

January 29, 2021

Mr. Alex Wardle  
Virginia Department of Environmental Quality (VDEQ)  
Northern Regional Office  
13901 Crown Court  
Woodbridge, VA 22193

and

Mr. Joshua Rodriguez  
Chief, Inspection and Enforcement Branch  
Water Quality Division  
Department of Energy & Environment (DOEE)  
1200 First Street NE, 5<sup>th</sup> Floor  
Washington, D.C. 20002

**Subject: Groundwater Monitoring Status Report – Fourth Quarter 2020  
HRP Potomac, LLC  
Alexandria, Virginia**

Dear Mr. Wardle and Mr. Rodriguez:

On behalf of HRP Potomac, LLC (HRP), Geosyntec Consultants (Geosyntec) has prepared this letter report to present the results of the groundwater monitoring event conducted in December 2020 at the former Potomac River Generating Station (the Site). The Site location is shown on **Figure 1**, and the Site features are shown on **Figure 2**.

## **SITE BACKGROUND**

The Site is a decommissioned coal-fired power-generating facility, which operated from 1949 through October 2012 under various owners/operators (including the Potomac Electric Power Company (Pepco), NRG, and GenOn). During operation, the power station used No. 2 heating oil to preheat the coal-fired boilers. The No. 2 heating oil used during operations was stored in two 25,000-gallon underground storage tanks (USTs). The USTs were closed in place in late 2012. The location of the USTs is shown on **Figure 2**.

In April 2013, the Virginia Department of Environmental Quality (VDEQ) issued pollution complaint number 2013-3154 (PC#2013-3154) associated with a fuel oil release from the USTs discovered during the UST closure activities. Site characterization activities, including soil and groundwater sampling to assess the extent of contamination, were conducted in 2013 and 2014, and the results were summarized in a Site Characterization Report and Site Characterization Report Addendum submitted to VDEQ. A Corrective Action Plan (CAP) was submitted to VDEQ in December 2014 to address petroleum constituents in groundwater. The CAP, which

included a total phase extraction (TPE), groundwater pump and treat (P&T) system, and an air sparge soil vapor extraction (AS/SVE) remediation system, was approved by the VDEQ in March 2015. The treatment systems were installed in October 2015 and operated continuously from May 2016 through March 2018.

In June 2014, the Department of Energy & Environment (DOEE) issued a Compliance Directive letter (Directive) in response to total petroleum hydrocarbon – diesel range organics (TPH-DRO) detections in groundwater migrating toward the Potomac River. An assessment was conducted to evaluate the potential for migration of groundwater around, under, and through the bulkhead wall. The results of that assessment were summarized in a Seep Report submitted to DOEE in January 2015. In March 2016, an investigation of the groundwater and soil immediately adjacent to the bulkhead was conducted to evaluate the potential for vertical migration of TPH-DRO below the bulkhead and into the Potomac River. The investigation and subsequent report concluded that no TPH-DRO were migrating vertically below the bulkhead. DOEE approved the conclusions of this investigation.

In March 2018, VDEQ and DOEE approved a trial shutdown of the remediation systems due to changes in the groundwater chemistry and creation of conditions not suitable for continued active groundwater recovery. Due to the observation of light nonaqueous phase liquid (LNAPL) in monitoring well TW-05, cycling of the P&T and TPE system resumed in August 2018 and continued through September 2019. In the third quarter of 2019, VDEQ and DOEE approved the permanent shutdown of the remediation systems.

Periodic groundwater monitoring was conducted during operation of the remediation systems and has continued since the systems were shut down. The installation and sampling of groundwater wells on the Mount Vernon Trail (located between the Site and the Potomac River) have been conducted under Special Use Permits issued by the National Park Service (NPS). Since 2015, periodic monitoring and status reports have been provided to DOEE, VDEQ, the City of Alexandria, and the NPS.

HRP purchased the property from PepCo in 2018 and negotiated the termination of GenOn's land lease in late 2020. As a result of these transactions, HRP has taken over responsibility for environmental remediation and monitoring activities.

## **DECEMBER 2020 GROUNDWATER MONITORING EVENT**

Geosyntec conducted groundwater monitoring activities from December 7 through December 10, 2020.

### **Water Level Measurements**

Geosyntec collected synoptic water level measurements at the Site monitoring wells. Depth to groundwater at each well was measured from a reference point on the inner well casing to the nearest 0.01-foot (ft) using a clean electronic water level indicator. At the time of the December

2020 sampling, groundwater monitoring wells MW-16S, MW-52, and RW-30S were dry, and well MW-105 could not be located. Water level measurements were recorded on field forms, which are included in **Attachment A**.

### **Groundwater Sampling**

After synoptic water level measurements were collected, groundwater samples were collected from the monitoring wells listed below. The monitoring well locations are shown on **Figure 2**.

#### Shallow Zone Monitoring Wells:

- MW-01S, MW-08S, MW/RW-10S, MW-15S, MW-16S, MW-25S, RW-28S, MW-51S, MW/RW-72S, MW-100S, MW-107, MW-108, MW/RW-123S, RW-05S, RW-25S, RW-116S, RW-117S, RW-118S, RW-119S, TW-12, and TW-14.

#### Deep Zone Monitoring Wells:

- MW/RW-14, MW-16, MW/RW-25, MW-27, MW/RW-31, MW-33, MW/RW-51, MW/RW-72, MW-100, MW-106, MW-121, MW-122, RW-1, RW-05, TW-02, TW-03, TW-04, TW-05, TW-06, and TW-07.

Groundwater samples were collected using a peristaltic pump with the intake set near the approximate center of each well screen or available water column (if the water level was below the top of the screen). The pump discharged via dedicated, 0.25-inch inner-diameter polyethylene tubing at flow rates between 90 milliliters per minute (ml/min) and 350 ml/min. Purging rates were modified, as necessary, to limit drawdown to less than 0.3 ft. During purging, water was passed through a YSI Model 556 multi-parameter water quality meter fitted with a flow-through cell, and the following water quality measurements were recorded: pH, temperature, specific conductance, dissolved oxygen, and oxidation-reduction potential. Turbidity was measured using a LaMotte 2020 turbidity meter. Purge water was monitored at approximately 5-minute intervals until stabilization criteria for groundwater quality parameters were met. The stabilized water quality measurements obtained immediately prior to sampling at each well were recorded on the field forms (see **Attachment A**). Water quality meters were calibrated in the field according to the manufacturer's guidelines and the QAPP<sup>1</sup> prior to sampling. Calibration sheets and field check information were recorded daily on field forms (see **Attachment A**).

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<sup>1</sup> The Site QAPP was developed by Geosyntec applicable to the samples collected under the DOEE Directive.

After purging was completed, groundwater samples were collected by removing the pump discharge tubing from the flow through cell intake and filling clean, pre-preserved, laboratory-provided sample bottles directly from the discharge tubing. Samples were appropriately labeled, recorded on the chain-of-custody form, and preserved on wet ice in a laboratory-supplied cooler immediately following collection. The samples were shipped via courier under executed chain-of-custody forms to Eurofins Lancaster Laboratories Env, LLC (ELLE) in Lancaster, Pennsylvania for analysis.

During groundwater purging, the drawdown in the following wells could not be controlled despite pumping at the pump's lowest setting: MW-15S, MS-27, MW-31, MW-72, MW-72S, MW-107, RW-117S, MW-122, MW-123S, RW-05S, and RW-25S. These monitoring wells purged dry during sampling. Geosyntec allowed these monitoring wells to recover and then collected grab samples, but no groundwater quality parameters were collected from these wells.

Purge water generated during groundwater sampling was containerized in steel, Department of Transportation (DOT)-approved, 55-gallon drums. The drums were staged on site pending waste characterization and off-site disposal.

Between sample locations and at the beginning and end of each day, nondedicated, down-hole sampling equipment was decontaminated. Decontamination was completed in a three-step procedure in accordance with the QAPP. While moving equipment between sampling locations, equipment was stored on clean disposable plastic sheeting.

Groundwater samples were analyzed for TPH-DRO, via Method 8015B. A subset of wells (TW-01 through TW-07 and TW-14) were also monitored for selected volatile organic compounds (VOCs; EPA Method 8260B), polycyclic aromatic hydrocarbons (PAHs; EPA Method 8270), oil and grease (EPA Method 1664B), and TPH-gasoline range organics (GRO; EPA Method 8015B) in accordance with the DOEE Directive.

Geosyntec collected quality assurance (QA) samples in accordance with the QAPP prepared under the DOEE Directive. QA samples included one trip blank per cooler containing samples for VOCs, one blind duplicate sample (from well TW-06), one matrix spike/matrix spike duplicate (from well TW-02), and one equipment rinsate blank (after TW-14 was sampled). Matrix spike/matrix spike duplicate and blind duplicate samples were collected at the same time and in an identical manner as their corresponding field groundwater samples. An equipment blank was collected after decontamination of the equipment. The QA samples were analyzed for the same analytes as the field samples, except for the trip blanks, which were analyzed only for VOCs.



## RESULTS AND DISCUSSION

### Groundwater Flow and Direction

Geosyntec used water level data obtained during the December 2020 sampling in conjunction with the top-of-casing elevation data from prior surveys to estimate potentiometric surfaces for the shallow and the deep groundwater zones. Groundwater level measurements and associated groundwater elevations are summarized in **Table 1**, and potentiometric surface maps for the shallow and deep groundwater zones are provided on **Figure 3** and **Figure 4**, respectively.

Shallow groundwater in the monitoring wells was encountered at elevations ranging from 6.57 feet above mean sea level (ft-amsl) (TW-12S) to 10.61 ft-amsl (RW-119S). Groundwater in the shallow zone generally flows east/northeast toward the Potomac River (**Figure 3**). Groundwater elevations in the vicinity of the USTs appear to form a mound driving flow radially away from the USTs. In general, the groundwater elevations and flow directions observed in the shallow zone are consistent with historical groundwater monitoring event observations.

Deep groundwater in the monitoring wells was encountered at elevations ranging from -1.85 ft-amsl (MW-100) to 7.87 ft-amsl (MW/RW-05). The two most prominent features in the potentiometric surface for deep groundwater are the apparent groundwater mounding conditions near the sheet pile wall and the apparent north-south ground divide between the USTs and pump house. (**Figure 4**). In general, the groundwater flow directions in the deep zone are consistent with historical groundwater flow directions. However, groundwater elevations in the deep zone have historically varied due to the operation of the groundwater remediation system and nearby construction dewatering.

