70-130			
1,3,5-Trimethylbenzene	10.2	1.0	ug/L	10.00		102	70-130			
1,3-Dichlorobenzene	9.5	1.0	ug/L	10.00		95	70-130			
1,3-Dichloropropane	9.7	1.0	ug/L	10.00		97	70-130			
1,4-Dichlorobenzene	9.3	1.0	ug/L	10.00		93	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CH92723 - 5030B										
2,2-Dichloropropane	10.9	1.0	ug/L	10.00		109	70-130			
2-Butanone	51.4	10.0	ug/L	50.00		103	70-130			
2-Chloroethyl vinyl ether	65.1	10.0	ug/L	50.00		130	70-130			
2-Chlorotoluene	9.7	1.0	ug/L	10.00		97	70-130			
2-Hexanone	48.1	10.0	ug/L	50.00		96	70-130			
4-Chlorotoluene	9.9	1.0	ug/L	10.00		99	70-130			
4-Isopropyltoluene	9.8	1.0	ug/L	10.00		98	70-130			
4-Methyl-2-Pentanone	50.7	10.0	ug/L	50.00		101	70-130			
Acetone	49.0	10.0	ug/L	50.00		98	70-130			
Acrolein	9.2	5.0	ug/L	10.00		92	60-140			
Acrylonitrile	10.7	5.0	ug/L	10.00		107	70-130			
Benzene	9.6	1.0	ug/L	10.00		96	70-130			
Bromobenzene	9.3	2.0	ug/L	10.00		93	70-130			
Bromochloromethane	9.5	1.0	ug/L	10.00		95	70-130			
Bromodichloromethane	9.6	0.6	ug/L	10.00		96	70-130			
Bromoform	8.1	1.0	ug/L	10.00		81	70-130			
Bromomethane	14.2	2.0	ug/L	10.00		142	70-130			B+
Carbon Disulfide	9.3	1.0	ug/L	10.00		93	70-130			
Carbon Tetrachloride	10.0	1.0	ug/L	10.00		100	70-130			
Chlorobenzene	9.1	1.0	ug/L	10.00		91	70-130			
Chloroethane	8.8	2.0	ug/L	10.00		88	70-130			
Chloroform	9.7	1.0	ug/L	10.00		97	70-130			
Chloromethane	10.9	2.0	ug/L	10.00		109	70-130			
cis-1,2-Dichloroethene	9.5	1.0	ug/L	10.00		95	70-130			
cis-1,3-Dichloropropene	10.0	0.4	ug/L	10.00		100	70-130			
Dibromochloromethane	9.2	1.0	ug/L	10.00		92	70-130			
Dibromomethane	9.6	1.0	ug/L	10.00		96	70-130			
Dichlorodifluoromethane	8.2	2.0	ug/L	10.00		82	70-130			
Ethylbenzene	9.3	1.0	ug/L	10.00		93	70-130			
Hexachlorobutadiene	10.2	0.6	ug/L	10.00		102	70-130			
Isopropylbenzene	9.6	1.0	ug/L	10.00		96	70-130			
Methyl tert-Butyl Ether	10.0	1.0	ug/L	10.00		100	70-130			
Methylene Chloride	10.6	2.0	ug/L	10.00		106	70-130			
Naphthalene	9.8	1.0	ug/L	10.00		98	70-130			
n-Butylbenzene	9.1	1.0	ug/L	10.00		91	70-130			
n-Propylbenzene	9.7	1.0	ug/L	10.00		97	70-130			
sec-Butylbenzene	9.9	1.0	ug/L	10.00		99	70-130			
Styrene	7.9	1.0	ug/L	10.00		79	70-130			
tert-Butylbenzene	9.6	1.0	ug/L	10.00		96	70-130			
Tetrachloroethene	7.7	1.0	ug/L	10.00		77	70-130			
Toluene	9.2	1.0	ug/L	10.00		92	70-130			
trans-1,2-Dichloroethene	9.7	1.0	ug/L	10.00		97	70-130			
trans-1,3-Dichloropropene	8.0	0.4	ug/L	10.00		80	70-130			
Trichloroethene	9.1	1.0	ug/L	10.00		91	70-130			
Trichlorofluoromethane	9.7	1.0	ug/L	10.00		97	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CH92723 - 5030B										
Vinyl Acetate	9.0	5.0	ug/L	10.00		90	70-130			
Vinyl Chloride	8.5	1.0	ug/L	10.00		85	70-130			
Xylene O	8.7	1.0	ug/L	10.00		87	70-130			
Xylene P,M	17.1	2.0	ug/L	20.00		85	70-130			
Surrogate: 1,2-Dichloroethane-d4	*25.7*		ug/L	*25.00*		*103*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*25.7*		ug/L	*25.00*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*25.9*		ug/L	*25.00*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*25.9*		ug/L	*25.00*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*25.6*		ug/L	*25.00*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*25.6*		ug/L	*25.00*		*103*	*70-130*			
Surrogate: Toluene-d8	*23.9*		ug/L	*25.00*		*96*	*70-130*			
Surrogate: Toluene-d8	*23.9*		ug/L	*25.00*		*96*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	9.3	1.0	ug/L	10.00		93	70-130	1	20	
1,1,1-Trichloroethane	10.1	1.0	ug/L	10.00		101	70-130	3	20	
1,1,2,2-Tetrachloroethane	9.7	0.5	ug/L	10.00		97	70-130	2	20	
1,1,2-Trichloroethane	9.1	1.0	ug/L	10.00		91	70-130	3	20	
1,1-Dichloroethane	9.9	1.0	ug/L	10.00		99	70-130	3	20	
1,1-Dichloroethene	9.5	1.0	ug/L	10.00		95	70-130	3	20	
1,1-Dichloropropene	9.6	2.0	ug/L	10.00		96	70-130	2	20	
1,2,3-Trichlorobenzene	9.0	1.0	ug/L	10.00		90	70-130	5	20	
1,2,3-Trichloropropane	9.1	1.0	ug/L	10.00		91	70-130	5	20	
1,2,4-Trichlorobenzene	8.7	1.0	ug/L	10.00		87	70-130	0.1	20	
1,2,4-Trimethylbenzene	9.2	1.0	ug/L	10.00		92	70-130	1	20	
1,2-Dibromo-3-Chloropropane	9.0	5.0	ug/L	10.00		90	70-130	7	20	
1,2-Dibromoethane	9.1	1.0	ug/L	10.00		91	70-130	2	20	
1,2-Dichlorobenzene	9.2	1.0	ug/L	10.00		92	70-130	0.8	20	
1,2-Dichloroethane	9.3	1.0	ug/L	10.00		93	70-130	2	20	
1,2-Dichloropropane	9.2	1.0	ug/L	10.00		92	70-130	2	20	
1,3,5-Trimethylbenzene	10.5	1.0	ug/L	10.00		105	70-130	3	20	
1,3-Dichlorobenzene	9.7	1.0	ug/L	10.00		97	70-130	2	20	
1,3-Dichloropropane	9.5	1.0	ug/L	10.00		95	70-130	2	20	
1,4-Dichlorobenzene	9.1	1.0	ug/L	10.00		91	70-130	3	20	
2,2-Dichloropropane	10.7	1.0	ug/L	10.00		107	70-130	2	20	
2-Butanone	48.6	10.0	ug/L	50.00		97	70-130	6	20	
2-Chloroethyl vinyl ether	62.7	10.0	ug/L	50.00		125	70-130	4	25	
2-Chlorotoluene	9.7	1.0	ug/L	10.00		97	70-130	0.1	20	
2-Hexanone	45.6	10.0	ug/L	50.00		91	70-130	5	20	
4-Chlorotoluene	9.7	1.0	ug/L	10.00		97	70-130	1	20	
4-Isopropyltoluene	9.8	1.0	ug/L	10.00		98	70-130	0.5	20	
4-Methyl-2-Pentanone	48.4	10.0	ug/L	50.00		97	70-130	4	20	
Acetone	45.1	10.0	ug/L	50.00		90	70-130	8	20	
Acrolein	8.9	5.0	ug/L	10.00		89	60-140	3	25	
Acrylonitrile	10.1	5.0	ug/L	10.00		101	70-130	6	25	
Benzene	9.4	1.0	ug/L	10.00		94	70-130	1	20	

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CH92723 - 5030B										
Bromobenzene	9.3	2.0	ug/L	10.00		93	70-130	0.2	20	
Bromochloromethane	9.2	1.0	ug/L	10.00		92	70-130	3	20	
Bromodichloromethane	9.2	0.6	ug/L	10.00		92	70-130	4	20	
Bromoform	7.8	1.0	ug/L	10.00		78	70-130	3	20	
Bromomethane	12.8	2.0	ug/L	10.00		128	70-130	10	20	
Carbon Disulfide	9.1	1.0	ug/L	10.00		91	70-130	3	20	
Carbon Tetrachloride	9.8	1.0	ug/L	10.00		98	70-130	2	20	
Chlorobenzene	9.0	1.0	ug/L	10.00		90	70-130	1	20	
Chloroethane	8.5	2.0	ug/L	10.00		85	70-130	3	20	
Chloroform	9.5	1.0	ug/L	10.00		95	70-130	2	20	
Chloromethane	10.3	2.0	ug/L	10.00		103	70-130	5	20	
cis-1,2-Dichloroethene	9.5	1.0	ug/L	10.00		95	70-130	0.4	20	
cis-1,3-Dichloropropene	9.6	0.4	ug/L	10.00		96	70-130	4	20	
Dibromochloromethane	8.7	1.0	ug/L	10.00		87	70-130	5	20	
Dibromomethane	9.3	1.0	ug/L	10.00		93	70-130	4	20	
Dichlorodifluoromethane	7.6	2.0	ug/L	10.00		76	70-130	7	20	
Ethylbenzene	9.2	1.0	ug/L	10.00		92	70-130	1	20	
Hexachlorobutadiene	10.0	0.6	ug/L	10.00		100	70-130	2	20	
Isopropylbenzene	9.7	1.0	ug/L	10.00		97	70-130	0.8	20	
Methyl tert-Butyl Ether	9.7	1.0	ug/L	10.00		97	70-130	3	20	
Methylene Chloride	10.4	2.0	ug/L	10.00		104	70-130	2	20	
Naphthalene	9.1	1.0	ug/L	10.00		91	70-130	7	20	
n-Butylbenzene	9.0	1.0	ug/L	10.00		90	70-130	1	20	
n-Propylbenzene	9.7	1.0	ug/L	10.00		97	70-130	0.1	20	
sec-Butylbenzene	9.9	1.0	ug/L	10.00		99	70-130	0.6	20	
Styrene	7.9	1.0	ug/L	10.00		79	70-130	0.1	20	
tert-Butylbenzene	9.6	1.0	ug/L	10.00		96	70-130	0.5	20	
Tetrachloroethene	7.7	1.0	ug/L	10.00		77	70-130	0.5	20	
Toluene	9.2	1.0	ug/L	10.00		92	70-130	0.3	20	
trans-1,2-Dichloroethene	9.7	1.0	ug/L	10.00		97	70-130	0.7	20	
trans-1,3-Dichloropropene	7.9	0.4	ug/L	10.00		79	70-130	0.8	20	
Trichloroethene	8.6	1.0	ug/L	10.00		86	70-130	5	20	
Trichlorofluoromethane	9.4	1.0	ug/L	10.00		94	70-130	3	20	
Vinyl Acetate	8.8	5.0	ug/L	10.00		88	70-130	2	25	
Vinyl Chloride	8.1	1.0	ug/L	10.00		81	70-130	5	20	
Xylene O	8.6	1.0	ug/L	10.00		86	70-130	0.5	20	
Xylene P,M	17.1	2.0	ug/L	20.00		85	70-130	0.1	20	
Surrogate: 1,2-Dichloroethane-d4	*24.9*		ug/L	*25.00*		*100*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*24.9*		ug/L	*25.00*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*25.7*		ug/L	*25.00*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*25.7*		ug/L	*25.00*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*25.2*		ug/L	*25.00*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*25.2*		ug/L	*25.00*		*101*	*70-130*			
Surrogate: Toluene-d8	*24.1*		ug/L	*25.00*		*96*	*70-130*			
Surrogate: Toluene-d8	*24.1*		ug/L	*25.00*		*96*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CH92708 - 3520C										
Blank										
1,2,4-Trichlorobenzene	ND	10.0	ug/L							
1,2-Dichlorobenzene	ND	10.0	ug/L							
1,3-Dichlorobenzene	ND	10.0	ug/L							
1,4-Dichlorobenzene	ND	10.0	ug/L							
2,4,5-Trichlorophenol	ND	10.0	ug/L							
2,4,6-Trichlorophenol	ND	10.0	ug/L							
2,4-Dichlorophenol	ND	10.0	ug/L							
2,4-Dimethylphenol	ND	50.0	ug/L							
2,4-Dinitrophenol	ND	50.0	ug/L							
2,4-Dinitrotoluene	ND	10.0	ug/L							
2,6-Dinitrotoluene	ND	10.0	ug/L							
2-Chloronaphthalene	ND	10.0	ug/L							
2-Chlorophenol	ND	10.0	ug/L							
2-Methylphenol	ND	10.0	ug/L							
2-Nitroaniline	ND	10.0	ug/L							
2-Nitrophenol	ND	10.0	ug/L							
3,3´-Dichlorobenzidine	ND	20.0	ug/L							
3+4-Methylphenol	ND	20.0	ug/L							
3-Nitroaniline	ND	10.0	ug/L							
4,6-Dinitro-2-Methylphenol	ND	50.0	ug/L							
4-Bromophenyl-phenylether	ND	10.0	ug/L							
4-Chloro-3-Methylphenol	ND	10.0	ug/L							
4-Chloroaniline	ND	20.0	ug/L							
4-Nitroaniline	ND	10.0	ug/L							
4-Nitrophenol	ND	50.0	ug/L							
Acenaphthene	ND	10.0	ug/L							
Acenaphthylene	ND	10.0	ug/L							
Acetophenone	ND	10.0	ug/L							
Aniline	ND	10.0	ug/L							
Anthracene	ND	10.0	ug/L							
Azobenzene	ND	20.0	ug/L							
Benzidine	ND	50.0	ug/L							
Benzo(g,h,i)perylene	ND	10.0	ug/L							
Benzoic Acid	ND	100	ug/L							
Benzyl Alcohol	ND	10.0	ug/L							
bis(2-Chloroethoxy)methane	ND	10.0	ug/L							
bis(2-Chloroethyl)ether	ND	10.0	ug/L							
bis(2-chloroisopropyl)Ether	ND	10.0	ug/L							
bis(2-Ethylhexyl)phthalate	ND	6.0	ug/L							
Butylbenzylphthalate	ND	10.0	ug/L							
Carbazole	ND	10.0	ug/L							
Dibenzofuran	ND	10.0	ug/L							
Diethylphthalate	ND	10.0	ug/L							
Dimethylphthalate	ND	10.0	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CH92708 - 3520C										
Di-n-butylphthalate	ND	10.0	ug/L							
Di-n-octylphthalate	ND	10.0	ug/L							
Fluoranthene	ND	10.0	ug/L							
Fluorene	ND	10.0	ug/L							
Hexachlorobutadiene	ND	10.0	ug/L							
Hexachlorocyclopentadiene	ND	25.0	ug/L							
Hexachloroethane	ND	5.0	ug/L							
Isophorone	ND	10.0	ug/L							
Naphthalene	ND	10.0	ug/L							
Nitrobenzene	ND	10.0	ug/L							
N-Nitrosodimethylamine	ND	10.0	ug/L							
N-Nitroso-Di-n-Propylamine	ND	10.0	ug/L							
N-nitrosodiphenylamine	ND	10.0	ug/L							
Phenanthrene	ND	10.0	ug/L							
Phenol	ND	10.0	ug/L							
Pyrene	ND	10.0	ug/L							
Pyridine	ND	100	ug/L							
Surrogate: 1,2-Dichlorobenzene-d4	*65.6*		ug/L	*100.0*		*66*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*114*		ug/L	*150.0*		*76*	*15-110*			
Surrogate: 2-Chlorophenol-d4	*95.4*		ug/L	*150.0*		*64*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*73.0*		ug/L	*100.0*		*73*	*30-130*			
Surrogate: 2-Fluorophenol	*75.9*		ug/L	*150.0*		*51*	*15-110*			
Surrogate: Nitrobenzene-d5	*68.4*		ug/L	*100.0*		*68*	*30-130*			
Surrogate: Phenol-d6	*90.3*		ug/L	*150.0*		*60*	*15-110*			
Surrogate: p-Terphenyl-d14	*82.7*		ug/L	*100.0*		*83*	*30-130*			
LCS										
1,2,4-Trichlorobenzene	88.9	10.0	ug/L	100.0		89	40-140			
1,2-Dichlorobenzene	72.3	10.0	ug/L	100.0		72	40-140			
1,3-Dichlorobenzene	64.9	10.0	ug/L	100.0		65	40-140			
1,4-Dichlorobenzene	71.4	10.0	ug/L	100.0		71	40-140			
2,4,5-Trichlorophenol	98.5	10.0	ug/L	100.0		98	30-130			
2,4,6-Trichlorophenol	93.1	10.0	ug/L	100.0		93	30-130			
2,4-Dichlorophenol	88.7	10.0	ug/L	100.0		89	30-130			
2,4-Dimethylphenol	75.5	50.0	ug/L	100.0		76	30-130			
2,4-Dinitrophenol	99.4	50.0	ug/L	100.0		99	30-130			
2,4-Dinitrotoluene	106	10.0	ug/L	100.0		106	40-140			
2,6-Dinitrotoluene	94.1	10.0	ug/L	100.0		94	40-140			
2-Chloronaphthalene	83.2	10.0	ug/L	100.0		83	40-140			
2-Chlorophenol	69.7	10.0	ug/L	100.0		70	30-130			
2-Methylphenol	70.9	10.0	ug/L	100.0		71	30-130			
2-Nitroaniline	72.5	10.0	ug/L	100.0		73	40-140			
2-Nitrophenol	80.8	10.0	ug/L	100.0		81	30-130			
3,3´-Dichlorobenzidine	95.4	20.0	ug/L	100.0		95	40-140			
3+4-Methylphenol	150	20.0	ug/L	200.0		75	30-130			
3-Nitroaniline	87.7	10.0	ug/L	100.0		88	40-140			

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CH92708 - 3520C										
4,6-Dinitro-2-Methylphenol	109	50.0	ug/L	100.0		109	30-130			
4-Bromophenyl-phenylether	103	10.0	ug/L	100.0		103	40-140			
4-Chloro-3-Methylphenol	87.8	10.0	ug/L	100.0		88	30-130			
4-Chloroaniline	68.3	20.0	ug/L	100.0		68	40-140			
4-Nitroaniline	84.3	10.0	ug/L	100.0		84	40-140			
4-Nitrophenol	72.2	50.0	ug/L	100.0		72	30-130			
Acenaphthene	84.6	10.0	ug/L	100.0		85	40-140			
Acenaphthylene	77.0	10.0	ug/L	100.0		77	40-140			
Acetophenone	66.2	10.0	ug/L	100.0		66	40-140			
Aniline	54.5	10.0	ug/L	100.0		54	40-140			
Anthracene	92.5	10.0	ug/L	100.0		93	40-140			
Azobenzene	79.4	20.0	ug/L	100.0		79	40-140			
Benzidine	52.7	50.0	ug/L	100.0		53	40-140			
Benzo(g,h,i)perylene	108	10.0	ug/L	100.0		108	40-140			
Benzoic Acid	59.0	100	ug/L	100.0		59	40-140			
Benzyl Alcohol	73.1	10.0	ug/L	100.0		73	40-140			
bis(2-Chloroethoxy)methane	75.4	10.0	ug/L	100.0		75	40-140			
bis(2-Chloroethyl)ether	77.1	10.0	ug/L	100.0		77	40-140			
bis(2-chloroisopropyl)Ether	71.2	10.0	ug/L	100.0		71	40-140			
bis(2-Ethylhexyl)phthalate	100	6.0	ug/L	100.0		100	40-140			
Butylbenzylphthalate	93.1	10.0	ug/L	100.0		93	40-140			
Carbazole	93.9	10.0	ug/L	100.0		94	40-140			
Dibenzofuran	88.2	10.0	ug/L	100.0		88	40-140			
Diethylphthalate	101	10.0	ug/L	100.0		101	40-140			
Dimethylphthalate	103	10.0	ug/L	100.0		103	40-140			
Di-n-butylphthalate	104	10.0	ug/L	100.0		104	40-140			
Di-n-octylphthalate	99.3	10.0	ug/L	100.0		99	40-140			
Fluoranthene	102	10.0	ug/L	100.0		102	40-140			
Fluorene	91.2	10.0	ug/L	100.0		91	40-140			
Hexachlorobutadiene	85.5	10.0	ug/L	100.0		86	40-140			
Hexachlorocyclopentadiene	57.8	25.0	ug/L	100.0		58	40-140			
Hexachloroethane	62.6	5.0	ug/L	100.0		63	40-140			
Isophorone	64.9	10.0	ug/L	100.0		65	40-140			
Naphthalene	80.6	10.0	ug/L	100.0		81	40-140			
Nitrobenzene	76.5	10.0	ug/L	100.0		77	40-140			
N-Nitrosodimethylamine	58.2	10.0	ug/L	100.0		58	40-140			
N-Nitroso-Di-n-Propylamine	68.1	10.0	ug/L	100.0		68	40-140			
N-nitrosodiphenylamine	92.5	10.0	ug/L	100.0		93	40-140			
Phenanthrene	90.4	10.0	ug/L	100.0		90	40-140			
Phenol	76.2	10.0	ug/L	100.0		76	30-130			
Pyrene	96.3	10.0	ug/L	100.0		96	40-140			
Pyridine	56.3	100	ug/L	100.0		56	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*73.3*		ug/L	*100.0*		*73*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*143*		ug/L	*150.0*		*95*	*15-110*			
Surrogate: 2-Chlorophenol-d4	*105*		ug/L	*150.0*		*70*	*15-110*			

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CH92708 - 3520C										
Surrogate: 2-Fluorobiphenyl	*86.3*		ug/L	*100.0*		*86*	*30-130*			
Surrogate: 2-Fluorophenol	*87.4*		ug/L	*150.0*		*58*	*15-110*			
Surrogate: Nitrobenzene-d5	*78.1*		ug/L	*100.0*		*78*	*30-130*			
Surrogate: Phenol-d6	*102*		ug/L	*150.0*		*68*	*15-110*			
Surrogate: p-Terphenyl-d14	*94.0*		ug/L	*100.0*		*94*	*30-130*			
LCS Dup										
1,2,4-Trichlorobenzene	95.5	10.0	ug/L	100.0		96	40-140	7	20	
1,2-Dichlorobenzene	74.9	10.0	ug/L	100.0		75	40-140	3	20	
1,3-Dichlorobenzene	68.2	10.0	ug/L	100.0		68	40-140	5	20	
1,4-Dichlorobenzene	72.1	10.0	ug/L	100.0		72	40-140	0.9	20	
2,4,5-Trichlorophenol	114	10.0	ug/L	100.0		114	30-130	14	20	
2,4,6-Trichlorophenol	105	10.0	ug/L	100.0		105	30-130	12	20	
2,4-Dichlorophenol	101	10.0	ug/L	100.0		101	30-130	13	20	
2,4-Dimethylphenol	85.2	50.0	ug/L	100.0		85	30-130	12	20	
2,4-Dinitrophenol	108	50.0	ug/L	100.0		108	30-130	9	20	
2,4-Dinitrotoluene	114	10.0	ug/L	100.0		114	40-140	7	20	
2,6-Dinitrotoluene	101	10.0	ug/L	100.0		101	40-140	7	20	
2-Chloronaphthalene	95.4	10.0	ug/L	100.0		95	40-140	14	20	
2-Chlorophenol	74.0	10.0	ug/L	100.0		74	30-130	6	20	
2-Methylphenol	74.3	10.0	ug/L	100.0		74	30-130	5	20	
2-Nitroaniline	73.3	10.0	ug/L	100.0		73	40-140	1	20	
2-Nitrophenol	94.5	10.0	ug/L	100.0		94	30-130	16	20	
3,3´-Dichlorobenzidine	98.2	20.0	ug/L	100.0		98	40-140	3	20	
3+4-Methylphenol	164	20.0	ug/L	200.0		82	30-130	9	20	
3-Nitroaniline	88.9	10.0	ug/L	100.0		89	40-140	1	20	
4,6-Dinitro-2-Methylphenol	109	50.0	ug/L	100.0		109	30-130	0.05	20	
4-Bromophenyl-phenylether	107	10.0	ug/L	100.0		107	40-140	4	20	
4-Chloro-3-Methylphenol	95.6	10.0	ug/L	100.0		96	30-130	9	20	
4-Chloroaniline	73.7	20.0	ug/L	100.0		74	40-140	8	20	
4-Nitroaniline	86.4	10.0	ug/L	100.0		86	40-140	3	20	
4-Nitrophenol	66.9	50.0	ug/L	100.0		67	30-130	8	20	
Acenaphthene	91.4	10.0	ug/L	100.0		91	40-140	8	20	
Acenaphthylene	83.4	10.0	ug/L	100.0		83	40-140	8	20	
Acetophenone	69.0	10.0	ug/L	100.0		69	40-140	4	20	
Aniline	53.4	10.0	ug/L	100.0		53	40-140	2	20	
Anthracene	94.8	10.0	ug/L	100.0		95	40-140	2	20	
Azobenzene	78.7	20.0	ug/L	100.0		79	40-140	0.9	20	
Benzidine	44.4	50.0	ug/L	100.0		44	40-140	17	20	
Benzo(g,h,i)perylene	117	10.0	ug/L	100.0		117	40-140	8	20	
Benzoic Acid	69.5	100	ug/L	100.0		70	40-140	16	20	
Benzyl Alcohol	78.5	10.0	ug/L	100.0		79	40-140	7	20	
bis(2-Chloroethoxy)methane	84.3	10.0	ug/L	100.0		84	40-140	11	20	
bis(2-Chloroethyl)ether	70.5	10.0	ug/L	100.0		71	40-140	9	20	
bis(2-chloroisopropyl)Ether	72.4	10.0	ug/L	100.0		72	40-140	2	20	
bis(2-Ethylhexyl)phthalate	108	6.0	ug/L	100.0		108	40-140	7	20	

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CH92708 - 3520C										
Butylbenzylphthalate	104	10.0	ug/L	100.0		104	40-140	11	20	
Carbazole	96.1	10.0	ug/L	100.0		96	40-140	2	20	
Dibenzofuran	94.4	10.0	ug/L	100.0		94	40-140	7	20	
Diethylphthalate	106	10.0	ug/L	100.0		106	40-140	4	20	
Dimethylphthalate	114	10.0	ug/L	100.0		114	40-140	11	20	
Di-n-butylphthalate	108	10.0	ug/L	100.0		108	40-140	4	20	
Di-n-octylphthalate	96.2	10.0	ug/L	100.0		96	40-140	3	20	
Fluoranthene	100	10.0	ug/L	100.0		100	40-140	2	20	
Fluorene	101	10.0	ug/L	100.0		101	40-140	10	20	
Hexachlorobutadiene	92.2	10.0	ug/L	100.0		92	40-140	7	20	
Hexachlorocyclopentadiene	66.0	25.0	ug/L	100.0		66	40-140	13	20	
Hexachloroethane	68.7	5.0	ug/L	100.0		69	40-140	9	20	
Isophorone	75.0	10.0	ug/L	100.0		75	40-140	14	20	
Naphthalene	86.8	10.0	ug/L	100.0		87	40-140	7	20	
Nitrobenzene	87.0	10.0	ug/L	100.0		87	40-140	13	20	
N-Nitrosodimethylamine	59.0	10.0	ug/L	100.0		59	40-140	2	20	
N-Nitroso-Di-n-Propylamine	78.7	10.0	ug/L	100.0		79	40-140	15	20	
N-nitrosodiphenylamine	93.4	10.0	ug/L	100.0		93	40-140	0.9	20	
Phenanthrene	92.1	10.0	ug/L	100.0		92	40-140	2	20	
Phenol	80.6	10.0	ug/L	100.0		81	30-130	6	20	
Pyrene	96.8	10.0	ug/L	100.0		97	40-140	0.5	20	
Pyridine	53.7	100	ug/L	100.0		54	40-140	5	20	
Surrogate: 1,2-Dichlorobenzene-d4	*72.2*		ug/L	*100.0*		*72*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*135*		ug/L	*150.0*		*90*	*15-110*			
Surrogate: 2-Chlorophenol-d4	*109*		ug/L	*150.0*		*72*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*95.8*		ug/L	*100.0*		*96*	*30-130*			
Surrogate: 2-Fluorophenol	*95.4*		ug/L	*150.0*		*64*	*15-110*			
Surrogate: Nitrobenzene-d5	*87.6*		ug/L	*100.0*		*88*	*30-130*			
Surrogate: Phenol-d6	*106*		ug/L	*150.0*		*71*	*15-110*			
Surrogate: p-Terphenyl-d14	*95.8*		ug/L	*100.0*		*96*	*30-130*			
8270D(SIM) Semi-Volatile Organic Compounds										
Batch CH92708 - 3520C										
Blank										
2-Methylnaphthalene	ND	0.20	ug/L							
Benzo(a)anthracene	ND	0.05	ug/L							
Benzo(a)pyrene	ND	0.05	ug/L							
Benzo(b)fluoranthene	ND	0.05	ug/L							
Benzo(k)fluoranthene	ND	0.05	ug/L							
Chrysene	ND	0.05	ug/L							
Dibenzo(a,h)Anthracene	ND	0.05	ug/L							
Hexachlorobenzene	ND	0.20	ug/L							
Indeno(1,2,3-cd)Pyrene	ND	0.05	ug/L							
Pentachlorophenol	ND	0.90	ug/L							
Surrogate: 1,2-Dichlorobenzene-d4	*42.5*		ug/L	*100.0*		*42*	*30-130*			