### Groundwater Quality

The results of the laboratory analyses for the December 2020 sampling were provided in laboratory reports dated December 21 and December 23, 2020 (**Attachment B**). Geosyntec reviewed the laboratory quality control (QC) data and the results of the QA samples and then assigned additional data qualifications based on the results of the review. Below is a summary of the observed data quality issues:

- Samples submitted for PAH analysis from monitoring well TW-14 were analyzed outside of hold time due to a laboratory error. The laboratory reported all PAH results as not detected. Geosyntec qualified the data as estimated not detected (UJ) at the method detection limit. Historical PAH concentration data from TW-14 were consistent with the Q4 2020 results.
- The laboratory control sample duplicate relative percent difference (RPD) was greater than the internal data quality standard set by the laboratory (20%) for TPH-DRO samples submitted under laboratory report number 410-23823-1. Geosyntec qualified the data as estimated (J) as reported.

- The sample submitted for TPH-DRO analysis from monitoring well RW-116S had a low surrogate recovery. Geosyntec qualified the data as estimated (J) as reported.
- For the sample collected at MW-51, the laboratory indicated that contamination was likely introduced into the sample during preparation and/or analysis. The result of 880 micrograms per liter ( $\mu\text{g/L}$ ) was consistent with historical concentration data and is reported as estimated (J).

Based on Geosyntec's data quality evaluation, the qualified data are considered reliable and usable subject to the minor QC observations above. **Table 2** presents a summary of the TPH-DRO concentrations from the monitoring wells sampled. **Table 3** presents a summary of the concentrations of selected VOCs (BTEX, MTBE, EDB, and EDC), TPH-GRO, and TPH-ORO in monitoring wells sampled under the DOEE Directive. **Table 4** presents a summary PAH concentrations in monitoring wells sampled under the DOEE Directive.

### *Shallow Zone Groundwater Quality*

The TPH-DRO concentration in the groundwater sample collected from monitoring well RW-25S (39,000  $\mu\text{g/L}$ ) exceeded the VDEQ Storage Tank Program<sup>2</sup> groundwater quality standard (GWQS) of 15,000  $\mu\text{g/L}$  (**Table 2**). No other TPH-DRO concentrations measured in the shallow zone exceeded the VDEQ GWQS for TPH-DRO.

Only one shallow zone monitoring well (TW-14) was sampled for the additional analytes under the DOEE Directive (**Table 3** and **Table 4**). There were no measured exceedances of the applicable DOEE surface water quality standards<sup>3</sup> (SWQS) in the sample collected from this well.

### *Deep Zone Groundwater Quality*

The TPH-DRO concentrations of 17,000  $\mu\text{g/L}$  and 16,000  $\mu\text{g/L}$  at monitoring wells MW-25 and TW-05, respectively, exceeded the VDEQ Storage Tank Program GWQS of 15,000  $\mu\text{g/L}$  (**Table 2**). No other TPH-DRO concentrations measured in the deep zone exceeded the VDEQ GWQS.

Deep monitoring wells TW-02, TW-03, TW-04, TW-05, TW-06, and TW-07 were sampled for the additional analytes under the DOEE Directive (**Table 3** and **Table 4**). At monitoring well TW-03, the concentration of indeno-(1,2,3-cd)pyrene (0.086  $\mu\text{g/L}$ ) exceeded the SWQS of 0.018  $\mu\text{g/L}$ .

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<sup>2</sup> Groundwater Quality Standards - Virginia Department of the Environment (VDEQ) Storage Tank Program Technical Manual Table 6-2.

<sup>3</sup> Surface Water Quality Standards - Department of Energy & Environment (DOEE) Risk Based Corrective Action (RBCA) Surface Water Standards - Table 5-6 Groundwater and Surface Water Standards at the Point of Exposure and 21 DCMR 1100 DDOE.

The indeno-(1,2,3-cd)pyrene concentration detected in monitoring well TW-03 was evaluated with methods consistent with those outlined in the *District of Columbia Risk Based Corrective Action Technical Guidance*.<sup>4</sup> to calculate the maximum allowable groundwater concentration of indeno-(1,2,3-cd)pyrene at the point of discharge. Based on that evaluation, the indeno-(1,2,3-cd)pyrene concentration measured in TW-03 was at least four orders of magnitude below the maximum allowable concentration at the point of discharge. The calculation of allowable groundwater discharge concentration to surface water is provided as **Attachment C**.

## CONCLUSIONS

The following conclusions are based on the data compiled during the December 2020 groundwater monitoring event at the former Potomac River Generating Station:

- Interpreted groundwater flow suggests that the sheet pile wall continues to act as barrier to groundwater flow toward the Potomac River, as shown in the occurrence of groundwater mounds in deep groundwater wells on the north and south side of the pump house.
- LNAPL was not found in any of the MW/RW series wells.
- Wells RW-25S and MW-25 had elevated TPH-DRO concentrations above the VDEQ GWQS. Both of these wells are installed near the USTs and are considered source-area wells. TPH-DRO concentrations at these two locations are consistent with historical results.
- Monitoring well TW-05 had an elevated TPH-DRO concentration slightly above the VDEQ GWQS. This well is located downgradient of the USTs and is considered a shoreline well. The TPH-DRO concentration at this location is consistent with previously observed concentrations at this location. The concentrations of TPH-DRO in monitoring wells TW-06, TW-07, and TW-03, which are downgradient of TW-05 and immediately adjacent to the Potomac River were less than the VDEQ GWQS and at least two orders of magnitude less than the concentration at TW-05.

Based on the sampling results and conclusions presented above, groundwater conditions at the Site are consistent with previous sampling events and groundwater discharging from the Site does not appear to be adversely impacting the surface water quality of the Potomac River.

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<sup>4</sup> DOEE Toxic Substance Division Underground Storage Tanks Branch, June 2011, District of Columbia Risk-Based Corrective Action Technical Guidance (Risk-Based Decision Making)

## CLOSING

Geosyntec appreciates the opportunity to provide this information to you. Should you have any questions or require additional information, please contact either of the undersigned at (410) 381-4333.

Sincerely,



Mark Bauer, P.G.  
Geologist



Mark A. Johnson  
Principal

Attachments:	Table 1:	Summary of Groundwater Elevations
	Table 2:	Summary of Groundwater Analytical Results – Total Petroleum Hydrocarbons - Diesel Range Organics
	Table 3:	Summary of Groundwater Analytical Results – Volatile Organic Compounds, Total Petroleum Hydrocarbons, and Oil & Grease
	Table 4:	Summary of Groundwater Analytical Results – Polycyclic Aromatic Hydrocarbons
	Figure 1:	Site Location Map
	Figure 2:	Site Layout Map
	Figure 3:	Potentiometric Surface Map – Shallow Zone
	Figure 4:	Potentiometric Surface Map – Deep Zone
	Attachment A:	Field Sampling Forms
	Attachment B:	Laboratory Analytical Reports –Fourth Quarter 2020
	Attachment C:	Allowable Groundwater Concentration Calculation

Copy to: Mr. Joe Jeray – HRP  
Ms. Julianna Connolly – Green Ladder Environmental, LLC  
Mr. Khoa Tran – City of Alexandria  
Mr. Peter McCallum – NPS

# TABLES

**Table 1**  
**Summary of Groundwater Elevations**  
**Former Potomac River Generating Station, Alexandria, Virginia**

Well ID	Date	Top of Casing (ft-msl)	Depth to Water (ft- btoc)	Measured Depth to Bottom (ft-btoc)	Groundwater Elevation (ft-msl)	Comments
<i>Shallow Wells</i>						
MW-01S	12/07/2020	31.04	22.69	27.3	8.35	
RW-05S	12/07/2020	31.98	22.57	26.3	9.41	
MW-08S	12/07/2020	30.86	21.33	24.8	9.53	
MW/RW-10S	12/07/2020	31.24	21.94	26.1	9.30	
TW-12S	12/07/2020	31.33	24.76	25.0	6.57	
TW-14	12/07/2020	11.61	3.02	6.2	8.59	
MW-15S	12/07/2020	31.03	23.74	26.0	7.29	
MW-16S	12/07/2020	31.03	DRY	24.7	-	
MW-25S	12/07/2020	31.22	21.80	33.4	9.42	
RW-25S	12/07/2020	31.12	22.92	24.8	8.20	
RW-28S	12/07/2020	31.55	23.06	26.3	8.49	
RW-30S	12/07/2020	31.32	DRY	29.1	-	
MW-51S	12/07/2020	31.00	20.79	23.3	10.21	
MW/RW-72S	12/07/2020	30.63	20.96	23.8	9.67	
MW-100S	12/07/2020	31.03	20.51	24.2	10.52	
MW-103	12/07/2020	11.07	3.92	14.5	7.15	
MW-104	12/07/2020	12.00	3.57	12.0	8.43	
MW-105	-	10.94	NM	-	-	could not locate
MW-107	12/07/2020	15.74	7.47	11.0	8.27	
MW-108	12/07/2020	15.61	6.99	9.2	8.62	
MW-109S	-	19.27	NM	-	-	Basement Well
MW-110S	-	19.13	NM	-	-	Basement Well
MW-112S	-	19.22	NM	-	-	Basement Well
RW-116S	12/07/2020	31.61	22.46	26.0	9.15	
RW-117S	12/07/2020	32.31	22.45	24.6	9.86	
RW-118S	12/07/2020	30.81	20.93	24.2	9.88	
RW-119S	12/07/2020	30.53	19.92	26.5	10.61	
MW/RW-123S	12/07/2020	31.22	21.67	26.3	9.55	