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D(SIM) Semi-Volatile Organic Compounds										
Batch CH92708 - 3520C										
Surrogate: 2,4,6-Tribromophenol	*65.2*		ug/L	*150.0*		*43*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*46.6*		ug/L	*100.0*		*47*	*30-130*			
Surrogate: Nitrobenzene-d5	*74.7*		ug/L	*100.0*		*75*	*30-130*			
Surrogate: p-Terphenyl-d14	*48.6*		ug/L	*100.0*		*49*	*30-130*			
LCS										
2-Methylnaphthalene	71.3	4.00	ug/L	100.0		71	40-140			
Benzo(a)anthracene	79.7	1.00	ug/L	100.0		80	40-140			
Benzo(a)pyrene	78.2	1.00	ug/L	100.0		78	40-140			
Benzo(b)fluoranthene	85.6	1.00	ug/L	100.0		86	40-140			
Benzo(k)fluoranthene	76.7	1.00	ug/L	100.0		77	40-140			
Chrysene	82.5	1.00	ug/L	100.0		83	40-140			
Dibenzo(a,h)Anthracene	87.4	1.00	ug/L	100.0		87	40-140			
Hexachlorobenzene	105	4.00	ug/L	100.0		105	40-140			
Indeno(1,2,3-cd)Pyrene	88.4	1.00	ug/L	100.0		88	40-140			
Pentachlorophenol	63.4	18.0	ug/L	100.0		63	30-130			
Surrogate: 1,2-Dichlorobenzene-d4	*65.4*		ug/L	*100.0*		*65*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*170*		ug/L	*150.0*		*113*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*72.9*		ug/L	*100.0*		*73*	*30-130*			
Surrogate: Nitrobenzene-d5	*90.4*		ug/L	*100.0*		*90*	*30-130*			
Surrogate: p-Terphenyl-d14	*85.4*		ug/L	*100.0*		*85*	*30-130*			
LCS Dup										
2-Methylnaphthalene	72.4	4.00	ug/L	100.0		72	40-140	2	20	
Benzo(a)anthracene	89.1	1.00	ug/L	100.0		89	40-140	11	20	
Benzo(a)pyrene	86.3	1.00	ug/L	100.0		86	40-140	10	20	
Benzo(b)fluoranthene	99.6	1.00	ug/L	100.0		100	40-140	15	20	
Benzo(k)fluoranthene	80.2	1.00	ug/L	100.0		80	40-140	4	20	
Chrysene	90.1	1.00	ug/L	100.0		90	40-140	9	20	
Dibenzo(a,h)Anthracene	94.9	1.00	ug/L	100.0		95	40-140	8	20	
Hexachlorobenzene	113	4.00	ug/L	100.0		113	40-140	8	20	
Indeno(1,2,3-cd)Pyrene	98.1	1.00	ug/L	100.0		98	40-140	10	20	
Pentachlorophenol	72.7	18.0	ug/L	100.0		73	30-130	14	20	
Surrogate: 1,2-Dichlorobenzene-d4	*70.1*		ug/L	*100.0*		*70*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*174*		ug/L	*150.0*		*116*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*82.3*		ug/L	*100.0*		*82*	*30-130*			
Surrogate: Nitrobenzene-d5	*103*		ug/L	*100.0*		*103*	*30-130*			
Surrogate: p-Terphenyl-d14	*92.5*		ug/L	*100.0*		*93*	*30-130*			

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly ESS Laboratory Work Order: 19H0809

Notes and Definitions

U	Analyte included in the analysis, but not detected
SM	Surrogate recovery(ies) outside of criteria due to matrix (UCM/coelution/matrix is present) (SM).
Q	Calibration required quadratic regression (Q).
P	Percent difference between primary and confirmation results exceeds 40% (P).
LC	Lower value is used due to matrix interferences (LC).
IM	Internal Standard(s) outside of criteria due to matrix (UCM/coelution is present) (IM).
ICV-	Initial Calibration Verification recovery is below lower control limit (ICV-).
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
B+	Blank Spike recovery is above upper control limit (B+).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA - Quarterly

ESS Laboratory Work Order: 19H0809

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Clean Harbors - MA - KPB/TB/HDM

Shipped/Delivered Via: ESS Courier

ESS Project ID: 19H0809
Date Received: 8/26/2019
Project Due Date: 9/3/2019
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 1.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	381240	Yes	No	Yes	VOA Vial - HCl	HCl	
01	381241	Yes	No	Yes	VOA Vial - HCl	HCl	
01	381242	Yes	No	Yes	VOA Vial - HCl	HCl	
01	381271	Yes	NA	Yes	1L Amber - Unpres	NP	
01	381272	Yes	NA	Yes	1L Amber - Unpres	NP	
01	381273	Yes	NA	Yes	1L Amber - Unpres	NP	
01	381274	Yes	NA	Yes	1L Amber - Unpres	NP	
01	381282	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
02	381237	Yes	No	Yes	VOA Vial - HCl	HCl	
02	381238	Yes	No	Yes	VOA Vial - HCl	HCl	
02	381239	Yes	No	Yes	VOA Vial - HCl	HCl	
02	381267	Yes	NA	Yes	1L Amber - Unpres	NP	
02	381268	Yes	NA	Yes	1L Amber - Unpres	NP	
02	381269	Yes	NA	Yes	1L Amber - Unpres	NP	
02	381270	Yes	NA	Yes	1L Amber - Unpres	NP	
02	381281	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
03	381234	Yes	No	Yes	VOA Vial - HCl	HCl	
03	381235	Yes	No	Yes	VOA Vial - HCl	HCl	
03	381236	Yes	No	Yes	VOA Vial - HCl	HCl	
03	381263	Yes	NA	Yes	1L Amber - Unpres	NP	
03	381264	Yes	NA	Yes	1L Amber - Unpres	NP	
03	381265	Yes	NA	Yes	1L Amber - Unpres	NP	
03	381266	Yes	NA	Yes	1L Amber - Unpres	NP	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Clean Harbors - MA - KPB/TB/HDM

ESS Project ID: 19H0809

Date Received: 8/26/2019

03	381280	Yes	NA	Yes	250 mL Poly - HNO3	HNO3
04	381231	Yes	No	Yes	VOA Vial - HCl	HCl
04	381232	Yes	No	Yes	VOA Vial - HCl	HCl
04	381233	Yes	No	Yes	VOA Vial - HCl	HCl
04	381259	Yes	NA	Yes	1L Amber - Unpres	NP
04	381260	Yes	NA	Yes	1L Amber - Unpres	NP
04	381261	Yes	NA	Yes	1L Amber - Unpres	NP
04	381262	Yes	NA	Yes	1L Amber - Unpres	NP
04	381279	Yes	NA	Yes	250 mL Poly - HNO3	HNO3
05	381228	Yes	No	Yes	VOA Vial - HCl	HCl
05	381229	Yes	No	Yes	VOA Vial - HCl	HCl
05	381230	Yes	No	Yes	VOA Vial - HCl	HCl
05	381255	Yes	NA	Yes	1L Amber - Unpres	NP
05	381256	Yes	NA	Yes	1L Amber - Unpres	NP
05	381257	Yes	NA	Yes	1L Amber - Unpres	NP
05	381258	Yes	NA	Yes	1L Amber - Unpres	NP
05	381278	Yes	NA	Yes	250 mL Poly - HNO3	HNO3
06	381225	Yes	No	Yes	VOA Vial - HCl	HCl
06	381226	Yes	No	Yes	VOA Vial - HCl	HCl
06	381227	Yes	No	Yes	VOA Vial - HCl	HCl
06	381251	Yes	NA	Yes	1L Amber - Unpres	NP
06	381252	Yes	NA	Yes	1L Amber - Unpres	NP
06	381253	Yes	NA	Yes	1L Amber - Unpres	NP
06	381254	Yes	NA	Yes	1L Amber - Unpres	NP
06	381277	Yes	NA	Yes	250 mL Poly - HNO3	HNO3
07	381222	Yes	No	Yes	VOA Vial - HCl	HCl
07	381223	Yes	No	Yes	VOA Vial - HCl	HCl
07	381224	Yes	No	Yes	VOA Vial - HCl	HCl
07	381247	Yes	NA	Yes	1L Amber - Unpres	NP
07	381248	Yes	NA	Yes	1L Amber - Unpres	NP
07	381249	Yes	NA	Yes	1L Amber - Unpres	NP
07	381250	Yes	NA	Yes	1L Amber - Unpres	NP
07	381276	Yes	NA	Yes	250 mL Poly - HNO3	HNO3
08	381219	Yes	No	Yes	VOA Vial - HCl	HCl
08	381220	Yes	No	Yes	VOA Vial - HCl	HCl
08	381221	Yes	No	Yes	VOA Vial - HCl	HCl
08	381243	Yes	NA	Yes	1L Amber - Unpres	NP
08	381244	Yes	NA	Yes	1L Amber - Unpres	NP
08	381245	Yes	NA	Yes	1L Amber - Unpres	NP
08	381246	Yes	NA	Yes	1L Amber - Unpres	NP
08	381275	Yes	NA	Yes	250 mL Poly - HNO3	HNO3
09	381216	Yes	No	Yes	VOA Vial - HCl	HCl

2nd Review

Were all containers scanned into storage/lab? Initials _____ Yes / No

Are barcode labels on correct containers? Yes / No

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: _____ Date & Time: 8/26/19 2044

Reviewed By: _____ Date & Time: 8/26/19 2102

Delivered By: _____ 8/26/19 2102

CHAIN OF CUSTODY
ESS Lab
Quarterly

19H0809

Client:	Clean Harbors	Phone Number:	781-247-3966
Address:	42 Longwater Drive Norwell, MA 02061	Fax Number:	781-871-0690
Contact:	John Talley	e-mail:	talley.johnd@cleanharbors.com
		Data Delivery:	email: irwin.lisa@cleanharbors.com
Project:	Baird & McGuire GWTF	Comments:	**CAM Compliant GW-1**
Project: P.O.:	EO8683573		**Please double check RL for Pentachlorophenol, Hexachlorobenzene and Hexachlorobutadiene**

REQUIRED REPORT DATE_____ SAMPLE TEAM MEMBER John Talley REFERENCE DOCUMENT NO._____

	SAMPLE ID/TYPE	DATE/TIME COLLECTED	CONTAINER TYPE	SAMPLE VOLUME	PRESERVATIVE	REQUESTED TESTING PROGRAM
1	EW 3 WATER	8/22/19 / 1020	GLASS VIALS	3 X 40 mL	4 C / HCL pH<2	HSL VOLATILES BY METHOD 8260C
1	EW 3 WATER	8/22/19 / 1020	AMBER GLASS	2 X 1 LITER	4 C	HSL SEMIVOLATILES BY METHOD 8270D
1	EW 3 WATER	8/22/19 / 1020	AMBER GLASS	2 X 1 LITER	4 C	HSL PESTICIDES BY METHOD 8081B
1	EW 3 WATER	8/22/19 / 1020	POLY	250 mL	4 C / HNO3 pH<2	ARSENIC ONLY METHOD 6010C
2	EW 4A WATER	8/22/19* ~~8/21/19~~ / 1040	GLASS VIALS	3 X 40 mL	4 C / HCL pH<2	HSL VOLATILES BY METHOD 8260C
2	EW 4A WATER	8/22/19 / 1040	AMBER GLASS	2 X 1 LITER	4 C	HSL SEMIVOLATILES BY METHOD 8270D
2	EW 4A WATER	8/22/19 / 1040	AMBER GLASS	2 X 1 LITER	4 C	HSL PESTICIDES BY METHOD 8081B
2	EW 4A WATER	8/22/19 / 1040	POLY	250 mL	4 C / HNO3 pH<2	ARSENIC ONLY METHOD 6010C
3	EW 6A WATER	8/22/19 / 1100	GLASS VIALS	3 X 40 mL	4 C / HCL pH<2	HSL VOLATILES BY METHOD 8260C
3	EW 6A WATER	8/22/19 / 1100	AMBER GLASS	2 X 1 LITER	4 C	HSL SEMIVOLATILES BY METHOD 8270D
3	EW 6A WATER	8/22/19 / 1100	AMBER GLASS	2 X 1 LITER	4 C	HSL PESTICIDES BY METHOD 8081B
3	EW 6A WATER	8/22/19 / 1100	POLY	250 mL	4 C / HNO3 pH<2	ARSENIC ONLY METHOD 6010C

*sample date confirmed by client 8/28/19 LLB

SPECIAL INSTRUCTIONS:

PROJECT SPECIFIC : PERFORM AS INDICATED

SAMPLE DISPOSAL : DISPOSAL BY LAB X

TURNAROUND TIME : 5 / 7 DAYS FROM SAMPLE RECEIPT

1. RELINQUISHED BY : John Talley	DATE 8/22/19 TIME 1500	1. RECEIVED BY : secure on-site fridge	DATE 8/22/19 TIME 1500
2. RELINQUISHED BY : Monique Bergeron	DATE 8-26-19 TIME 1310	2. RECEIVED BY : RC	DATE 8/26/19 TIME 1310
4. RELINQUISHED BY : RC	DATE 8/26/19 TIME 1737	4. RECEIVED BY :	DATE 8/26/19 TIME 1737