**Table 1**  
**Summary of Groundwater Elevations**  
**Former Potomac River Generating Station, Alexandria, Virginia**

Well ID	Date	Top of Casing (ft-msl)	Depth to Water (ft- btoc)	Measured Depth to Bottom (ft-btoc)	Groundwater Elevation (ft-msl)	Comments
<i>Deep Wells</i>						
RW-1	12/07/2020	31.19	32.47	40.8	-1.28	
MW/RW-05	12/07/2020	32.20	24.33	31.9	7.87	
MW-11	12/07/2020	30.85	DRY	29.3	-	
MW/RW-14	12/07/2020	31.33	32.11	36.6	-0.78	
MW-16	12/07/2020	30.97	30.86	35.5	0.11	
MW/RW-25	12/07/2020	32.75	31.77	35.6	0.98	
MW-27	12/07/2020	31.44	31.03	33.8	0.41	
MW/RW-31	12/07/2020	31.42	31.72	33.7	-0.30	
MW-33	12/07/2020	30.88	32.02	34.8	-1.14	
MW/RW-51	12/07/2020	31.62	32.28	36.3	-0.66	
MW-52	12/07/2020	30.17	DRY	25.5	-	
MW-70	12/07/2020	30.86	31.40	35.2	-0.54	
MW/RW-72	12/07/2020	31.03	32.21	33.1	-1.18	
MW-100	12/07/2020	30.78	32.63	36.1	-1.85	
MW-102	12/07/2020	29.72	26.14	37.4	3.58	
MW-106	12/07/2020	11.12	6.13	8.9	4.99	
MW-109	-	19.13	NM	-	-	Basement Well
MW-110	-	19.51	NM	-	-	Basement Well
MW-111	-	19.17	NM	-	-	Basement Well
MW-112	-	19.08	NM	-	-	Basement Well
MW-113	-	19.11	NM	-	-	Basement Well
MW-114	-	19.26	NM	-	-	Basement Well
MW-121	12/07/2020	31.43	32.13	37.0	-0.70	
MW-122	12/07/2020	31.64	32.47	35.4	-0.83	
TW-02	12/07/2020	16.11	12.51	21.6	3.60	
TW-03	12/07/2020	10.40	8.48	14.6	1.92	
TW-04	12/07/2020	9.49	5.31	14.9	4.18	
TW-05	12/07/2020	9.64	3.76	13.4	5.88	
TW-06	12/07/2020	9.99	4.64	12.6	5.35	
TW-07	12/07/2020	9.88	6.78	15.0	3.10	

**Notes:**

ft-msl: feet above mean sea level

ft-btoc: feet below top of casing

-: Not recorded/calculated

**Table 2**  
**Summary of Groundwater Analytical Results - Total Petroleum Hydrocarbons - Diesel Range Organics**  
**Former Potomac River Generating Station, Alexandria, Virginia**

Sample Location	Date	TPH-DRO (µg/L)
	GWQS [1]	15,000
	SWQS [2,3]	NA
<b>Shallow Zone Wells</b>		
MW-01S	12/09/2020	1,700
MW-08S	12/09/2020	2,200
MW/RW-10S	12/10/2020	4,300 J
MW-15S	12/11/2020	400 J
MW-16S	12/10/2020	<59
MW/RW-25s	12/10/2020	2,700 J
MW-51S	12/09/2020	3,100
MW/RW-72S	12/11/2020	1,500 J
MW-100S	12/08/2020	<57
MW-107	12/09/2020	160
MW-108	12/08/2020	<57
MW/RW-123S	12/10/2020	11,000 J
RW-05S	12/10/2020	3,400 J
RW-25S	12/11/2020	<b>39,000 J</b>
RW-28S	12/07/2020	360
RW-116S	12/10/2020	6,800 J
RW-117S	12/11/2020	3,200 J
RW-118S	12/10/2020	2,300 J
RW-119S	12/09/2020	480
TW-14	12/10/2020	<58

Sample Location	Date	TPH-DRO (µg/L)
	GWQS [1]	15,000
	SWQS [2,3]	NA
<b>Deep Zone Wells</b>		
MW/RW-14	12/10/2020	1,000 J
MW-25	12/10/2020	<b>17,000 J</b>
MW-27	12/09/2020	1,400
MW/RW-31	12/08/2020	110
MW-33	12/08/2020	380
MW/RW-51	12/09/2020	880 J
MW/RW-72	12/11/2020	380 J
MW-100	12/08/2020	<58
MW-106	12/08/2020	<56
MW-121	12/09/2020	120
MW-122	12/10/2020	<59
RW-1	12/10/2020	640 J
RW-05	12/10/2020	15,000 J
TW-02	12/08/2020	<57
TW-03	12/08/2020	<57
TW-04	12/09/2020	260
TW-05	12/09/2020	<b>16,000</b>
TW-06	12/08/2020	65 J
	12/8/2020 [4]	270 J
TW-07	12/9/2020	99 J

Notes:

µg/L: micrograms per liter

TPH-DRO: Total petroleum hydrocarbons-diesel range organics.

J: Constituent detected below reportable quantitation limit, or result is an estimated value.

<: Indicates the sample results were not detected above the listed the method detection limit.

**Gray and Bold indicates the results exceeds a groundwater quality standard.**

[1] Groundwater Quality Standards - Virginia Department of the Environment (VDEQ) Storage Tank Program Technical Manual Table 6-2.

[2] Surface Water Quality Standards - Virginia Department of the Environment (VDEQ) Criteria For Surface Water Standards 9VAC25-260-140.

[3] Surface Water Quality Standards - Department Of Energy & Environment (DOEE) Risk Based Corrective Action (RBCA) Surface Water Standards - Table 5-6 Groundwater and Surface Water Standards at the Point of Exposure and 21 DCMR 1100 DDOE.

[4] Duplicate sample results.

**Table 3**  
**Summary of Groundwater Analytical Results - Volatile Organic Compounds, Total Petroleum Hydrocarbons, and Oil & Grease**  
**Former Potomac River Generating Station, Alexandria, Virginia**

Sample Location	Date	Volatile Organic Compounds (µg/L)								TPHs (µg/L)	
		Benzene	Toluene	Ethylbenzene	Xylene	Methyl tert-butylether	Tertbutyl alcohol	1,2-Dichloroethane	1,2-Dibromoethane	TPH-GRO	Oil and Grease
	GWQS [1]	5	1,000	700	10,000	22	1,410	5	0.0118	34,500	31,800
	SWQS [2]	51	600	40	NA	NA	NA	37	NA	NA	10,000
<b>Shallow Zone Wells</b>											
TW-14	12/7/2020 [9]	<0.2	<0.2	<0.2	<0.8	<0.2	<10	<2	<0.3	<23	1,800 J
<b>Deep Zone Wells</b>											
TW-02	12/8/2020	<0.2	<0.2	<0.2	<0.8	<0.2	<10	<2	<0.3	<23	<1,700
TW-03	12/8/2020	<0.2	<0.2	<0.2	<0.8	<0.2	<10	<2	<0.3	<23	2,300 J
TW-04	12/9/2020	<0.2	<0.2	<0.2	<0.8	<0.2	<10	<2	<0.3	<23	3,600 J
TW-05	12/9/2020	<0.2	<0.2	<0.2	<0.8	<0.2	<10	<2	<0.3	33 J	5,600 J
TW-06	12/8/2020	<0.2	<0.2	<0.2	<0.8	<0.2	<10	<2	<0.3	<23	<1,700
	12/8/2020 [3]	<0.2	<0.2	<0.2	<0.8	<0.2	<10	<2	<0.3	<23	1,900 J
TW-07	12/9/2020	<0.2	<0.2	<0.2	<0.8	<0.2	<10	<2	<0.3	<23	2,300 J

Notes:

NS: Not Sampled

NA: No applicable surface water standard.

µg/L: micrograms per liter

J: Constituent detected below reportable quantitation limit, or result is an estimated value.

GRO: gasoline range organics

TPH: total petroleum hydrocarbons

<: Indicates the sample results were not detected above the listed the method detection limit

[1] Groundwater Quality Standards - Department Of Energy & Environment (DOEE) Risk Based Corrective Action (RBCA) Ground Water Standards - Table 5-8 Risk-Based Levels for a Resident Child - Domestic Use of Water (Ingestion and Inhalation).

[2] Surface Water Quality Standards - Department Of Energy & Environment (DOEE) Risk Based Corrective Action (RBCA) Surface Water Standards - Table 5-6 Groundwater and Surface Water Standards at the Point of Exposure and 21 DCMR 1100 DDOE.

[3] Duplicate sample results

**Table 4**  
**Summary of Groundwater Analytical Results**  
**Potomac River Generating Station, Alexandria, Virginia**

Sample Location	Date/ Standards	Polycyclic Aromatic Hydrocarbons (PAHs) (µg/l)							
		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(b)fluoranthene	Benzo[a]anthracene	Benzo[a]pyrene
	GWQS [1,2]	NA	NA	939	NA	4,690	0.0529	0.0529	NA
	SWQS [3]	NA	NA	50,000	NA	40,000	18	18	18
Shallow Zone Wells									
TW-14	12/7/2020	0.021 UJ	0.063 UJ	0.021 UJ	0.021 UJ	0.021 UJ	0.084 UJ	0.021 UJ	0.021 UJ
Deep Zone Wells									
TW-02	12/8/2020	0.025 J	<0.063	0.073 J	<0.021	0.048 J	<0.085	0.049 J	0.057 J
TW-03	12/8/2020	<0.021	<0.063	0.033 J	<0.021	<0.021	<0.084	0.026 J	0.036 J
TW-04	12/9/2020	1.4	0.14 J	5.1	0.097 J	0.4	<0.084	<0.021	<0.021
TW-05	12/9/2020	<0.021	<0.064	<0.021	<0.021	<0.021	<0.086	<0.021	0.027 J
TW-06	12/8/2020	<0.021	<0.063	0.036 J	<0.021	<0.021	<0.084	<0.021	<0.021
	12/8/2020 [4]	0.023 J	<0.063	0.062 J	<0.021	0.068 J	<0.085	0.060 J	0.064 J
TW-07	12/9/2020	<0.021	<0.064	<0.021	<0.021	0.030 J	<0.085	<0.021	<0.021

Notes:

NS Not Sampled

NA No applicable surface water standard

µg/L micrograms per liter

J Constituent detected below reportable quantitation limit, or result is an estimated value

< Indicates the sample results were not detected above the listed the method detection limit (MDL).

UJ Concentration is estimated as not detected at the MDL, due analysis outside of the hold time.

[1] Groundwater Quality Standards - Department Of Energy & Environment (DOEE) Risk Based Corrective Action (RBCA) Ground Water Standards - Table 5-8 Risk-Based Levels for a Resident Child - Domestic Use of Water (ingestion and Inhalation)

[2] Groundwater Quality Standards - 21 DCMR 1155 Groundwater Standards. Criteria used when no applicable criteria published in RBCA Table 5-8

[3] Surface Water Quality Standards - Department Of Energy & Environment (DOEE) Risk Based Corrective Action (RBCA) Surface Water Standards - Table 5-6 Groundwater and Surface Water Standards at the Point of Exposure and 21 DCMR 1100 DDOE

[4] Duplicate sample results

**Bold** indicates an exceedance, for comparative purpose, of one or more standards (groundwater and/or surface water)

**Table 4**  
**Summary of Groundwater Analytical Results**  
**Potomac River Generating Station, Alexandria, Virginia**

Sample Location	Date/ Standards	Polycyclic Aromatic Hydrocarbons (PAHs) (µg/l)							
		Benzo [g,h,i] perylene	Benzo [k] fluoranthene	Benzo (e) pyrene	Biphenyl	Chrysene	Dibenz[a,h]-anthracene	Dibenzofuran	Dibenzo-thiophene
		GWQS [1,2]	469	0.0785	NA	NA	0.785	NA	NA
	SWQS [3]	NA	18	NA	NA	18	18	NA	NA
<b>Shallow Zone Wells</b>									
TW-14	12/7/2020	0.063 UJ	0.021 UJ	0.021 UJ	0.042 UJ	0.021 UJ	0.021 UJ	0.021 UJ	0.042 UJ
<b>Deep Zone Wells</b>									
TW-02	12/8/2020	<0.063	0.036 J	<0.021	0.046 J	0.050 J	0.034 J	0.045 J	<0.042
TW-03	12/8/2020	0.077 J	0.056 J	<0.021	<0.042	0.043 J	0.072 J	<0.021	<0.042
TW-04	12/9/2020	<0.063	<0.021	<0.021	0.26	<0.021	<0.021	1	0.099 J
TW-05	12/9/2020	<0.064	<0.021	<0.021	<0.043	0.021 J	<0.021	<0.021	<0.043
TW-06	12/8/2020	<0.063	<0.021	<0.021	<0.042	<0.021	<0.021	<0.021	<0.042
	12/8/2020 [4]	<0.063	0.047 J	<0.021	<0.042	0.062 J	0.044 J	0.043 J	<0.042
TW-07	12/9/2020	<0.064	<0.021	<0.021	<0.042	<0.021	<0.021	<0.021	<0.042

Notes:

NS Not Sampled

NA No applicable surface water standard

µg/L micrograms per liter

J Constituent detected below reportable quantitation limit, or result is an estimated value

< Indicates the sample results were not detected above the listed the method detection limit (MDL).

UJ Concentration is estimated as not detected at the MDL, due analysis outside of the hold time.

[1] Groundwater Quality Standards - Department Of Energy & Environment (DOEE) Risk Based Corrective Action (RBCA) Ground Water Standards - Table 5-8 Risk-Based Levels for a Resident Child - Domestic Use of Water (ingestion and Inhalation)

[2] Groundwater Quality Standards - 21 DCMR 1155 Groundwater Standards. Criteria used when no applicable criteria published in RBCA Table 5-8

[3] Surface Water Quality Standards - Department Of Energy & Environment (DOEE) Risk Based Corrective Action (RBCA) Surface Water Standards - Table 5-6 Groundwater and Surface Water Standards at the Point of Exposure and 21 DCMR 1100 DDOE

[4] Duplicate sample results

**Bold** indicates an exceedance, for comparative purpose, of one or more standards (groundwater and/or surface water)

Table 4  
Summary of Groundwater Analytical Results - Polycyclic Aromatic Hydrocarbons  
Potomac River Generating Station, Alexandria, Virginia

Sample Location	Date/ Standards	Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)							
		Fluoranthene	Fluorene	Indeno- (1,2,3-cd)pyrene	Napthalene	Naphtho- benzo- thiophene	Perylene	Phenanthrene	Pyrene
	GWQS [1,2]	626	626	NA	0.268	NA	NA	469	469
	SWQS [3]	140	5,300	0.018	600	NA	NA	NA	4,000
Shallow Zone Wells									
TW-14	12/7/2020	0.021 UJ	0.021 UJ	0.084 UJ	0.063 UJ	0.042 UJ	0.042 UJ	0.063 UJ	0.042 UJ
Deep Zone Wells									
TW-02	12/8/2020	0.083 J	0.050 J	<0.085	<0.063	<0.042	<0.042	0.073 J	0.077 J
TW-03	12/8/2020	0.024 J	0.098 J	0.086 J	<0.063	<0.042	<0.042	<0.063	0.055 J
TW-04	12/9/2020	0.21	2.3	<0.084	2.4	<0.042	<0.042	0.68	0.18
TW-05	12/9/2020	<0.021	<0.021	<0.086	<0.064	<0.043	<0.043	<0.064	0.300
TW-06	12/8/2020	<0.021	<0.021	<0.084	<0.063	<0.042	<0.042	<0.063	0.074 J
	12/8/2020 [4]	0.069 J	0.063 J	<0.085	<0.063	<0.042	<0.042	0.066 J	0.1
TW-07	12/9/2020	<0.021	<0.021	<0.085	<0.064	<0.042	<0.042	<0.064	<0.042

Notes:

NS: Not Sampled

NA: No applicable surface water standard

µg/L: micrograms per liter

J: Constituent detected below reportable quantitation limit, or result is an estimated value

< Indicates the sample results were not detected above the listed the method detection limit (MDL).

UJ: Concentration is estimated as not detected at the MDL, due analysis outside of the hold time.

[1] Groundwater Quality Standards - Department Of Energy & Environment (DOEE) Risk Based Corrective Action (RBCA) Ground Water Standards - Table 5-8 Risk-Based Levels for a Resident Child - Domestic Use of Water (ingestion and Inhalation)

[2] Groundwater Quality Standards - 21 DCMR 1155 Groundwater Standards. Criteria used when no applicable criteria published in RBCA Table 5-8

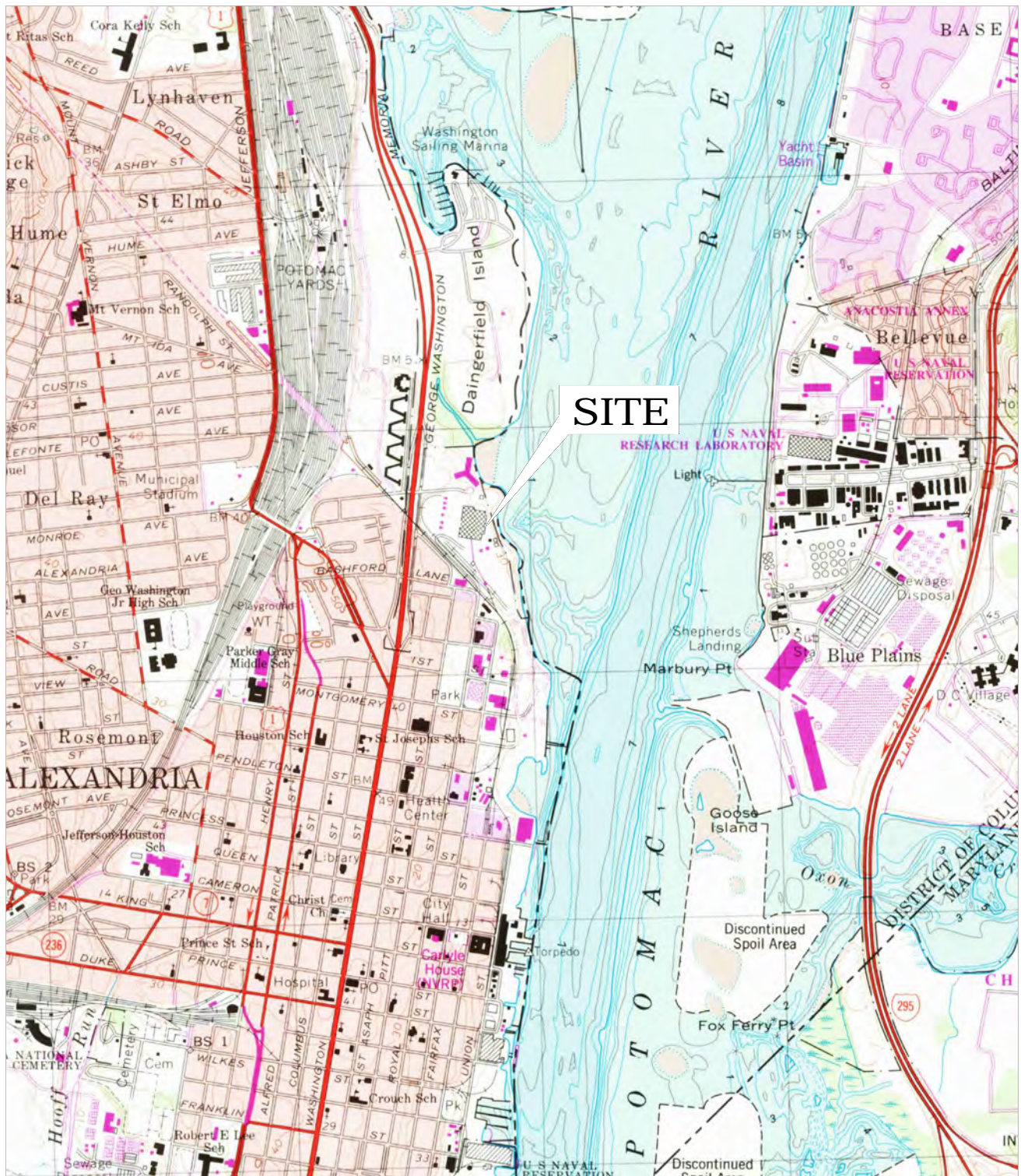
[3] Surface Water Quality Standards - Department Of Energy & Environment (DOEE) Risk Based Corrective Action (RBCA) Surface Water Standards - Table 5-6 Groundwater and Surface Water Standards at the Point of Exposure and 21 DCMR 1100 DDOE

[4] Duplicate sample results

**Bold** indicates an exceedance, for comparative purpose, of one or more standards (groundwater and/or surface water)



# FIGURES



REFERENCE: "ALEXANDRIA, VIRGINIA"  
7.5' QUADRANGLE, USGS, (1965,  
PHOTOREVISED 1983, BATHYMETRY 1982).