1.1 + 0.8 + 0.5 ICE RC

CHAIN OF CUSTODY
ESS Lab
Quarterly

19H0809

Client:	Clean Harbors	Phone Number:	781-247-3966
Address:	42 Longwater Drive Norwell, MA 02061	Fax Number:	781-871-0690
Contact:	John Talley	e-mail:	talley.johnd@cleanharbors.com
		Data Delivery:	email: irwin.lisa@cleanharbors.com
Project:	Baird & McGuire GWTF	Comments:	**CAM Compliant GW-1**
Project: P.O.:	EO8683573		**Please double check RL for Pentachlorophenol, Hexachlorobenzene and Hexachlorobutadiene**

REQUIRED REPORT DATE_____ SAMPLE TEAM MEMBER John Talley REFERENCE DOCUMENT NO._____

	SAMPLE ID/TYPE	DATE/TIME COLLECTED	CONTAINER TYPE	SAMPLE VOLUME	PRESERVATIVE	REQUESTED TESTING PROGRAM
4	EW 7 WATER	8/22/19 / 1120	GLASS VIALS	3 X 40 mL	4 C / HCL pH<2	HSL VOLATILES BY METHOD 8260C
4	EW 7 WATER	8/22/19 / 1120	AMBER GLASS	2 X 1 LITER	4 C	HSL SEMIVOLATILES BY METHOD 8270D
4	EW 7 WATER	8/22/19 / 1120	AMBER GLASS	2 X 1 LITER	4 C	HSL PESTICIDES BY METHOD 8081B
4	EW 7 WATER	8/22/19 / 1120	POLY	250 mL	4 C / HNO3 pH<2	ARSENIC ONLY METHOD 6010C
5	EW 8 WATER	8/22/19 / 1140	GLASS VIALS	3 X 40 mL	4 C / HCL pH<2	HSL VOLATILES BY METHOD 8260C
5	EW 8 WATER	8/22/19 / 1140	AMBER GLASS	2 X 1 LITER	4 C	HSL SEMIVOLATILES BY METHOD 8270D
5	EW 8 WATER	8/22/19 / 1140	AMBER GLASS	2 X 1 LITER	4 C	HSL PESTICIDES BY METHOD 8081B
5	EW 8 WATER	8/22/19 / 1140	POLY	250 mL	4 C / HNO3 pH<2	ARSENIC ONLY METHOD 6010C

SPECIAL INSTRUCTIONS:

PROJECT SPECIFIC : PERFORM AS INDICATED

SAMPLE DISPOSAL : DISPOSAL BY LAB X

TURNAROUND TIME : 5 / 7 DAYS FROM SAMPLE RECEIPT

1. RELINQUISHED BY : John Talley	DATE 8/22/19 TIME 1500	1. RECEIVED BY : Secure on-site fridge	DATE 8/22/19 TIME 1500
2. RELINQUISHED BY : Renee Bergeron	DATE 8/26/19 TIME 1310	2. RECEIVED BY : R Salas	DATE 8/26/19 TIME 1310
4. RELINQUISHED BY : R Salas	DATE 8/26/19 TIME 1737	4. RECEIVED BY :	DATE 8/26/19 TIME 2020

1.1 + 0.8 + 0.5 ICE RC

CHAIN OF CUSTODY
ESS Lab
Quarterly

1904809

Client:	Clean Harbors	Phone Number:	781-247-3966
Address:	42 Longwater Drive Norwell, MA 02061	Fax Number:	781-871-0690
		e-mail:	talley.johnd@cleanharbors.com
Contact:	John Talley	Data Delivery:	email: irwin.lisa@cleanharbors.com
Project:	Baird & McGuire GWTF	Comments:	**CAM Compliant GW-1**
Project: P.O.:	EO8683573		**Please double check RL for Pentachlorophenol, Hexachlorobenzene and Hexachlorobutadiene**

REQUIRED REPORT DATE_____ SAMPLE TEAM MEMBER John Talley REFERENCE DOCUMENT NO._____

	SAMPLE ID/TYPE	DATE/TIME COLLECTED	CONTAINER TYPE	SAMPLE VOLUME	PRESERVATIVE	REQUESTED TESTING PROGRAM
6	EW 9 WATER	8/22/19 / 1200	GLASS VIALS	3 X 40 mL	4 C / HCL pH<2	HSL VOLATILES BY METHOD 8260C
6	EW 9 WATER	8/22/19 / 1200	AMBER GLASS	2 X 1 LITER	4 C	HSL SEMIVOLATILES BY METHOD 8270D
6	EW 9 WATER	8/22/19 / 1200	AMBER GLASS	2 X 1 LITER	4 C	HSL PESTICIDES BY METHOD 8081B
6	EW 9 WATER	8/22/19 / 1200	POLY	250 mL	4 C / HNO3 pH<2	ARSENIC ONLY METHOD 6010C
7	FD WATER	8/22/19 / 1200	GLASS VIALS	3 X 40 mL	4 C / HCL pH<2	HSL VOLATILES BY METHOD 8260C
7	FD WATER	8/22/19 / 1200	AMBER GLASS	2 X 1 LITER	4 C	HSL SEMIVOLATILES BY METHOD 8270D
7	FD WATER	8/22/19 / 1200	AMBER GLASS	2 X 1 LITER	4 C	HSL PESTICIDES BY METHOD 8081B
7	FD WATER	8/22/19 / 1200	POLY	250 mL	4 C / HNO3 pH<2	ARSENIC ONLY METHOD 6010C
9	Trip blank	Lab supplied	GLASS VIALS	40 mL	4C/HCL pH<2	HSL VOLATILES BY METHOD 8260C

SPECIAL INSTRUCTIONS:

PROJECT SPECIFIC : PERFORM AS INDICATED

SAMPLE DISPOSAL : DISPOSAL BY LAB ___X___

TURNAROUND TIME : 5 / 7 DAYS FROM SAMPLE RECEIPT

1. RELINQUISHED BY : John Talley	DATE 8/22/19 TIME 1500	1. RECEIVED BY : secure on-site fridge	DATE 8/22/19 TIME 1500
2. RELINQUISHED BY :	DATE 8-26-19 TIME 1310	2. RECEIVED BY :	DATE 8/26/19 TIME 1310
4. RELINQUISHED BY :	DATE 8/26/19 TIME 1737	4. RECEIVED BY :	DATE TIME

1.1+0.8+0.5 ICE 2C

CHAIN OF CUSTODY
ESS Lab
Quarterly

19H0889

Client:	Clean Harbors
Address:	42 Longwater Drive Norwell, MA 02061
Contact:	John Talley
Project:	Baird & McGuire GWTF
Project: P.O.:	EO8683573

Phone Number:	781-247-3966
Fax Number:	781-871-0690
e-mail:	talley.johnd@cleanharbors.com
Data Delivery:	email: irwin.lisa@cleanharbors.com
Comments:	**CAM Compliant GW-1** **Please double check RL for Pentachlorophenol, Hexachlorobenzene and Hexachlorobutadiene**

REQUIRED REPORT DATE_____ SAMPLE TEAM MEMBER John Talley REFERENCE DOCUMENT NO._____

	SAMPLE ID/TYPE	DATE/TIME COLLECTED	CONTAINER TYPE	SAMPLE VOLUME	PRESERVATIVE	REQUESTED TESTING PROGRAM
8	EW 10 WATER	8/22/19 / 1220	GLASS VIALS	3 X 40 mL	4 C / HCL pH<2	HSL VOLATILES BY METHOD 8260C
8	EW 10 WATER	8/22/19 / 1220	AMBER GLASS	2 X 1 LITER	4 C	HSL SEMIVOLATILES BY METHOD 8270D
8	EW 10 WATER	8/22/19 / 1220	AMBER GLASS	2 X 1 LITER	4 C	HSL PESTICIDES BY METHOD 8081B
8	EW 10 WATER	8/22/19 / 1220	POLY	250 mL	4 C / HNO3 pH<2	ARSENIC ONLY METHOD 6010C

SPECIAL INSTRUCTIONS:

PROJECT SPECIFIC : PERFORM AS INDICATED

SAMPLE DISPOSAL : DISPOSAL BY LAB X

TURNAROUND TIME : 5 / 7 DAYS FROM SAMPLE RECEIPT

1. RELINQUISHED BY :	DATE	8/22/19	1. RECEIVED BY : on-site fridge	DATE	8/22/19
	TIME	1500		TIME	1500
2. RELINQUISHED BY : George Bergeron	DATE	8-26-19	2. RECEIVED BY :	DATE	8/26/19
	TIME	1310		TIME	1310
4. RELINQUISHED BY :	DATE	8/26/19	4. RECEIVED BY :	DATE	8/26/19
	TIME	1737		TIME	1739

1.1+0.8+0.5 ICE RC

PFAS Summary December 22, 2018

MassDEP PFAS6	*Sample ID:*	EB (IQK696)	EW-4A	EW-3	EW-6A	EW-7	EW-8	EB (IQK702)	MW97-2
Perfluoroheptanoic Acid (PFHpA)		3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Perfluorohexane Sulfonate (PFHxS)		2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Perfluorononanoic Acid (PFNA)		4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35
Perfluorodecanoic Acid (PFDA)		3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
Perfluoro-n-Octanoic Acid (PFOA)		1.65	5.7	4.8	9.6	1.65	5.5	1.65	5.5
Perfluorooctane Sulfonate (PFOS)		3.0	3.0	3.0	3.0	3.0	3.0	3.0	7.7
	Totals:	*18.6*	***22.6***	***21.7***	***26.5***	*18.6*	***22.4***	*18.6*	***27.1***

units presented in ng/l (parts per trillion)
grey shade = half the reporting limit
bold = greater than the 20 ppt MassDEP PFAS6 standard

PFAS Summary August 22 & 26, 2019

MassDEP PFAS6	*Sample ID:*	EW-3	EW-4A	EW-6A	EW-7	EW-8	EW-9	EW-10	EB	FB	MW97-2	Trip Blank
Perfluoroheptanoic Acid (PFHpA)		0.76	1.10	1.00	0.45	0.48	1.40	1.30	0.185	0.185	0.68	0.185
Perfluorohexanesulfonic acid (PFHxS)		1.5	1.5	1.9	1.5	1.3	1.9	1.8	0.165	0.165	1.3	0.165
Perfluorononanoic Acid (PFNA)		0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Perfluorodecanoic Acid (PFDA)		0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Perfluorooctanoic Acid (PFOA)		3.3	4.4	4.2	3.0	2.7	6.2	6.2	0.115	0.115	3.8	0.115
Perfluorooctanesulfonic acid (PFOS)		4.0	5.8	5.0	4.5	2.9	14	11	0.215	0.215	7.1	0.215
	Totals:	*9.9*	*13.1*	*12.4*	*9.8*	*7.7*	***23.8***	***20.6***	*1.0*	*1.0*	*13.2*	*1.0*

units presented in ng/l (parts per trillion)
grey shade = half the reporting limit
bold = greater than the 20 ppt MassDEP PFAS6 standard

CERTIFICATE OF ANALYSIS

Lisa Irwin
Clean Harbors
42 Longwater Drive
Norwell, MA 02061-9149

RE: Baird & McGuire Holbrook MA (E08683573)
ESS Laboratory Work Order Number: 19H0808

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 4:38 pm, Sep 12, 2019

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

Subcontracted Analyses
Maxxam Analytics - Cheektowaga, NY PFAS

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA

ESS Laboratory Work Order: 19H0808

SAMPLE RECEIPT

The following samples were received on August 26, 2019 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

Lab Number	Sample Name	Matrix	Analysis
19H0808-01	EW3	Aqueous	SUB
19H0808-02	EW4A	Aqueous	SUB
19H0808-03	EW6A	Aqueous	SUB
19H0808-04	EW7	Aqueous	SUB
19H0808-05	EW8	Aqueous	SUB
19H0808-06	EW9	Aqueous	SUB
19H0808-07	EW10	Aqueous	SUB
19H0808-08	EB	Aqueous	SUB
19H0808-09	FB	Aqueous	SUB
19H0808-10	97-2	Aqueous	SUB
19H0808-11	Trip Blank	Aqueous	SUB

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA

ESS Laboratory Work Order: 19H0808

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA

ESS Laboratory Work Order: 19H0808

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA

ESS Laboratory Work Order: 19H0808

Subcontracted Analysis

Client Sample ID: EW3
Date Sampled: 08/22/19 13:00

ESS Laboratory Sample ID: 19H0808-01
Sample Matrix: Aqueous

Analyte	Results	Units	MRL	Method	DF	Analyst	Analyzed	I/V	F/V
PFAS	**See Attached**								

Client Sample ID: EW4A
Date Sampled: 08/22/19 13:10

ESS Laboratory Sample ID: 19H0808-02
Sample Matrix: Aqueous

Analyte	Results	Units	MRL	Method	DF	Analyst	Analyzed	I/V	F/V
PFAS	**See Attached**								

Client Sample ID: EW6A
Date Sampled: 08/22/19 13:20

ESS Laboratory Sample ID: 19H0808-03
Sample Matrix: Aqueous

Analyte	Results	Units	MRL	Method	DF	Analyst	Analyzed	I/V	F/V
PFAS	**See Attached**								

Client Sample ID: EW7
Date Sampled: 08/22/19 13:30

ESS Laboratory Sample ID: 19H0808-04
Sample Matrix: Aqueous

Analyte	Results	Units	MRL	Method	DF	Analyst	Analyzed	I/V	F/V
PFAS	**See Attached**								

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA

ESS Laboratory Work Order: 19H0808

Subcontracted Analysis

Client Sample ID: EW8
Date Sampled: 08/22/19 13:40

ESS Laboratory Sample ID: 19H0808-05
Sample Matrix: Aqueous

Analyte	Results	Units	MRL	Method	DF	Analyst	Analyzed	I/V	F/V
PFAS	**See Attached**								

Client Sample ID: EW9
Date Sampled: 08/22/19 13:50

ESS Laboratory Sample ID: 19H0808-06
Sample Matrix: Aqueous

Analyte	Results	Units	MRL	Method	DF	Analyst	Analyzed	I/V	F/V
PFAS	**See Attached**								

Client Sample ID: EW10
Date Sampled: 08/22/19 14:00

ESS Laboratory Sample ID: 19H0808-07
Sample Matrix: Aqueous

Analyte	Results	Units	MRL	Method	DF	Analyst	Analyzed	I/V	F/V
PFAS	**See Attached**								

Client Sample ID: EB
Date Sampled: 08/26/19 08:20

ESS Laboratory Sample ID: 19H0808-08
Sample Matrix: Aqueous

Analyte	Results	Units	MRL	Method	DF	Analyst	Analyzed	I/V	F/V
PFAS	**See Attached**								