2000 1000 0 2000  
APPROXIMATE SCALE: 1" = 2000'

## SITE LOCATION MAP

FORMER POTOMAC RIVER GENERATING STATION  
ALEXANDRIA, VIRGINIA

**Geosyntec**  
consultants

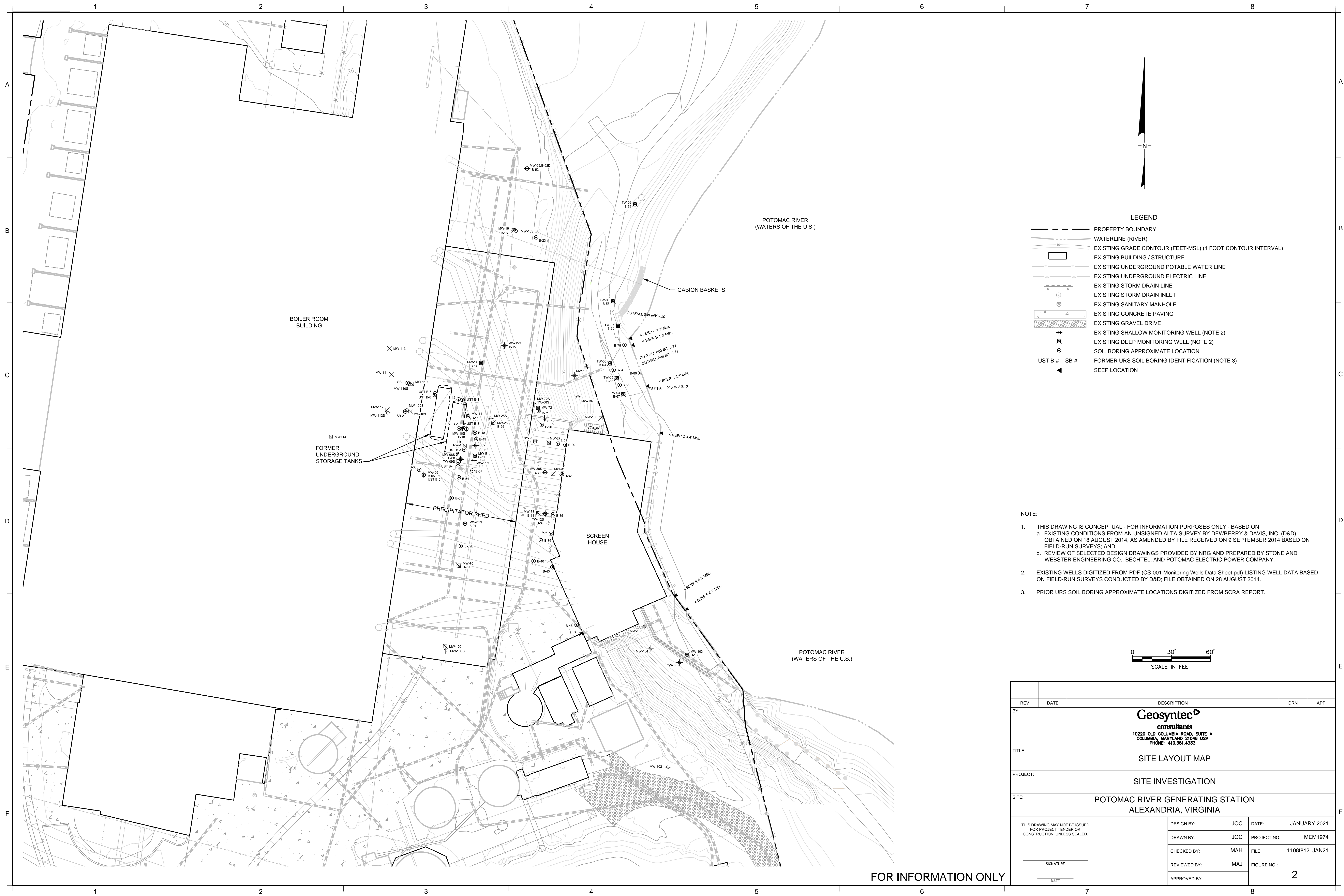
COLUMBIA, MARYLAND

DATE:	JANUARY 2021
PROJECT NO.	MEM1974
DOCUMENT NO.	
FILE NO.	1108f811_JAN21
FIGURE NO.	1



QUADRANGLE LOCATION  
NO SCALE





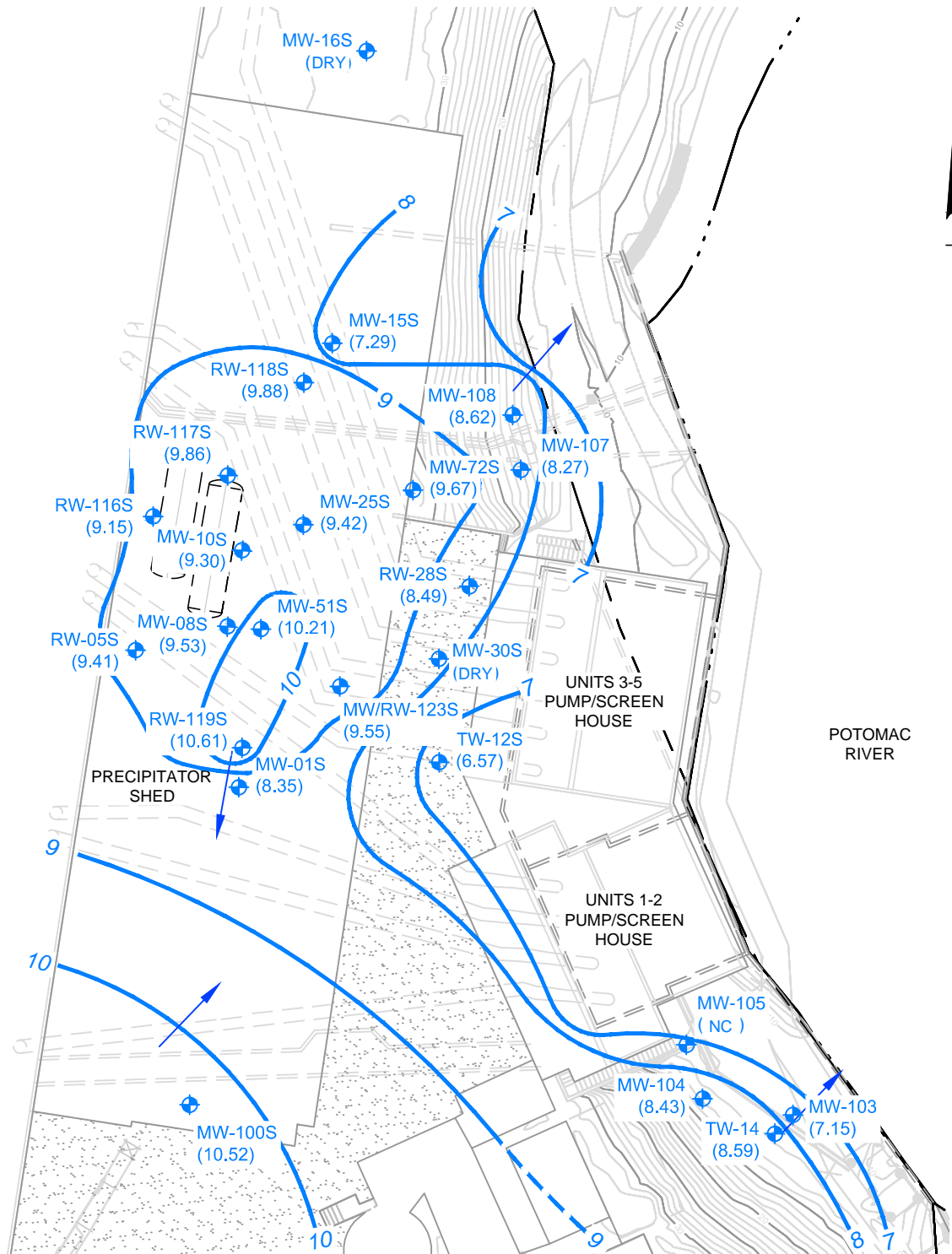
FOR INFORMATION ONLY

- NOTE:
- THIS DRAWING IS CONCEPTUAL - FOR INFORMATION PURPOSES ONLY - BASED ON
    - EXISTING CONDITIONS FROM AN UNSIGNED ALTA SURVEY BY DEWBERRY & DAVIS, INC. (D&D) OBTAINED ON 18 AUGUST 2014, AS AMENDED BY FILE RECEIVED ON 9 SEPTEMBER 2014 BASED ON FIELD-RUN SURVEYS; AND
    - REVIEW OF SELECTED DESIGN DRAWINGS PROVIDED BY NRG AND PREPARED BY STONE AND WEBSTER ENGINEERING CO., BECHTEL, AND POTOMAC ELECTRIC POWER COMPANY.
  - EXISTING WELLS DIGITIZED FROM PDF (CS-001 Monitoring Wells Data Sheet.pdf) LISTING WELL DATA BASED ON FIELD-RUN SURVEYS CONDUCTED BY D&D; FILE OBTAINED ON 28 AUGUST 2014.
  - PRIOR URS SOIL BORING APPROXIMATE LOCATIONS DIGITIZED FROM SCRA REPORT.

REV	DATE	DESCRIPTION	DRN	APP	
BY: <b>Geosyntec</b> consultants 10220 OLD COLUMBIA ROAD, SUITE A COLUMBIA, MARYLAND 21046 USA PHONE: 410.381.4333					
TITLE: SITE LAYOUT MAP					
PROJECT: SITE INVESTIGATION					
SITE: POTOMAC RIVER GENERATING STATION ALEXANDRIA, VIRGINIA					
THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.		DESIGN BY: JOC	DATE: JANUARY 2021		
SIGNATURE		DRAWN BY: JOC	PROJECT NO.: MEM1974		
DATE		CHECKED BY: MAH	FILE: 1108/812_JAN21		
		REVIEWED BY: MAJ	FIGURE NO.: 2		
		APPROVED BY:			



BOILER ROOM  
BUILDING



#### LEGEND

- Property Boundary
- Waterline (river)
- + Monitoring Well / Well ID (Water Elevation)
- Potentiometric Contour
- Inferred Potentiometric Contour
- Groundwater Flow Direction
- (NC) Not Collected

**NOTES:**  
Data collected by Geosyntec, 7 December, 2020.








### POTENTIOMETRIC SURFACE – SHALLOW ZONE FORMER POTOMAC RIVER GENERATING STATION ALEXANDRIA, VIRGINIA

**Geosyntec**  
consultants  
COLUMBIA, MARYLAND

DATE: JANUARY 2021	DOCUMENT NO.
PROJECT NO. MEM1974	FIGURE NO. 3



### LEGEND

-  Property Boundary  
 Waterline (river)  
 Monitoring Well Well ID  
 Groundwater Flow Direction  
 Potentiometric Contour  
 Inferred Potentiometric Contour  
 (NC) Not Collected

NOTES:  
Data collected by Geosyntec 7 December 2020.



POTENTIOMETRIC SURFACE —  
DEEP ZONE  
FORMER POTOMAC RIVER GENERATING STATION  
ALEXANDRIA, VIRGINIA

**Geosyntec**   
**consultants**  
COLUMBIA, MARYLAND

DATE: JANUARY 2021	DOCUMENT NO.
PROJECT NO. MEM1974	FIGURE NO.

4

**ATTACHMENT A**  
**Field Sampling Forms**



## PRGS GAUGING WELL LIST

Monitoring Well	Well type	Aquifer Zone Designation	Well Diameter (in)	Total Depth of Well from Ground Surface (ft)	Depth to Water	Depth to Bottom	Notes
MW-01S	MW	Shallow	4	27	22.67	27.30	
MW-05 / RW-05	P&T	Deep	4	35	24.93	31.7	
MW-08S	MW	Shallow	4	25	<del>22.17</del> 21.94	<del>22.33</del> 21.93	24.75
MW-10S / RW-10S	TPE	Shallow	4	27	21.94	26.1	
MW-14 / RW-14	P&T	Deep	4	38.5	32.11	36.6	
MW-16	MW	Deep	2	36	30.86	35.54	
MW-25S	MW	Shallow	4	26	31.77	35.4	
MW-25 / RW-25	P&T	Deep	4	35	31.03	33.8	
MW-27	MW	Deep	4	35	31.92	31.65	
MW-31 / RW-31	P&T	Deep	4	36	20.79	29.3	
MW-51S	MW	Shallow	4	25.5	32.28	36.3	
MW-51 / RW-51	P&T	Deep	4	37	20.96	23.8	
MW-72S / RW-72S	TPE	Shallow	4	25	32.21	33.1	
MW-72 / RW-72	MW	Deep	4	35	6.13	8.4	
MW-106	MW	Deep	2	10	6.07	7.23	
MW-108	MW	Shallow	2	10	32.13	37	
MW-121	MW	Deep	4	37	<del>32.13</del> 32.17	35.40	
MW-122	MW	Deep	4	37	21.67	28.32	
MW-123S / RW-123S	TPE	Shallow	4	25	12.51	21.6	soft bottom
TW-02	MW	Deep	1	24	6.98	14.6	
TW-03	MW	Deep	1	15	9.71	14.7	soft
TW-04	MW	Deep	1	15	3.76	13.4	soft
TW-05	MW	Deep	1	10	4.64	12.4	soft
TW-06	MW	Deep	1	15	6.48	17.4	
TW-07	MW	Deep	1	15	24.76	25.0	
TW-12S	MW	Shallow	1	25	5.02	6.17	
TW-14	MW	Shallow	1	5.5	32.47	40.6	
RW-1	MW	Deep	4	41	22.57	26.25	
RW-05S	TPE	Shallow	4	26	21.73	22.92	
RW-25S	TPE	Shallow	4	25	23.16	26.29	
RW-28S	TPE	Shallow	4	27	23.21	25.95	
RW-116S	TPE	Shallow	4	26	22.49	24.55	
RW-117S	TPE	Shallow	4	25	20.93	24.2	
RW-118S	TPE	Shallow	4	25	17.92	26.92	
RW-119S	TPE	Shallow	4	26	dry	24.3	
MW-11	MW	Deep	4	35	23.74	26	
MW-15S	MW	Shallow	4	26	dry	24.7	
MW-16S	MW	Shallow	2	25	32.02	34.80	
MW-33	MW	Deep	4	35	dry	25.3	
MW-52	MW	Deep	2	36	31.40	35.19	
MW-70	MW	Deep	2	36	20.51	24.21	
MW-100S	MW	Shallow	2	24.5	32.63	36.14	
MW-100	MW	Deep	2	37.5	26.17	37.40	
MW-102	MW	Deep	2	37	3.97	14.53	
MW-103	MW	Shallow	2	15	3.57	11.95	
MW-104	MW	Shallow	2	12			
MW-105	MW	Shallow	2	10	7.47	11.04	could not loc.
MW-107	MW	Shallow	2	11	dry	29.1	
RW-30S	TPE	Shallow	4	29			



Monitoring Well	Well type	Aquifer Zone Designation	Well Diameter (in)	Total Depth of Well from Ground Surface (ft)	Depth to Water (3Q 2020)	Completed?
MW-01S	MW	Shallow	4	27	23.44	12/9/20
MW-05 / RW-05	P&T	Deep	4	35	25	12/10/20
MW-08S	MW	Shallow	4	25	21.26	12/9/20
MW-10S / RW-10S	TPE	Shallow	4	27	22	12/10/20
MW-14 / RW-14	P&T	Deep	4	38.5	DRY (usually 28)	12/10/20
MW-16	MW	Deep	2	36	DRY (usually 25)	12/10/20
MW-25S	MW	Shallow	4	26	22	12/10/20
MW-25 / RW-25	P&T	Deep	4	35	DRY (usually 26)	12/10/20
MW-27	MW	Deep	4	35	DRY (usually 28)	12/9/20
MW-31 / RW-31	P&T	Deep	4	36	31	12/8/20
MW-51S	MW	Shallow	4	25.5	22	12/9/20
MW-51 / RW-51	P&T	Deep	4	37	DRY (usually 27)	12/9/20
MW-72S / RW-72S	TPE	Shallow	4	25	22	12/11/20
MW-72 / RW-72	MW	Deep	4	35	DRY (usually 28)	12/11/20
MW-106	MW	Deep	2	10	DRY (usually 7)	12/8/20
MW-108	MW	Shallow	2	10	DRY (usually 9)	12/8/20
MW-121	MW	Deep	4	37	DRY (usually 27)	12/9/20
MW-122	MW	Deep	4	37	DRY (usually 27)	12/10/20
MW-123S / RW-123S	TPE	Shallow	4	25	22	12/10/20
TW-02	MW	Deep	1	24	14	12/18/20
TW-03	MW	Deep	1	15	10	12/18/20
TW-04	MW	Deep	1	15	11	12/19/20
TW-05	MW	Deep	1	10	DRY	12/19/20
TW-06	MW	Deep	1	15	9	12/18/20
TW-07	MW	Deep	1	15	10	12/19/20
TW-12S	MW	Shallow	1	25	25	DRY
TW-14	MW	Shallow	1	5.5	3	12/17/20
RW-1	MW	Deep	4	41	23	12/18/20
RW-05S	TPE	Shallow	4	26	38	12/10/20
RW-25S	TPE	Shallow	4	25	24 (historically DRY)	12-11-20
RW-28S	TPE	Shallow	4	27	25	12/17/20
RW-116S	TPE	Shallow	4	26	23	12/10/20
RW-117S	TPE	Shallow	4	25	24	12/11/20
RW-118S	TPE	Shallow	4	25	22	12/10/20
RW-119S	TPE	Shallow	4	26	22	12/9/20
MW-11	MW	Deep	4	35	DRY (usually 27)	DRY
MW-15S	MW	Shallow	4	26	25	12/11/20
MW-33	MW	Deep	4	35	DRY (usually 27)	12/18/20
MW-100S	MW	Shallow	2	24.5	21	12/18/20
MW-100	MW	Deep	2	37.5	DRY (usually 27)	12/18/20
RW-30S	TPE	Shallow	4	29	DRY (usually 26)	DRY
MW-107	MW	Shallow	2	11	8	12/9/20

Sample or Attempted to sample in both 4Q 2019 and 3Q 2020

Sample or Attempted to sample in only 4Q 2019

Not Sampled or attempted to sample between 4Q 2019 and 3Q 2020

EB-12/17/2020 @ 1605  
 DUP 2020/208 @ 12-8-20  
 MS/MSD @ TW02, 1345, 12-8-20

Total well count: 42



# METER CALIBRATION FORM

10211 Wincopin Circle, 4th Floor  
Columbia, Maryland 21044  
Tel (410) 381-4333 Fax (410) 381-4499

Project Name: PRGS	Date: 12/7/20
Project Number: MEM1974	Initial Calibration Completed at: 1300
Field Personnel: AA, MT, PS	Midday Calibration Completed at: —
Recorded By: AA	Final Calibration Completed at: 1630
Weather: 40s, sunny	

1. Specific Conductance Calibration 1413 µS/cm			
	Temp.	Initial	Cal. to
Initial	57.66	1348	1409
Midday	<del>49.77</del>	<del>1267</del>	
Final	49.77	1267	

2. pH Calibration		Buffer Solution		
		pH 7.0	pH 4.0	pH 10.0
Initial	Temp.	58.30	57.10	57.13
	Reading	7.10	3.99	10.01
	Cal. to	7.00	4.00	10.0
Midday	Temp.			
	Reading			
	Cal. to			
Final	Temp.	60.71	57.65	59.71
	Reading	7.03	3.96	10.05

4. Dissolved Oxygen Calibration		Saturation	
		100%	0%
Initial	Barometer	760	760
	Temp.	50.28	51.03
	Reading mg/L	12.02	0.38
	Cal. to	11.24	
Midday	Barometer		
	Temp.		
	Reading mg/L		
	Cal. to		
Final	Barometer	760	
	Temp.	43.69	
	Reading mg/L	11.81	