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA

ESS Laboratory Work Order: 19H0808

Subcontracted Analysis

Client Sample ID: FB
Date Sampled: 08/22/19 14:00

ESS Laboratory Sample ID: 19H0808-09
Sample Matrix: Aqueous

Analyte	Results	Units	MRL	Method	DF	Analyst	Analyzed	I/V	F/V
PFAS	**See Attached**								

Client Sample ID: 97-2
Date Sampled: 08/26/19 09:00

ESS Laboratory Sample ID: 19H0808-10
Sample Matrix: Aqueous

Analyte	Results	Units	MRL	Method	DF	Analyst	Analyzed	I/V	F/V
PFAS	**See Attached**								

Client Sample ID: Trip Blank
Date Sampled: 08/26/19 00:00

ESS Laboratory Sample ID: 19H0808-11
Sample Matrix: Aqueous

Analyte	Results	Units	MRL	Method	DF	Analyst	Analyzed	I/V	F/V
PFAS	**See Attached**								

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA

ESS Laboratory Work Order: 19H0808

Notes and Definitions

Z-08	See Attached
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: Clean Harbors
Client Project ID: Baird & McGuire Holbrook MA

ESS Laboratory Work Order: 19H0808

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

Your P.O. #: B02815
Your Project #: 19H0808
Your C.O.C. #: na

Attention: Shawn Morrell

ESS Laboratory
185 Frances Ave
Cranston, RI
USA 02910

Report Date: 2019/09/10
Report #: R5873800
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B9N9789
Received: 2019/08/28, 13:41

Sample Matrix: Water
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Low level PFOS and PFOA by SPE/LCMS (1)	9	2019/09/05	2019/09/07	CAM SOP-00894	EPA 537 m
Low level PFOS and PFOA by SPE/LCMS (1)	2	2019/09/06	2019/09/07	CAM SOP-00894	EPA 537 m

Remarks:

Bureau Veritas Laboratories are accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by BV Labs are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in BV Labs profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and BV Labs in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

BV Labs liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. BV Labs has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by BV Labs, unless otherwise agreed in writing. BV Labs is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by BV Labs, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Per- and polyfluoroalkyl substances (PFAS) identified as surrogates on the certificate of analysis represent the extracted internal standard.

U = Undetected at the limit of quantitation.
J = Estimated concentration between the EDL & RDL.
B = Blank Contamination.
Q = One or more quality control criteria failed.
E = Analyte concentration exceeds the maximum concentration level.
K = Estimated maximum possible concentration due to ion abundance ratio failure.

Your P.O. #: B02815
Your Project #: 19H0808
Your C.O.C. #: na

Attention: Shawn Morrell

ESS Laboratory
185 Frances Ave
Cranston, RI
USA 02910

Report Date: 2019/09/10
Report #: R5873800
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B9N9789
Received: 2019/08/28, 13:41

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Stephanie Pollen, Project Manager
Email: Stephanie.Pollen@bvlabs.com
Phone# (905)817-5830
==========
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

BV Labs Job #: B9N9789
Report Date: 2019/09/10

ESS Laboratory
Client Project #: 19H0808
Your P.O. #: B02815

RESULTS OF ANALYSES OF WATER

BV Labs ID		KQF005	KQF006	KQF007	KQF008	KQF009	KQF010			
Sampling Date		2019/08/22 13:00	2019/08/22 13:10	2019/08/22 13:20	2019/08/22 13:30	2019/08/22 13:40	2019/08/22 13:50			
COC Number		na	na	na	na	na	na			
	UNITS	19H0808-01	19H0808-02	19H0808-03	19H0808-04	19H0808-05	19H0808-06	RDL	MDL	QC Batch
Perfluorinated Compounds										
Perfluorobutanoic acid	ng/L	1.5 J	2.6	3.1	0.93 J	4.5	1.5 J	2.0	0.45	6317625
Perfluoropentanoic Acid (PFPeA)	ng/L	1.0 J	1.8 J	2.6	0.48 U	1.9 J	1.5 J	2.0	0.48	6317625
Perfluorohexanoic Acid (PFHxA)	ng/L	1.8 J	1.8 J	2.2	0.80 J	4.0	1.9 J	2.0	0.26	6317625
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.76 J	1.1 J	1.0 J	0.45 J	0.48 J	1.4 J	2.0	0.37	6317625
Perfluorooctanoic Acid (PFOA)	ng/L	3.3	4.4	4.2	3.0	2.7	6.2	2.0	0.23	6317625
Perfluorononanoic Acid (PFNA)	ng/L	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	2.0	0.48	6317625
Perfluorodecanoic Acid (PFDA)	ng/L	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	2.0	0.18	6317625
Perfluoroundecanoic Acid (PFUnA)	ng/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	2.0	0.38	6317625
Perfluorododecanoic Acid (PFDoA)	ng/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2.0	0.25	6317625
Perfluorotridecanoic Acid	ng/L	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	2.0	0.30	6317625
Perfluorotetradecanoic Acid	ng/L	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	2.0	0.16	6317625
Perfluorobutanesulfonic acid	ng/L	0.87 J	1.2 J	1.8 J	0.53 J	0.86 J	1.5 J	2.0	0.37	6317625
Perfluorohexanesulfonic acid	ng/L	1.5 J	1.5 J	1.9 J	1.5 J	1.3 J	1.9 J	2.0	0.33	6317625
Perfluoroheptanesulfonic acid	ng/L	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	2.0	0.63	6317625
Perfluorooctanesulfonic acid	ng/L	4.0	5.8	5.0	4.5	2.9	14	2.0	0.43	6317625
Perfluorodecanesulfonic acid (PFDS)	ng/L	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	2.0	0.36	6317625
Perfluorooctane Sulfonamide (PFOSA)	ng/L	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	4.0	0.31	6317625
EtFOSAA	ng/L	0.48 U	0.48 U	7.6	0.48 U	1.9 J	0.48 U	4.0	0.48	6317625
MeFOSAA	ng/L	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	4.0	0.57	6317625
6:2 Fluorotelomer sulfonic acid	ng/L	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	4.0	0.43	6317625
8:2 Fluorotelomer sulfonic acid	ng/L	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	4.0	0.47	6317625
Surrogate Recovery (%)										
13C2-6:2-Fluorotelomersulfonic Acid	%	85	117	138	63	67	85	N/A	N/A	6317625
13C2-8:2-Fluorotelomersulfonic Acid	%	88	115	128	63	96	83	N/A	N/A	6317625
13C2-Perfluorodecanoic acid	%	82	106	112	61	69	78	N/A	N/A	6317625
13C2-Perfluorododecanoic acid	%	66	96	104	56	70	72	N/A	N/A	6317625
13C2-Perfluorohexanoic acid	%	91	114	122	71	47 (1)	80	N/A	N/A	6317625
13C2-perfluorotetradecanoic acid	%	62	82	100	53	67	64	N/A	N/A	6317625
13C2-Perfluoroundecanoic acid	%	74	98	104	59	72	76	N/A	N/A	6317625
13C3-Perfluorobutanesulfonic acid	%	89	110	115	75	41 (2)	96	N/A	N/A	6317625

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

(1) Extracted internal standard analyte recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the extracted internal standard analyte. When considered together, these QC data suggest that matrix interferences may be increasing the variability of the associated native analyte result (Perfluorohexanoic acid).

(2) Extracted internal standard analyte recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the extracted internal standard analyte. When considered together, these QC data suggest that matrix interferences may be increasing the variability of the associated native analyte result (Perfluorobutane sulfonic acid).

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RESULTS OF ANALYSES OF WATER

BV Labs ID		KQF005	KQF006	KQF007	KQF008	KQF009	KQF010			
Sampling Date		2019/08/22 13:00	2019/08/22 13:10	2019/08/22 13:20	2019/08/22 13:30	2019/08/22 13:40	2019/08/22 13:50			
COC Number		na	na	na	na	na	na			
	UNITS	19H0808-01	19H0808-02	19H0808-03	19H0808-04	19H0808-05	19H0808-06	RDL	MDL	QC Batch
13C4-Perfluorobutanoic acid	%	72	82	84	66	33 (1)	65	N/A	N/A	6317625
13C4-Perfluoroheptanoic acid	%	88	112	120	69	52	77	N/A	N/A	6317625
13C4-Perfluorooctanesulfonic acid	%	84	106	108	68	66	88	N/A	N/A	6317625
13C4-Perfluorooctanoic acid	%	89	112	120	68	63	80	N/A	N/A	6317625
13C5-Perfluorononanoic acid	%	86	108	116	65	67	79	N/A	N/A	6317625
13C5-Perfluoropentanoic acid	%	82	104	113	71	40 (2)	77	N/A	N/A	6317625
13C8-Perfluorooctane Sulfonamide	%	42	78	56	38	52	32	N/A	N/A	6317625
18O2-Perfluorohexanesulfonic acid	%	91	108	116	70	52	89	N/A	N/A	6317625
D3-MeFOSAA	%	66	88	95	57	71	78	N/A	N/A	6317625
D5-EtFOSAA	%	66	91	104	58	77	77	N/A	N/A	6317625

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable

(1) Extracted internal standard analyte recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the extracted internal standard analyte. When considered together, these QC data suggest that matrix interferences may be increasing the variability of the associated native analyte result (Perfluorobutanoic acid).

(2) Extracted internal standard analyte recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the extracted internal standard analyte. When considered together, these QC data suggest that matrix interferences may be increasing the variability of the associated native analyte result (Perfluoropentanoic acid).

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RESULTS OF ANALYSES OF WATER

BV Labs ID		KQF011		KQF012		KQF013			
Sampling Date		2019/08/22 14:00		2019/08/26 08:20		2019/08/22 14:00			
COC Number		na		na		na			
	UNITS	19H0808-07	QC Batch	19H0808-08	QC Batch	19H0808-09	RDL	MDL	QC Batch
Perfluorinated Compounds									
Perfluorobutanoic acid	ng/L	2.0	6317625	0.45 U	6318274	0.45 U	2.0	0.45	6317625
Perfluoropentanoic Acid (PFPeA)	ng/L	1.9 J	6317625	0.48 U	6318274	0.48 U	2.0	0.48	6317625
Perfluorohexanoic Acid (PFHxA)	ng/L	2.0	6317625	0.26 U	6318274	0.26 U	2.0	0.26	6317625
Perfluoroheptanoic Acid (PFHpA)	ng/L	1.3 J	6317625	0.37 U	6318274	0.37 U	2.0	0.37	6317625
Perfluorooctanoic Acid (PFOA)	ng/L	6.2	6317625	0.23 U	6318274	0.23 U	2.0	0.23	6317625
Perfluorononanoic Acid (PFNA)	ng/L	0.48 U	6317625	0.48 U	6318274	0.48 U	2.0	0.48	6317625
Perfluorodecanoic Acid (PFDA)	ng/L	0.18 U	6317625	0.18 U	6318274	0.18 U	2.0	0.18	6317625
Perfluoroundecanoic Acid (PFUnA)	ng/L	0.38 U	6317625	0.38 U	6318274	0.38 U	2.0	0.38	6317625
Perfluorododecanoic Acid (PFDoA)	ng/L	0.25 U	6317625	0.25 U	6318274	0.25 U	2.0	0.25	6317625
Perfluorotridecanoic Acid	ng/L	0.30 U	6317625	0.30 U	6318274	0.30 U	2.0	0.30	6317625
Perfluorotetradecanoic Acid	ng/L	0.16 U	6317625	0.16 U	6318274	0.16 U	2.0	0.16	6317625
Perfluorobutanesulfonic acid	ng/L	1.5 J	6317625	0.37 U	6318274	0.37 U	2.0	0.37	6317625
Perfluorohexanesulfonic acid	ng/L	1.8 J	6317625	0.33 U	6318274	0.33 U	2.0	0.33	6317625
Perfluoroheptanesulfonic acid	ng/L	0.63 U	6317625	0.63 U	6318274	0.63 U	2.0	0.63	6317625
Perfluorooctanesulfonic acid	ng/L	11	6317625	0.43 U	6318274	0.43 U	2.0	0.43	6317625
Perfluorodecanesulfonic acid (PFDS)	ng/L	0.36 U	6317625	0.36 U	6318274	0.36 U	2.0	0.36	6317625
Perfluorooctane Sulfonamide (PFOSA)	ng/L	0.31 U	6317625	0.31 U	6318274	0.31 U	4.0	0.31	6317625
EtFOSAA	ng/L	0.48 U	6317625	0.48 U	6318274	0.48 U	4.0	0.48	6317625
MeFOSAA	ng/L	0.57 U	6317625	0.57 U	6318274	0.57 U	4.0	0.57	6317625
6:2 Fluorotelomer sulfonic acid	ng/L	0.43 U	6317625	0.43 U	6318274	0.43 U	4.0	0.43	6317625
8:2 Fluorotelomer sulfonic acid	ng/L	0.47 U	6317625	0.47 U	6318274	0.47 U	4.0	0.47	6317625
Surrogate Recovery (%)									
13C2-6:2-Fluorotelomersulfonic Acid	%	81	6317625	96	6318274	104	N/A	N/A	6317625
13C2-8:2-Fluorotelomersulfonic Acid	%	86	6317625	96	6318274	101	N/A	N/A	6317625
13C2-Perfluorodecanoic acid	%	80	6317625	98	6318274	105	N/A	N/A	6317625
13C2-Perfluorododecanoic acid	%	75	6317625	88	6318274	96	N/A	N/A	6317625
13C2-Perfluorohexanoic acid	%	84	6317625	105	6318274	112	N/A	N/A	6317625
13C2-perfluorotetradecanoic acid	%	72	6317625	89	6318274	96	N/A	N/A	6317625
13C2-Perfluoroundecanoic acid	%	79	6317625	91	6318274	102	N/A	N/A	6317625
13C3-Perfluorobutanesulfonic acid	%	86	6317625	102	6318274	106	N/A	N/A	6317625
13C4-Perfluorobutanoic acid	%	61	6317625	79	6318274	111	N/A	N/A	6317625
13C4-Perfluoroheptanoic acid	%	81	6317625	102	6318274	111	N/A	N/A	6317625
13C4-Perfluorooctanesulfonic acid	%	84	6317625	101	6318274	103	N/A	N/A	6317625
13C4-Perfluorooctanoic acid	%	83	6317625	106	6318274	112	N/A	N/A	6317625

RDL = Reportable Detection Limit
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N/A = Not Applicable

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RESULTS OF ANALYSES OF WATER