3. ORP Calibration +240 mV Zobell			
	Temp.	Initial	Cal. to
Initial	57.88	229.0	220.0
Midday			
Final	45.94	228.9	

5. Turbidity			
	1 NTU	10 NTU	NTU
Initial	0.29	13.48	
	0.42	10.0	
Midday			
Final	0.97	12.1	

pH 7 Calibration Solution — Lot Number: 7003K7	Expiration Date: 3-1-22
pH 4 Calibration Solution — Lot number: 7007157	Expiration Date: 7-22-22
pH 10 Calibration Solution — Lot Number: 7005144	Expiration Date: 5-1-22
Specific Conductance Calibration Solution — Lot Number: 7406263	Expiration Date: 6-1-21
ORP Calibration Solution — Lot number: 8010435	Expiration Date: 8-1-21
NTU Calibration Solution — Lot Number: —	Expiration Date: —
1 NTU Calibration Solution — Lot Number: —	Expiration Date: —
10 NTU Calibration Solution — Lot Number: —	Expiration Date: —
NTU Calibration Solution — Lot Number: —	Expiration Date: —
Multiparameter Probe — Model: 556mps	Rental #: 077273X
Turbidity Meter — Model: La Motte 2021	Rental #: 032787
Comments (rental, condition, problems, etc.):	
No midday cal	

SN#: 14F101474  
SN#: 5136-5014



# METER CALIBRATION FORM

10211 Wincopin Circle, 4th Floor  
Columbia, Maryland 21044  
Tel (410) 381-4333 Fax (410) 381-4499

Project Name: PRGS	Date: 12/7/2020
Project Number: MEM1974	Initial Calibration Completed at:
Field Personnel: P.S. A.A. M.T.	Midday Calibration Completed at:
Recorded By: P. Silverheart	Final Calibration Completed at:
Weather: Sunny, high 30's	

1. Specific Conductance Calibration 1413 $\mu\text{S}/\text{cm}$			
	Temp.	Initial	Cal. to
Initial	4.75	1348	1407
Midday			
Final	5.90	1407	

2. pH Calibration		Buffer Solution		
		pH 7.0	pH 4.0	pH 10.0
Initial	Temp.	14.60	14.23	13.95
	Reading	7.10	3.83	9.82
	Cal. to	7.00	4.00	10.03
Midday	Temp.			
	Reading			
	Cal. to			
Final	Temp.	15.03	6.57	14.97
	Reading	7.07	3.95	10.05

3. ORP Calibration +240 mV Zobell			
	Temp.	Initial	Cal. to
Initial	14.96	237.8	220.0
Midday			
Final	8.29	219.4	

		5. Turbidity			
		0 NTU	1 NTU	10 NTU	NTU
Initial	Reading	-0.16	1.15	9.85	
	Cal. to	-	1.05	10.00	
Midday	Reading				
	Cal. to				
Final	Reading	0.09	0.78	9.93	

4. Dissolved Oxygen Calibration		Saturation	
		100%	0%
Initial	Barometer	760	760
	Temp.	9.6	9.91
	Reading mg/L	15.71	0.91
	Cal. to	11.33	
Midday	Barometer		
	Temp.		
	Reading mg/L		
	Cal. to		
Final	Barometer	760	766
	Temp.	6.94	10.03
	Reading mg/L	11.77	0.49

pH 7 Calibration Solution — Lot Number: 7003167	Expiration Date: 3-1-22
pH 4 Calibration Solution — Lot number: 7007157	Expiration Date: 7-22-22
pH 10 Calibration Solution — Lot Number: 7005144	Expiration Date: 5-1-22
Specific Conductance Calibration Solution — Lot Number: 7406283	Expiration Date: 6-1-21
ORP Calibration Solution — Lot number: 8010435	Expiration Date: 8-1-21
NTU Calibration Solution — Lot Number:	Expiration Date:
NTU Calibration Solution — Lot Number:	Expiration Date:
NTU Calibration Solution — Lot Number:	Expiration Date:
NTU Calibration Solution — Lot Number:	Expiration Date:
Multiparameter Probe — Model: YSI-556-MPS Rental #: 57670	SN#: 08 K100253
Turbidity Meter — Model: La Motta 2010WR Rental #: 025713	SN#: 3943
Comments (rental, condition, problems, etc.):	



# METER CALIBRATION FORM

10211 Wincopin Circle, 4th Floor  
Columbia, Maryland 21044  
Tel (410) 381-4333 Fax (410) 381-4499

Project Name: PRGS	Date: 12/7/20
Project Number: MEM1974	Initial Calibration Completed at:
Field Personnel: M. Thurny, P. Silverman, A. Ambrosino	Midday Calibration Completed at:
Recorded By: MT	Final Calibration Completed at:
Weather: 20s - 40s, clear	

1. Specific Conductance Calibration 1413 $\mu\text{S/cm}$			
	Temp.	Initial	Cal. to
Initial	12.93	1324	1409
Midday			
Final	14.10	1363	

2. pH Calibration		Buffer Solution		
		pH 7.0	pH 4.0	pH 10.0
Initial	Temp.	11.84	14.97	15.01
	Reading	7.21	4.59	9.57
	Cal. to	7.00	4.00	10.00
Midday	Temp.			
	Reading			
	Cal. to			
Final	Temp.	15.02	15.25	15.61
	Reading	7.10	4.30	9.99

4. Dissolved Oxygen Calibration		Saturation	
		100%	0%
Initial	Barometer	760	768
	Temp.	10.05	10.10
	Reading mg/L	13.35	6.71
	Cal. to	11.22	
Midday	Barometer		
	Temp.		
	Reading mg/L		
	Cal. to		
Final	Barometer	760	768
	Temp.	10.99	11.03
	Reading mg/L	12.15	0.41

3. ORP Calibration +240 mV Zobell			
	Temp.	Initial	Cal. to
Initial	15.50	233.1	222.0
Midday			
Final	15.78	225.3	

		5. Turbidity			
		0 NTU	1 NTU	10 NTU	NTU
Initial	Reading	-0.04	0.96	11.2	
	Cal. to	-	1.00	10.50	
Midday	Reading				
	Cal. to				
Final	Reading	0.03	1.13	10.51	

pH 7 Calibration Solution — Lot Number: 700 3167	Expiration Date: 3-22
pH 4 Calibration Solution — Lot number: 780 #199	Expiration Date: 7-22
pH 10 Calibration Solution — Lot Number: 740 7198	Expiration Date: 7-21
Specific Conductance Calibration Solution — Lot Number: 740623	Expiration Date: 6-21
ORP Calibration Solution — Lot number: 801 0435	Expiration Date: 8-21
0 NTU Calibration Solution — Lot Number:	Expiration Date:
1 NTU Calibration Solution — Lot Number:	Expiration Date:
10 NTU Calibration Solution — Lot Number:	Expiration Date:
1 NTU Calibration Solution — Lot Number:	Expiration Date:
Multiparameter Probe — Model: YSI 556 MB	Rental #: 065 7152
Turbidity Meter — Model: LaMotte 2000	Rental #: 029464
Comments (rental, condition, problems, etc.):	
No midday cal	

# METER CALIBRATION FORM

10211 Wincopin Circle, 4th Floor  
Columbia, Maryland 21044  
Tel (410) 381-4333 Fax (410) 381-4499

Project Name: PRGS	Date: 12/8/2020
Project Number: MEM1974	Initial Calibration Completed at: 0745
Field Personnel: A. Ambrosio, P. Silverman, F. Ezell	Midday Calibration Completed at: 1210
Recorded By: F. Ezell	Final Calibration Completed at: 1540
Weather: Clear 30s	

1. Specific Conductance Calibration 1413 µS/cm			
	Temp.	Initial	Cal. to
Initial	15.63	1469	1413
Midday	15.61	1424	1413
Final	14.73	1382	

2. pH Calibration		Buffer Solution		
		pH 7.0	pH 4.0	pH 10.0
Initial	Temp.	13.37	14.62	15.92
	Reading	7.14	3.82	10.09
	Cal. to	7.00	4.00	10.00
Midday	Temp.	13.42	14.21	14.02
	Reading	7.21	4.01	10.07
	Cal. to	7.00	4.00	10.03
Final	Temp.	14.45	12.87	14.68
	Reading	7.40	4.10	10.10

4. Dissolved Oxygen Calibration		Saturation	
		100%	0%
Initial	Barometer	763	
	Temp.	4.23	
	Reading mg/L	11.62	
	Cal. to	11.00	
Midday	Barometer	761	
	Temp.	5.01	
	Reading mg/L	11.54	
	Cal. to	11.12	
Final	Barometer	760	
	Temp.	7.61	
	Reading mg/L	11.75	

3. ORP Calibration +240 mV Zobell			
	Temp.	Initial	Cal. to
Initial	4.49	242.3	240
Midday	7.21	243.2	240
Final	11.84	238.2	

5. Turbidity			
	0 NTU	1 NTU	10 NTU
Initial	Reading	0.44	0.89
	Cal. to	0.40	1.00
Midday	Reading	0.34	0.79
	Cal. to	0.24	0.92
Final	Reading	0.23	0.89

pH 7 Calibration Solution — Lot Number: 7003167	Expiration Date: 3/22
pH 4 Calibration Solution — Lot number: 7007159	Expiration Date: 7/22
pH 10 Calibration Solution — Lot Number: 7907128	Expiration Date: 7/21
Specific Conductance Calibration Solution — Lot Number: 7906263	Expiration Date: 6/21
ORP Calibration Solution — Lot number: 8010435	Expiration Date: 8/21
1 NTU Calibration Solution — Lot Number: 19520075	Expiration Date: 3/21
10 NTU Calibration Solution — Lot Number: 19230122	Expiration Date: 3/21
— NTU Calibration Solution — Lot Number:	Expiration Date:
— NTU Calibration Solution — Lot Number:	Expiration Date:
Multiparameter Probe — Model: 451 556ms Rental #: 65715	SN#: 11F100175
Turbidity Meter — Model: Lamotte 2020 m Rental #: 29494	SN#: 4949-4114
Comments (rental, condition, problems, etc.):	



# METER CALIBRATION FORM

10211 Wincopin Circle, 4th Floor  
Columbia, Maryland 21044  
Tel (410) 381-4333 Fax (410) 381-4499

Project Name: PRGS	Date: 12/8/2020
Project Number: MEM1974	Initial Calibration Completed at: 0720
Field Personnel: A. Ambrosio, F. Ezell, P. Silverheart	Midday Calibration Completed at: 1215
Recorded By: AA, ee	Final Calibration Completed at: 1630
Weather: 40s, Sunny	