BV Labs ID		KQF011		KQF012		KQF013			
Sampling Date		2019/08/22 14:00		2019/08/26 08:20		2019/08/22 14:00			
COC Number		na		na		na			
	UNITS	19H0808-07	QC Batch	19H0808-08	QC Batch	19H0808-09	RDL	MDL	QC Batch
13C5-Perfluorononanoic acid	%	81	6317625	104	6318274	109	N/A	N/A	6317625
13C5-Perfluoropentanoic acid	%	77	6317625	99	6318274	109	N/A	N/A	6317625
13C8-Perfluorooctane Sulfonamide	%	45	6317625	85	6318274	87	N/A	N/A	6317625
18O2-Perfluorohexanesulfonic acid	%	84	6317625	106	6318274	106	N/A	N/A	6317625
D3-MeFOSAA	%	72	6317625	80	6318274	90	N/A	N/A	6317625
D5-EtFOSAA	%	74	6317625	85	6318274	91	N/A	N/A	6317625

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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RESULTS OF ANALYSES OF WATER

BV Labs ID		KQF014		KQF015			
Sampling Date		2019/08/26 09:00		2019/08/22 00:00			
COC Number		na		na			
	UNITS	19H0808-10	QC Batch	19H0808-11	RDL	MDL	QC Batch
Perfluorinated Compounds							
Perfluorobutanoic acid	ng/L	1.5 J	6318274	0.45 U	2.0	0.45	6317625
Perfluoropentanoic Acid (PFPeA)	ng/L	0.63 J	6318274	0.48 U	2.0	0.48	6317625
Perfluorohexanoic Acid (PFHxA)	ng/L	0.63 J	6318274	0.26 U	2.0	0.26	6317625
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.68 J	6318274	0.37 U	2.0	0.37	6317625
Perfluorooctanoic Acid (PFOA)	ng/L	3.8	6318274	0.23 U	2.0	0.23	6317625
Perfluorononanoic Acid (PFNA)	ng/L	0.48 U	6318274	0.48 U	2.0	0.48	6317625
Perfluorodecanoic Acid (PFDA)	ng/L	0.18 U	6318274	0.18 U	2.0	0.18	6317625
Perfluoroundecanoic Acid (PFUnA)	ng/L	0.38 U	6318274	0.38 U	2.0	0.38	6317625
Perfluorododecanoic Acid (PFDoA)	ng/L	0.25 U	6318274	0.25 U	2.0	0.25	6317625
Perfluorotridecanoic Acid	ng/L	0.30 U	6318274	0.30 U	2.0	0.30	6317625
Perfluorotetradecanoic Acid	ng/L	0.16 U	6318274	0.16 U	2.0	0.16	6317625
Perfluorobutanesulfonic acid	ng/L	0.59 J	6318274	0.37 U	2.0	0.37	6317625
Perfluorohexanesulfonic acid	ng/L	1.3 J	6318274	0.33 U	2.0	0.33	6317625
Perfluoroheptanesulfonic acid	ng/L	0.63 U	6318274	0.63 U	2.0	0.63	6317625
Perfluorooctanesulfonic acid	ng/L	7.1	6318274	0.43 U	2.0	0.43	6317625
Perfluorodecanesulfonic acid (PFDS)	ng/L	0.36 U	6318274	0.36 U	2.0	0.36	6317625
Perfluorooctane Sulfonamide (PFOSA)	ng/L	0.31 U	6318274	0.31 U	4.0	0.31	6317625
EtFOSAA	ng/L	0.48 U	6318274	0.48 U	4.0	0.48	6317625
MeFOSAA	ng/L	0.57 U	6318274	0.57 U	4.0	0.57	6317625
6:2 Fluorotelomer sulfonic acid	ng/L	0.43 U	6318274	0.43 U	4.0	0.43	6317625
8:2 Fluorotelomer sulfonic acid	ng/L	0.47 U	6318274	0.47 U	4.0	0.47	6317625
Surrogate Recovery (%)							
13C2-6:2-Fluorotelomersulfonic Acid	%	121	6318274	97	N/A	N/A	6317625
13C2-8:2-Fluorotelomersulfonic Acid	%	98	6318274	99	N/A	N/A	6317625
13C2-Perfluorodecanoic acid	%	106	6318274	101	N/A	N/A	6317625
13C2-Perfluorododecanoic acid	%	95	6318274	90	N/A	N/A	6317625
13C2-Perfluorohexanoic acid	%	109	6318274	103	N/A	N/A	6317625
13C2-perfluorotetradecanoic acid	%	94	6318274	91	N/A	N/A	6317625
13C2-Perfluoroundecanoic acid	%	98	6318274	96	N/A	N/A	6317625
13C3-Perfluorobutanesulfonic acid	%	109	6318274	86	N/A	N/A	6317625
13C4-Perfluorobutanoic acid	%	72	6318274	99	N/A	N/A	6317625
13C4-Perfluoroheptanoic acid	%	108	6318274	103	N/A	N/A	6317625
13C4-Perfluorooctanesulfonic acid	%	108	6318274	93	N/A	N/A	6317625
13C4-Perfluorooctanoic acid	%	110	6318274	106	N/A	N/A	6317625

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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RESULTS OF ANALYSES OF WATER

BV Labs ID		KQF014		KQF015			
Sampling Date		2019/08/26 09:00		2019/08/22 00:00			
COC Number		na		na			
	UNITS	19H0808-10	QC Batch	19H0808-11	RDL	MDL	QC Batch
13C5-Perfluorononanoic acid	%	109	6318274	105	N/A	N/A	6317625
13C5-Perfluoropentanoic acid	%	96	6318274	99	N/A	N/A	6317625
13C8-Perfluorooctane Sulfonamide	%	78	6318274	73	N/A	N/A	6317625
18O2-Perfluorohexanesulfonic acid	%	117	6318274	91	N/A	N/A	6317625
D3-MeFOSAA	%	97	6318274	78	N/A	N/A	6317625
D5-EtFOSAA	%	95	6318274	83	N/A	N/A	6317625

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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TEST SUMMARY

BV Labs ID: KQF005 **Collected:** 2019/08/22
Sample ID: 19H0808-01 **Shipped:**
Matrix: Water **Received:** 2019/08/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	6317625	2019/09/05	2019/09/07	Patrick Yu Peng Li

BV Labs ID: KQF006 **Collected:** 2019/08/22
Sample ID: 19H0808-02 **Shipped:**
Matrix: Water **Received:** 2019/08/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	6317625	2019/09/05	2019/09/07	Patrick Yu Peng Li

BV Labs ID: KQF007 **Collected:** 2019/08/22
Sample ID: 19H0808-03 **Shipped:**
Matrix: Water **Received:** 2019/08/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	6317625	2019/09/05	2019/09/07	Patrick Yu Peng Li

BV Labs ID: KQF008 **Collected:** 2019/08/22
Sample ID: 19H0808-04 **Shipped:**
Matrix: Water **Received:** 2019/08/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	6317625	2019/09/05	2019/09/07	Patrick Yu Peng Li

BV Labs ID: KQF009 **Collected:** 2019/08/22
Sample ID: 19H0808-05 **Shipped:**
Matrix: Water **Received:** 2019/08/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	6317625	2019/09/05	2019/09/07	Patrick Yu Peng Li

BV Labs ID: KQF010 **Collected:** 2019/08/22
Sample ID: 19H0808-06 **Shipped:**
Matrix: Water **Received:** 2019/08/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	6317625	2019/09/05	2019/09/07	Patrick Yu Peng Li

BV Labs ID: KQF011 **Collected:** 2019/08/22
Sample ID: 19H0808-07 **Shipped:**
Matrix: Water **Received:** 2019/08/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	6317625	2019/09/05	2019/09/07	Patrick Yu Peng Li

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TEST SUMMARY

BV Labs ID: KQF012 **Collected:** 2019/08/26
Sample ID: 19H0808-08 **Shipped:**
Matrix: Water **Received:** 2019/08/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	6318274	2019/09/06	2019/09/07	Adnan Khan

BV Labs ID: KQF013 **Collected:** 2019/08/22
Sample ID: 19H0808-09 **Shipped:**
Matrix: Water **Received:** 2019/08/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	6317625	2019/09/05	2019/09/07	Patrick Yu Peng Li

BV Labs ID: KQF014 **Collected:** 2019/08/26
Sample ID: 19H0808-10 **Shipped:**
Matrix: Water **Received:** 2019/08/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	6318274	2019/09/06	2019/09/07	Adnan Khan

BV Labs ID: KQF015 **Collected:** 2019/08/22
Sample ID: 19H0808-11 **Shipped:**
Matrix: Water **Received:** 2019/08/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA by SPE/LCMS	LCMS	6317625	2019/09/05	2019/09/07	Patrick Yu Peng Li

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GENERAL COMMENTS

PFAS Abbreviations:
Perfluorobutanoic acid (PFBA)
Perfluoropentanoic acid (PFPeA)
Perfluorohexanoic acid (PFHxA)
Perfluoroheptanoic acid (PFHpA)
Perfluorooctanoic acid (PFOA)
Perfluorononanoic acid (PFNA)
Perfluorodecanoic acid (PFDA)
Perfluorodecanoic acid (PFUnA)
Perfluorododecanoic acid (PFDoA)
Perfluorotridecanoic acid (PFTrDA)
Perfluorotridecanoic acid (PFTeDA)
Perfluorobutanesulfonic acid (PFBS)
Perfluorohexanesulfonic acid (PFHxS)
Perfluorohexanesulfonic acid (PFHpS)
Perfluorooctanesulfonic acid (PFOS)
Perfluorodecanesulfonic acid (PFDS)
Perfluorooctane sulfonamide (PFOSA)
N-Methylperfluorooctanesulfonamidoacetic acid (MeFOSAA)
N-Ethylperfluorooctanesulfonamidoacetic acid (EtFOSAA)
6:2 Fluorotelomersulfonic acid (6:2FTS)
8:2 Fluorotelomersulfonic acid (8:2FTS)

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
6317625	YPL	Matrix Spike	13C2-6:2-Fluorotelomersulfonic Acid	2019/09/07		90	%	50 - 150
			13C2-8:2-Fluorotelomersulfonic Acid	2019/09/07		89	%	50 - 150
			13C2-Perfluorodecanoic acid	2019/09/07		89	%	50 - 150
			13C2-Perfluorododecanoic acid	2019/09/07		64	%	50 - 150
			13C2-Perfluorohexanoic acid	2019/09/07		95	%	50 - 150
			13C2-perfluorotetradecanoic acid	2019/09/07		63	%	50 - 150
			13C2-Perfluoroundecanoic acid	2019/09/07		76	%	50 - 150
			13C3-Perfluorobutanesulfonic acid	2019/09/07		95	%	50 - 150
			13C4-Perfluorobutanoic acid	2019/09/07		83	%	50 - 150
			13C4-Perfluoroheptanoic acid	2019/09/07		94	%	50 - 150
			13C4-Perfluorooctanesulfonic acid	2019/09/07		91	%	50 - 150
			13C4-Perfluorooctanoic acid	2019/09/07		98	%	50 - 150
			13C5-Perfluorononanoic acid	2019/09/07		95	%	50 - 150
			13C5-Perfluoropentanoic acid	2019/09/07		94	%	50 - 150
			13C8-Perfluorooctane Sulfonamide	2019/09/07		44	%	20 - 130
			18O2-Perfluorohexanesulfonic acid	2019/09/07		95	%	50 - 150
			D3-MeFOSAA	2019/09/07		75	%	50 - 150
			D5-EtFOSAA	2019/09/07		66	%	50 - 150
			Perfluorobutanoic acid	2019/09/07		104	%	70 - 130
			Perfluoropentanoic Acid (PFPeA)	2019/09/07		104	%	70 - 130
			Perfluorohexanoic Acid (PFHxA)	2019/09/07		105	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2019/09/07		103	%	70 - 130
			Perfluorooctanoic Acid (PFOA)	2019/09/07		102	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2019/09/07		103	%	70 - 130
			Perfluorodecanoic Acid (PFDA)	2019/09/07		100	%	70 - 130
			Perfluoroundecanoic Acid (PFUnA)	2019/09/07		101	%	70 - 130
			Perfluorododecanoic Acid (PFDoA)	2019/09/07		100	%	70 - 130
			Perfluorotridecanoic Acid	2019/09/07		96	%	70 - 130
			Perfluorotetradecanoic Acid	2019/09/07		104	%	70 - 130
			Perfluorobutanesulfonic acid	2019/09/07		99	%	70 - 130
			Perfluorohexanesulfonic acid	2019/09/07		102	%	70 - 130
			Perfluoroheptanesulfonic acid	2019/09/07		98	%	70 - 130
			Perfluorooctanesulfonic acid	2019/09/07		106	%	70 - 130
			Perfluorodecanesulfonic acid (PFDS)	2019/09/07		75	%	70 - 130
			Perfluorooctane Sulfonamide (PFOSA)	2019/09/07		98	%	70 - 130
			EtFOSAA	2019/09/07		99	%	70 - 130
			MeFOSAA	2019/09/07		100	%	70 - 130
			6:2 Fluorotelomer sulfonic acid	2019/09/07		104	%	70 - 130
			8:2 Fluorotelomer sulfonic acid	2019/09/07		101	%	70 - 130
6317625	YPL	Spiked Blank	13C2-6:2-Fluorotelomersulfonic Acid	2019/09/07		95	%	50 - 150
			13C2-8:2-Fluorotelomersulfonic Acid	2019/09/07		100	%	50 - 150
			13C2-Perfluorodecanoic acid	2019/09/07		100	%	50 - 150
			13C2-Perfluorododecanoic acid	2019/09/07		91	%	50 - 150
			13C2-Perfluorohexanoic acid	2019/09/07		98	%	50 - 150
			13C2-perfluorotetradecanoic acid	2019/09/07		90	%	50 - 150
			13C2-Perfluoroundecanoic acid	2019/09/07		97	%	50 - 150
			13C3-Perfluorobutanesulfonic acid	2019/09/07		83	%	50 - 150
			13C4-Perfluorobutanoic acid	2019/09/07		94	%	50 - 150
			13C4-Perfluoroheptanoic acid	2019/09/07		97	%	50 - 150
			13C4-Perfluorooctanesulfonic acid	2019/09/07		92	%	50 - 150
			13C4-Perfluorooctanoic acid	2019/09/07		101	%	50 - 150
			13C5-Perfluorononanoic acid	2019/09/07		101	%	50 - 150

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			13C5-Perfluoropentanoic acid	2019/09/07		95	%	50 - 150
			13C8-Perfluorooctane Sulfonamide	2019/09/07		65	%	20 - 130
			18O2-Perfluorohexanesulfonic acid	2019/09/07		88	%	50 - 150
			D3-MeFOSAA	2019/09/07		83	%	50 - 150
			D5-EtFOSAA	2019/09/07		84	%	50 - 150
			Perfluorobutanoic acid	2019/09/07		99	%	70 - 130
			Perfluoropentanoic Acid (PFPeA)	2019/09/07		96	%	70 - 130
			Perfluorohexanoic Acid (PFHxA)	2019/09/07		99	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2019/09/07		98	%	70 - 130
			Perfluorooctanoic Acid (PFOA)	2019/09/07		97	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2019/09/07		101	%	70 - 130
			Perfluorodecanoic Acid (PFDA)	2019/09/07		94	%	70 - 130
			Perfluoroundecanoic Acid (PFUnA)	2019/09/07		97	%	70 - 130
			Perfluorododecanoic Acid (PFDoA)	2019/09/07		98	%	70 - 130
			Perfluorotridecanoic Acid	2019/09/07		97	%	70 - 130
			Perfluorotetradecanoic Acid	2019/09/07		101	%	70 - 130
			Perfluorobutanesulfonic acid	2019/09/07		96	%	70 - 130
			Perfluorohexanesulfonic acid	2019/09/07		97	%	70 - 130
			Perfluoroheptanesulfonic acid	2019/09/07		89	%	70 - 130
			Perfluorooctanesulfonic acid	2019/09/07		103	%	70 - 130
			Perfluorodecanesulfonic acid (PFDS)	2019/09/07		86	%	70 - 130
			Perfluorooctane Sulfonamide (PFOSA)	2019/09/07		97	%	70 - 130
			EtFOSAA	2019/09/07		89	%	70 - 130
			MeFOSAA	2019/09/07		97	%	70 - 130
			6:2 Fluorotelomer sulfonic acid	2019/09/07		99	%	70 - 130
			8:2 Fluorotelomer sulfonic acid	2019/09/07		100	%	70 - 130
6317625	YPL	Method Blank	13C2-6:2-Fluorotelomersulfonic Acid	2019/09/07		96	%	50 - 150
			13C2-8:2-Fluorotelomersulfonic Acid	2019/09/07		95	%	50 - 150
			13C2-Perfluorodecanoic acid	2019/09/07		92	%	50 - 150
			13C2-Perfluorododecanoic acid	2019/09/07		87	%	50 - 150
			13C2-Perfluorohexanoic acid	2019/09/07		102	%	50 - 150
			13C2-perfluorotetradecanoic acid	2019/09/07		85	%	50 - 150
			13C2-Perfluoroundecanoic acid	2019/09/07		89	%	50 - 150
			13C3-Perfluorobutanesulfonic acid	2019/09/07		101	%	50 - 150
			13C4-Perfluorobutanoic acid	2019/09/07		100	%	50 - 150
			13C4-Perfluoroheptanoic acid	2019/09/07		100	%	50 - 150
			13C4-Perfluorooctanesulfonic acid	2019/09/07		97	%	50 - 150
			13C4-Perfluorooctanoic acid	2019/09/07		102	%	50 - 150
			13C5-Perfluorononanoic acid	2019/09/07		100	%	50 - 150
			13C5-Perfluoropentanoic acid	2019/09/07		100	%	50 - 150
			13C8-Perfluorooctane Sulfonamide	2019/09/07		51	%	20 - 130
			18O2-Perfluorohexanesulfonic acid	2019/09/07		97	%	50 - 150
			D3-MeFOSAA	2019/09/07		82	%	50 - 150
			D5-EtFOSAA	2019/09/07		86	%	50 - 150
			Perfluorobutanoic acid	2019/09/07	0.45 U, MDL=0.45		ng/L	
			Perfluoropentanoic Acid (PFPeA)	2019/09/07	0.48 U, MDL=0.48		ng/L	
			Perfluorohexanoic Acid (PFHxA)	2019/09/07	0.26 U, MDL=0.26		ng/L	
			Perfluoroheptanoic Acid (PFHpA)	2019/09/07	0.37 U, MDL=0.37		ng/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Perfluorooctanoic Acid (PFOA)	2019/09/07	0.23 U, MDL=0.23		ng/L	
			Perfluorononanoic Acid (PFNA)	2019/09/07	0.48 U, MDL=0.48		ng/L	
			Perfluorodecanoic Acid (PFDA)	2019/09/07	0.18 U, MDL=0.18		ng/L	
			Perfluoroundecanoic Acid (PFUnA)	2019/09/07	0.38 U, MDL=0.38		ng/L	
			Perfluorododecanoic Acid (PFDoA)	2019/09/07	0.25 U, MDL=0.25		ng/L	
			Perfluorotridecanoic Acid	2019/09/07	0.30 U, MDL=0.30		ng/L	
			Perfluorotetradecanoic Acid	2019/09/07	0.16 U, MDL=0.16		ng/L	
			Perfluorobutanesulfonic acid	2019/09/07	0.37 U, MDL=0.37		ng/L	
			Perfluorohexanesulfonic acid	2019/09/07	0.33 U, MDL=0.33		ng/L	
			Perfluoroheptanesulfonic acid	2019/09/07	0.63 U, MDL=0.63		ng/L	
			Perfluorooctanesulfonic acid	2019/09/07	0.43 U, MDL=0.43		ng/L	
			Perfluorodecanesulfonic acid (PFDS)	2019/09/07	0.36 U, MDL=0.36		ng/L	
			Perfluorooctane Sulfonamide (PFOSA)	2019/09/07	0.31 U, MDL=0.31		ng/L	
			EtFOSAA	2019/09/07	0.48 U, MDL=0.48		ng/L	
			MeFOSAA	2019/09/07	0.57 U, MDL=0.57		ng/L	
			6:2 Fluorotelomer sulfonic acid	2019/09/07	0.43 U, MDL=0.43		ng/L	
			8:2 Fluorotelomer sulfonic acid	2019/09/07	0.47 U, MDL=0.47		ng/L	
6317625	YPL	RPD - Sample/Sample Dup	Perfluorobutanoic acid	2019/09/07	15		%	30
			Perfluoropentanoic Acid (PFPeA)	2019/09/07	10		%	30
			Perfluorohexanoic Acid (PFHxA)	2019/09/07	11		%	30
			Perfluoroheptanoic Acid (PFHpA)	2019/09/07	NC		%	30
			Perfluorooctanoic Acid (PFOA)	2019/09/07	NC		%	30
			Perfluorononanoic Acid (PFNA)	2019/09/07	NC		%	30
			Perfluorodecanoic Acid (PFDA)	2019/09/07	NC		%	30
			Perfluoroundecanoic Acid (PFUnA)	2019/09/07	NC		%	30
			Perfluorododecanoic Acid (PFDoA)	2019/09/07	NC		%	30
			Perfluorotridecanoic Acid	2019/09/07	NC		%	30
			Perfluorotetradecanoic Acid	2019/09/07	NC		%	30
			Perfluorobutanesulfonic acid	2019/09/07	NC		%	30
			Perfluorohexanesulfonic acid	2019/09/07	5.6		%	30
			Perfluoroheptanesulfonic acid	2019/09/07	NC		%	30
			Perfluorooctanesulfonic acid	2019/09/07	11		%	30
			Perfluorodecanesulfonic acid (PFDS)	2019/09/07	NC		%	30
			Perfluorooctane Sulfonamide (PFOSA)	2019/09/07	NC		%	30
			6:2 Fluorotelomer sulfonic acid	2019/09/07	NC		%	30
			8:2 Fluorotelomer sulfonic acid	2019/09/07	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
6318274	AKH	Matrix Spike	13C2-6:2-Fluorotelomersulfonic Acid	2019/09/07		125	%	50 - 150
			13C2-8:2-Fluorotelomersulfonic Acid	2019/09/07		106	%	50 - 150
			13C2-Perfluorodecanoic acid	2019/09/07		105	%	50 - 150
			13C2-Perfluorododecanoic acid	2019/09/07		96	%	50 - 150
			13C2-Perfluorohexanoic acid	2019/09/07		106	%	50 - 150
			13C2-perfluorotetradecanoic acid	2019/09/07		95	%	50 - 150
			13C2-Perfluoroundecanoic acid	2019/09/07		103	%	50 - 150
			13C3-Perfluorobutanesulfonic acid	2019/09/07		107	%	50 - 150
			13C4-Perfluorobutanoic acid	2019/09/07		91	%	50 - 150
			13C4-Perfluoroheptanoic acid	2019/09/07		107	%	50 - 150
			13C4-Perfluorooctanesulfonic acid	2019/09/07		111	%	50 - 150
			13C4-Perfluorooctanoic acid	2019/09/07		111	%	50 - 150
			13C5-Perfluorononanoic acid	2019/09/07		111	%	50 - 150
			13C5-Perfluoropentanoic acid	2019/09/07		104	%	50 - 150
			13C8-Perfluorooctane Sulfonamide	2019/09/07		65	%	20 - 130
			18O2-Perfluorohexanesulfonic acid	2019/09/07		111	%	50 - 150
			D3-MeFOSAA	2019/09/07		97	%	50 - 150
			D5-EtFOSAA	2019/09/07		97	%	50 - 150
			Perfluorobutanoic acid	2019/09/07		101	%	70 - 130
			Perfluoropentanoic Acid (PFPeA)	2019/09/07		98	%	70 - 130
			Perfluorohexanoic Acid (PFHxA)	2019/09/07		103	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2019/09/07		101	%	70 - 130
			Perfluorooctanoic Acid (PFOA)	2019/09/07		100	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2019/09/07		101	%	70 - 130
			Perfluorodecanoic Acid (PFDA)	2019/09/07		98	%	70 - 130
			Perfluoroundecanoic Acid (PFUnA)	2019/09/07		98	%	70 - 130
			Perfluorododecanoic Acid (PFDoA)	2019/09/07		99	%	70 - 130
			Perfluorotridecanoic Acid	2019/09/07		96	%	70 - 130
			Perfluorotetradecanoic Acid	2019/09/07		100	%	70 - 130
			Perfluorobutanesulfonic acid	2019/09/07		98	%	70 - 130
			Perfluorohexanesulfonic acid	2019/09/07		97	%	70 - 130
			Perfluoroheptanesulfonic acid	2019/09/07		104	%	70 - 130
			Perfluorooctanesulfonic acid	2019/09/07		100	%	70 - 130
			Perfluorodecanesulfonic acid (PFDS)	2019/09/07		92	%	70 - 130
			Perfluorooctane Sulfonamide (PFOSA)	2019/09/07		96	%	70 - 130
			EtFOSAA	2019/09/07		93	%	70 - 130
			MeFOSAA	2019/09/07		99	%	70 - 130
			6:2 Fluorotelomer sulfonic acid	2019/09/07		105	%	70 - 130
			8:2 Fluorotelomer sulfonic acid	2019/09/07		101	%	70 - 130
6318274	AKH	Spiked Blank	13C2-6:2-Fluorotelomersulfonic Acid	2019/09/07		103	%	50 - 150
			13C2-8:2-Fluorotelomersulfonic Acid	2019/09/07		109	%	50 - 150
			13C2-Perfluorodecanoic acid	2019/09/07		106	%	50 - 150
			13C2-Perfluorododecanoic acid	2019/09/07		94	%	50 - 150
			13C2-Perfluorohexanoic acid	2019/09/07		112	%	50 - 150
			13C2-perfluorotetradecanoic acid	2019/09/07		94	%	50 - 150
			13C2-Perfluoroundecanoic acid	2019/09/07		102	%	50 - 150
			13C3-Perfluorobutanesulfonic acid	2019/09/07		105	%	50 - 150
			13C4-Perfluorobutanoic acid	2019/09/07		111	%	50 - 150
			13C4-Perfluoroheptanoic acid	2019/09/07		112	%	50 - 150
			13C4-Perfluorooctanesulfonic acid	2019/09/07		109	%	50 - 150
			13C4-Perfluorooctanoic acid	2019/09/07		114	%	50 - 150
			13C5-Perfluorononanoic acid	2019/09/07		110	%	50 - 150

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			13C5-Perfluoropentanoic acid	2019/09/07		109	%	50 - 150
			13C8-Perfluorooctane Sulfonamide	2019/09/07		72	%	20 - 130
			18O2-Perfluorohexanesulfonic acid	2019/09/07		112	%	50 - 150
			D3-MeFOSAA	2019/09/07		92	%	50 - 150
			D5-EtFOSAA	2019/09/07		87	%	50 - 150
			Perfluorobutanoic acid	2019/09/07		102	%	70 - 130
			Perfluoropentanoic Acid (PFPeA)	2019/09/07		99	%	70 - 130
			Perfluorohexanoic Acid (PFHxA)	2019/09/07		102	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2019/09/07		101	%	70 - 130
			Perfluorooctanoic Acid (PFOA)	2019/09/07		102	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2019/09/07		105	%	70 - 130
			Perfluorodecanoic Acid (PFDA)	2019/09/07		99	%	70 - 130
			Perfluoroundecanoic Acid (PFUnA)	2019/09/07		100	%	70 - 130
			Perfluorododecanoic Acid (PFDoA)	2019/09/07		100	%	70 - 130
			Perfluorotridecanoic Acid	2019/09/07		98	%	70 - 130
			Perfluorotetradecanoic Acid	2019/09/07		101	%	70 - 130
			Perfluorobutanesulfonic acid	2019/09/07		100	%	70 - 130
			Perfluorohexanesulfonic acid	2019/09/07		97	%	70 - 130
			Perfluoroheptanesulfonic acid	2019/09/07		98	%	70 - 130
			Perfluorooctanesulfonic acid	2019/09/07		103	%	70 - 130
			Perfluorodecanesulfonic acid (PFDS)	2019/09/07		93	%	70 - 130
			Perfluorooctane Sulfonamide (PFOSA)	2019/09/07		100	%	70 - 130
			EtFOSAA	2019/09/07		99	%	70 - 130
			MeFOSAA	2019/09/07		98	%	70 - 130
			6:2 Fluorotelomer sulfonic acid	2019/09/07		105	%	70 - 130
			8:2 Fluorotelomer sulfonic acid	2019/09/07		101	%	70 - 130
6318274	AKH	Method Blank	13C2-6:2-Fluorotelomersulfonic Acid	2019/09/07		103	%	50 - 150
			13C2-8:2-Fluorotelomersulfonic Acid	2019/09/07		97	%	50 - 150
			13C2-Perfluorodecanoic acid	2019/09/07		93	%	50 - 150
			13C2-Perfluorododecanoic acid	2019/09/07		80	%	50 - 150
			13C2-Perfluorohexanoic acid	2019/09/07		103	%	50 - 150
			13C2-perfluorotetradecanoic acid	2019/09/07		79	%	50 - 150
			13C2-Perfluoroundecanoic acid	2019/09/07		87	%	50 - 150
			13C3-Perfluorobutanesulfonic acid	2019/09/07		96	%	50 - 150
			13C4-Perfluorobutanoic acid	2019/09/07		103	%	50 - 150
			13C4-Perfluoroheptanoic acid	2019/09/07		103	%	50 - 150
			13C4-Perfluorooctanesulfonic acid	2019/09/07		95	%	50 - 150
			13C4-Perfluorooctanoic acid	2019/09/07		102	%	50 - 150
			13C5-Perfluorononanoic acid	2019/09/07		99	%	50 - 150
			13C5-Perfluoropentanoic acid	2019/09/07		100	%	50 - 150
			13C8-Perfluorooctane Sulfonamide	2019/09/07		81	%	20 - 130
			18O2-Perfluorohexanesulfonic acid	2019/09/07		96	%	50 - 150
			D3-MeFOSAA	2019/09/07		77	%	50 - 150
			D5-EtFOSAA	2019/09/07		75	%	50 - 150
			Perfluorobutanoic acid	2019/09/07	0.45 U, MDL=0.45		ng/L	
			Perfluoropentanoic Acid (PFPeA)	2019/09/07	0.48 U, MDL=0.48		ng/L	
			Perfluorohexanoic Acid (PFHxA)	2019/09/07	0.26 U, MDL=0.26		ng/L	
			Perfluoroheptanoic Acid (PFHpA)	2019/09/07	0.37 U, MDL=0.37		ng/L	

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Perfluorooctanoic Acid (PFOA)	2019/09/07	0.23 U, MDL=0.23		ng/L	
			Perfluorononanoic Acid (PFNA)	2019/09/07	0.48 U, MDL=0.48		ng/L	
			Perfluorodecanoic Acid (PFDA)	2019/09/07	0.18 U, MDL=0.18		ng/L	
			Perfluoroundecanoic Acid (PFUnA)	2019/09/07	0.38 U, MDL=0.38		ng/L	
			Perfluorododecanoic Acid (PFDoA)	2019/09/07	0.25 U, MDL=0.25		ng/L	
			Perfluorotridecanoic Acid	2019/09/07	0.30 U, MDL=0.30		ng/L	
			Perfluorotetradecanoic Acid	2019/09/07	0.16 U, MDL=0.16		ng/L	
			Perfluorobutanesulfonic acid	2019/09/07	0.37 U, MDL=0.37		ng/L	
			Perfluorohexanesulfonic acid	2019/09/07	0.33 U, MDL=0.33		ng/L	
			Perfluoroheptanesulfonic acid	2019/09/07	0.63 U, MDL=0.63		ng/L	
			Perfluorooctanesulfonic acid	2019/09/07	0.43 U, MDL=0.43		ng/L	
			Perfluorodecanesulfonic acid (PFDS)	2019/09/07	0.36 U, MDL=0.36		ng/L	
			Perfluorooctane Sulfonamide (PFOSA)	2019/09/07	0.31 U, MDL=0.31		ng/L	
			EtFOSAA	2019/09/07	0.48 U, MDL=0.48		ng/L	
			MeFOSAA	2019/09/07	0.57 U, MDL=0.57		ng/L	
			6:2 Fluorotelomer sulfonic acid	2019/09/07	0.43 U, MDL=0.43		ng/L	
			8:2 Fluorotelomer sulfonic acid	2019/09/07	0.47 U, MDL=0.47		ng/L	
6318274	AKH	RPD - Sample/Sample Dup	Perfluorobutanoic acid	2019/09/07	NC		%	30
			Perfluoropentanoic Acid (PFPeA)	2019/09/07	NC		%	30
			Perfluorohexanoic Acid (PFHxA)	2019/09/07	NC		%	30
			Perfluoroheptanoic Acid (PFHpA)	2019/09/07	NC		%	30
			Perfluorooctanoic Acid (PFOA)	2019/09/07	NC		%	30
			Perfluorononanoic Acid (PFNA)	2019/09/07	NC		%	30
			Perfluorodecanoic Acid (PFDA)	2019/09/07	NC		%	30
			Perfluoroundecanoic Acid (PFUnA)	2019/09/07	NC		%	30
			Perfluorododecanoic Acid (PFDoA)	2019/09/07	NC		%	30
			Perfluorotridecanoic Acid	2019/09/07	NC		%	30
			Perfluorotetradecanoic Acid	2019/09/07	NC		%	30
			Perfluorobutanesulfonic acid	2019/09/07	NC		%	30
			Perfluorohexanesulfonic acid	2019/09/07	NC		%	30
			Perfluoroheptanesulfonic acid	2019/09/07	NC		%	30
			Perfluorooctanesulfonic acid	2019/09/07	NC		%	30
			Perfluorodecanesulfonic acid (PFDS)	2019/09/07	NC		%	30
			Perfluorooctane Sulfonamide (PFOSA)	2019/09/07	NC		%	30
			6:2 Fluorotelomer sulfonic acid	2019/09/07	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			8:2 Fluorotelomer sulfonic acid	2019/09/07	NC		%	30

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Colm McNamara, Senior Analyst, Liquid Chromatography

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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AIR

28-Aug-19 13:41
Stephanie Pollen
B9N9789

J_L ENV-1151

ESS Laboratory — MAXXAM / BV — CHAIN OF CUSTODY

ESS Lab # 19H0808

Division of Thielsch Engineering, Inc.
185 Frances Avenue,Cranston RI 02910-2211
Tel. (401)461-7181 Fax (401)461-4486
www.esslaboratory.com

Turn Time __X_Standard Other_____
Regulatory State: **MA** RI CT NH NJ NY ME Other_____
Is this project for any of the following:(please circle)
MA-MCP Navy USACE CT DEP Other_____

Reporting Limits - **2-4 PPT**
Electonic Deliverables Excel Access PDF

Co. Name: ESS Laboratory
Project #:
Project Name: 19H0808
Contact Person: Shawn Morrell / Heather Masse
Proj. Location:
Address:
City , State:
Zip:
PO # B02815
Tel. ext 3083
Email: Smorrell@thielsch.com; Hmasse@thielsch.com

ESS Lab ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sample ID	Pres Code	# of Containers	Type of Container	Vol of Container	Analysis	PFAS - 537*
	8/22/19	1300	G	Aq	19H0808-01						X
	8/22/19	1310	G	Aq	19H0808-02						X
	8/22/19	1320	G	Aq	19H0808-03						X
	8/22/19	1330	G	Aq	19H0808-04						X
	8/22/19	1340	G	Aq	19H0808-05						X
	8/22/19	1350	G	Aq	19H0808-06						X
	8/22/19	1400	G	Aq	19H0808-07						X
	8/26/19	0820	G	Aq	19H0808-08						X
	8/22/19	1400	G	Aq	19H0808-09						X
	8/26/19	0900	G	Aq	19H0808-10						X
	8/22/19	0000	G	Aq	19H0808-11						X

Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA
Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present _____Yes _____No
Seals Intact ____ Yes ___x No NA:____
Cooler Temperature: 2.6/2.7/2.2

Internal Use Only
[ ] Pickup
[ ] Technician____

Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-_____
Sampled by :
Comments: *Please refer to email sent to Stephanie Pollen with compound list

Relinquished by: (Signature, Date & Time)	Received by: (Signature, Date & Time)	Relinquished by: (Signature, Date & Time)	Received by: (Signature, Date & Time)
8/27/19 8:46	DIPIKA SINGH 2019/08/28 13:41		
Relinquished by: (Signature, Date & Time)	Received by: (Signature, Date & Time)	Relinquished by: (Signature, Date & Time)	Received by: (Signature, Date & Time)

collected in accordance with MADEP CAM VIIA

Report Method Blank & Laboratory Control Sample Results

Ship To: 299 Cayuga Rd
Cheektowaga, NY 14225

19 1 of 2

ESS Laboratory
Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 19H0806

Turn Time: Standard Days
Regulatory State
Is this project for any of the following?: ○CT RCP ○MA MCP ○RGP
Reporting Limits
Electonic Deliverables ☐Data Checker ☐Excel ☐Other (Please Specify →)

Company Name: Clean Harbors	Project #: E08683573	Project Name: Baird + McGuire	
Contact Person: Lisa Irwin	Address: 775 South Street		
City: Holbrook	State: MA	Zip Code: 02343	PO #:
Telephone Number: 781-589-2432	FAX Number:	Email Address: irwin.lisa@cleanharbors.com	

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: PFAS (537)																
1	8/22/19	1300	Grab	Water	EW3	X																
2		1310			EW4A	X																
3		1320			EW6A	X																
4		1330			EW7	X																
5		1340			EW8	X																
6		1350			EW9	X																
7		1400			EW10	X																
8	8/26/19	0820			EB	X																
9	8/22/19	1400			FB	X																
10	8/26/19	0900	Grab		97-2	X																

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — P
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 1
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
Number of Containers per Sample:

Laboratory Use Only
Cooler Present: ✓ ○Drop Off
Seals Intact: ○Pickup
Cooler Temperature: 1.1 +0.8 °C +0.5 ICE RC

Sampled by: John Talley
Comments: Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
8/26/19 0930	Secure on-site fridge 8/26/19 @ 0930	8-26-19 1310	8/26/19 1310
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
8/26/19 1737	8/26/19 1737		

pg. 2 of 2

CHAIN OF CUSTODY

ESS Laboratory
Division of Thielsch Engineering, Inc.
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Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

ESS Lab # 190808

Turn Time: Standard Days

Reporting Limits

Regulatory State

Is this project for any of the following?: ○ CT RCP ○ MA MCP ○ RGP

Electonic Deliverables ☐ Data Checker ☐ Excel ☐ Other (Please Specify →)

Company Name: Clean Harbors
Contact Person: Lisa Irwin
City: Holbrook
State: MA
Telephone Number: 781-589-2432
FAX Number:

Project #: EQ8683573
Project Name: Baird + McGuire
Address: 775 South Street
Zip Code: 02343
PO #:
Email Address: irwin.lisa@cleanharbors.com

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: PFAS (537)
11	Lab Supplied			Water	Blank	X

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — P
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 1
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
Number of Containers per Sample:

Laboratory Use Only
Cooler Present: ✓
Seals Intact:
Cooler Temperature: 1.1+0.8 °C +0.5 ICE RC

○ Drop Off ⊘ Pickup

Sampled by: John Talley

Comments: Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
John Talley 8/26/19@0930	Secure on-site fridge 8/26/19 @0930	George Bergman 8-26-19 1310	R Carlos 8/26/19 1310
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
R Carlos 8/26/19 1737	8/26/19 1737		

ESTIMATED CONTAMINANT MASS REMOVAL CALCULATIONS

BAIRD & MCGUIRE SUPERFUND SITE

3rd Quarter 2019

Estimated Total Mass Removal of Arsenic from Jul. through Sep. 2019 = 35.98 pounds

Extraction Well	Total Arsenic Concentration (mg/L)	Total Arsenic Concentration Converted from mg/L to lbs/gallon	Total Volume of Groundwater Pumped in Gallons	Total Mass Removal (lbs)
EW3	0.335	0.0000027957	2,517,150	7.037223
EW4A	0.326	0.0000027206	3,022,520	8.223074
EW6A	0.138	0.0000011517	355,050	0.408899
EW7	0.249	0.0000020780	2,022,580	4.202933
EW8	0.296	0.0000024702	1,011,180	2.497857
EW9	14.8	0.0001235120	107,032	13.219735
EW10	0.906	0.0000075609	51,378	0.388466
Totals				**35.98**

Estimated Total Mass Removal of Pesticides from Jul. through Sep. 2019 = 0.012 pound

Extraction Well	Total Pesticides Concentration (µg/L)	Total Pesticides Concentration Converted from µg/L to lbs/gallon	Total Volume of Groundwater Pumped in Gallons	Total Mass Removal (lbs)
EW3	0.000	0.0000000000	2,517,150	0.000000
EW4A	0.000	0.0000000000	3,022,520	0.000000
EW6A	1.700	0.0000000142	355,050	0.005037
EW7	0.000	0.0000000000	2,022,580	0.000000
EW8	0.734	0.0000000061	1,011,180	0.006194
EW9	0.000	0.0000000000	107,032	0.000000
EW10	2.050	0.0000000171	51,378	0.000879
Totals				**0.012**

Estimated Total Mass Removal of SVOCs for Jul. through Sep. 2019 = 53.17 pounds

Extraction Well	Total SVOCs Concentration (µg/L)	Total SVOCs Concentration Converted from µg/L to lbs/gallon	Total Volume of Groundwater Pumped in Gallons	Total Mass Removal (lbs)
EW3	138	0.0000011492	2,517,150	2.892614
EW4A	477	0.0000039808	3,022,520	12.031920
EW6A	639	0.0000053327	355,050	1.893380
EW7	0.62	0.0000000052	2,022,580	0.010465
EW8	4,305	0.0000359270	1,011,180	36.328630
EW9	0.21	0.0000000018	107,032	0.000188
EW10	27.3	0.0000002278	51,378	0.011705
Totals				**53.17**

Estimated Total Mass Removal of VOCs for Jul. through Sep. 2019 = 24.91 pounds

Extraction Well	Total VOCs Concentration (µg/L)	Total VOCs Concentration Converted from µg/L to lbs/gallon	Total Volume of Groundwater Pumped in Gallons	Total Mass Removal (lbs)
EW3	305	0.0000025453	2,517,150	6.407024
EW4A	223	0.0000018610	3,022,520	5.624986
EW6A	496	0.0000041393	355,050	1.469666
EW7	0	0.0000000000	2,022,580	0.000000
EW8	1,352	0.0000112830	1,011,180	11.409131
EW9	0	0.0000000000	107,032	0.000000
EW10	0	0.0000000000	51,378	0.000000
Totals				**24.91**

Notes:

The approximate mass of contaminant was determined by converting the analytical results of each major COC (arsenic, total pesticides, total SVOCs, and total VOCs) to pounds per gallon for each individual extraction well. This figure then was multiplied by the volume of groundwater pumped by the individual extraction wells during the previous quarter. It is assumed that the concentration of the COCs at the time the extraction wells were sampled represents the concentration of the groundwater during the entire quarter; therefore, the calculated mass of contaminant removed is approximate.

--- = not sampled during this reporting period