1. Specific Conductance Calibration 1413 $\mu\text{S/cm}$			
	Temp.	Initial	Cal. to
Initial	62.50	1280	1409
Midday			
Final			

2. pH Calibration		Buffer Solution		
		pH 7.0	pH 4.0	pH 10.0
Initial	Temp.	62.50	59.85	60.38
	Reading	6.96	3.98	9.94
	Cal. to	7.00	4.00	9.99
Midday	Temp.	63.10	60.01	61.71
	Reading	6.99	3.99	9.97
	Cal. to	7.00	4.00	10.0
Final	Temp.	62.51	59.10	60.97
	Reading	7.01	4.05	10.01

4. Dissolved Oxygen Calibration		Saturation	
		100%	0%
Initial	Barometer	760	760
	Temp.	39.28	40.12
	Reading mg/L	13.32	0.39
	Cal. to	12.69	
Midday	Barometer	760	760
	Temp	40.02	40.97
	Reading mg/L	13.01	0.61
	Cal. to	12.83	
Final	Barometer	760	760
	Temp	39.71	40.01
	Reading mg/L	12.99	0.52

3. ORP Calibration +240 mV Zobell			
	Temp.	Initial	Cal. to
Initial	40.17	230.5	220.0
Midday	41.37	230.1	220.0
Final	40.91	227.1	

Initial	Reading	0.32	11.2		(8.9)
	Cal. to	0.44	10.17		
Midday	Reading	0.76	10.61		
	Cal. to	1.00	10.0		
Final	Reading	0.88	10.71		

5. Turbidity			
1 NTU	10 NTU		

pH 7 Calibration Solution — Lot Number: 700314	Expiration Date: 3-1-22
pH 4 Calibration Solution — Lot number: 7007157	Expiration Date: 7-22-22
pH 10 Calibration Solution — Lot Number: 7005144	Expiration Date: 5-1-22
Specific Conductance Calibration Solution — Lot Number: 8010435 / 7406263	Expiration Date: 6/1/2021
ORP Calibration Solution — Lot number: 8010435	Expiration Date: 8/1/2021
0 NTU Calibration Solution — Lot Number: NA	Expiration Date: NA
1 NTU Calibration Solution — Lot Number: NA	Expiration Date: NA
10 NTU Calibration Solution — Lot Number: NA	Expiration Date: NA
- NTU Calibration Solution — Lot Number: -	Expiration Date: -
Multiparameter Probe — Model: 556mPS	Rental #: 077273X
Turbidity Meter — Model: LaMotte 2010	Rental #: 032787
Comments (rental, condition, problems, etc.):	

# METER CALIBRATION FORM

10211 Wincopin Circle, 4th Floor  
Columbia, Maryland 21044  
Tel (410) 381-4333 Fax (410) 381-4499

Project Name: PRGS	Date: 12-8-2020
Project Number: MEM1974	Initial Calibration Completed at: 07:20
Field Personnel: P.S., A.A., F.E.	Midday Calibration Completed at: 12:20
Recorded By: P. Silverhart	Final Calibration Completed at: 15:45
Weather: 30's, sunny	

1. Specific Conductance Calibration 1413 µS/cm			
	Temp.	Initial	Cal. to
Initial	14.82	1440	1409
Midday	17.73	1427	1409
Final	8.33	1364	

2. pH Calibration		Buffer Solution		
		pH 7.0	pH 4.0	pH 10.0
Initial	Temp.	16.07	15.66	14.91
	Reading	7.12	4.01	9.97
	Cal. to	7.00	4.00	9.98
Midday	Temp.	17.83	16.74	16.05
	Reading	7.08	4.06	10.02
	Cal. to	7.00	4.00	10.00
Final	Temp.	8.68	8.54	9.06
	Reading	7.09	4.02	10.11

4. Dissolved Oxygen Calibration		Saturation	
		100%	0%
Initial	Barometer	760	760
	Temp.	4.76	4.82
	Reading mg/L	11.00	0.93
	Cal. to	12.85	
Midday	Barometer	760	760
	Temp.	6.93	6.87
	Reading mg/L	12.90	0.55
	Cal. to	12.80	
Final	Barometer	760	760
	Temp.	7.49	7.22
	Reading mg/L	11.62	0.47

3. ORP Calibration +240 mV Zobell			
	Temp.	Initial	Cal. to
Initial	4.72	224.8	220.0
Midday	13.68	222.1	220.0
Final	10.56	206.9	

5. Turbidity				
0 NTU	1 NTU	10 NTU	<del>NTU</del>	
Initial	Reading	0.02	0.75	12.55
	Cal. to	-	1	10.00
Midday	Reading	0.03	0.87	10.08
	Cal. to	-	1	10.00
Final	Reading	0.18		

pH 7 Calibration Solution — Lot Number: 7003167	Expiration Date: 3-1-22
pH 4 Calibration Solution — Lot number: 7007157	Expiration Date: 7-22-22
pH 10 Calibration Solution — Lot Number: 7005144	Expiration Date: 5-1-22
Specific Conductance Calibration Solution — Lot Number: 7406263	Expiration Date: 6-1-21
ORP Calibration Solution — Lot number: 8010435	Expiration Date: 8-1-21
NTU Calibration Solution — Lot Number:	Expiration Date:
NTU Calibration Solution — Lot Number:	Expiration Date:
NTU Calibration Solution — Lot Number:	Expiration Date:
NTU Calibration Solution — Lot Number:	Expiration Date:
Multiparameter Probe — Model: YSI-556-MPS Rental #: 57670	SN#: 08K100253
Turbidity Meter — Model: LaMotte 2010 WPC Rental #: 025743	SN#: 3983
Comments (rental, condition, problems, etc.):	



# METER CALIBRATION FORM

10211 Wincopin Circle, 4th Floor  
Columbia, Maryland 21044  
Tel (410) 381-4333 Fax (410) 381-4499

Project Name: PRGS	Date: 12/19/2020
Project Number: MEM1974	Initial Calibration Completed at: 0800
Field Personnel: A. Ambrosino, P. Stuerkeart, T. Ezell	Midday Calibration Completed at: 1215
Recorded By: F. Ezell	Final Calibration Completed at: 1627
Weather: Clear 40s	

1. Specific Conductance Calibration 1413 µS/cm			
	Temp.	Initial	Cal. to
Initial	5.37	1425	1413
Midday	8.75	1419	1413
Final	5.28	1375	

2. pH Calibration		Buffer Solution		
		pH 7.0	pH 4.0	pH 10.0
Initial	Temp.	4.92	5.04	4.43
	Reading	7.13	4.15	9.61
	Cal. to	7.00	4.00	9.96
Midday	Temp.	8.14	8.27	8.45
	Reading	7.03	4.00	10.03
	Cal. to	7.00	4.00	10.00
Final	Temp.	5.18	5.98	5.43
	Reading	7.51	4.48	10.17

4. Dissolved Oxygen Calibration		Saturation	
		100%	0%
Initial	Barometer	760	
	Temp.	4.75	
	Reading mg/L	11.96	
	Cal. to	12.00	
Midday	Barometer	760	
	Temp.	5.67	
	Reading mg/L	11.89	
	Cal. to	12.00	
Final	Barometer	760	
	Temp.	9.92	
	Reading mg/L	11.45	

3. ORP Calibration +240 mV Zobell			
	Temp.	Initial	Cal. to
Initial	9.80	226.8	220
Midday	9.22	222.4	220
Final	5.07	177	

5. Turbidity				
	0 NTU	1 NTU	10 NTU	NTU
Initial	0.00	0.72	15.48	
	0.00	1.00	10.46	
Midday	0.05	0.63	11.27	
	0.06	1.08	10.00	
Final	0.01	0.94	8.54	

pH 7 Calibration Solution — Lot Number: 7003167	Expiration Date: 3/22
pH 4 Calibration Solution — Lot number: 7067159	Expiration Date: 7/22
pH 10 Calibration Solution — Lot Number: 7907129	Expiration Date: 7/21
Specific Conductance Calibration Solution — Lot Number: 7906263	Expiration Date: 6/21
ORP Calibration Solution — Lot number: 8010435	Expiration Date: 8/21
1 NTU Calibration Solution — Lot Number: 19520075	Expiration Date: 3/21
10 NTU Calibration Solution — Lot Number: 19230122	Expiration Date: 8/21
NTU Calibration Solution — Lot Number:	Expiration Date:
NTU Calibration Solution — Lot Number:	Expiration Date:
Multiparameter Probe — Model: YSI 556 MPS Rental #: 65715	SN#: 11F100135
Turbidity Meter — Model: Lamm 2020 WE Rental #: 29484	SN#: 4149-2114
Comments (rental, condition, problems, etc.):	



# METER CALIBRATION FORM

10211 Wincopin Circle, 4th Floor  
Columbia, Maryland 21044  
Tel (410) 381-4333 Fax (410) 381-4499

Project Name: PRGS	Date: 12/9/20
Project Number: MEM1974	Initial Calibration Completed at: 0745
Field Personnel: A. Ambrosing, E. Pzell, P. Silverheart	Midday Calibration Completed at:
Recorded By: AA	Final Calibration Completed at:
Weather: 40's, Overcast	

1. Specific Conductance Calibration 1413 µS/cm			
	Temp.	Initial	Cal. to
Initial	61.47	1420	1409
Midday	60.10	1401	1409
Final	61.31	1393	

2. pH Calibration		Buffer Solution		
		pH 7.0	pH 4.0	pH 10.0
Initial	Temp.	60.99	58.89	59.95
	Reading	6.99	4.02	9.96
	Cal. to	7.00	4.00	9.99
Midday	Temp.	61.71	60.10	60.93
	Reading	7.03	4.05	10.02
	Cal. to	7.00	4.00	10.0
Final	Temp.	61.33	60.97	61.93
	Reading	6.97	4.02	10.01

4. Dissolved Oxygen Calibration		Saturation	
		100%	0%
Initial	Barometer	760	760
	Temp.	45.53	46.01
	Reading mg/L	12.76	0.42
	Cal. to	11.99	
Midday	Barometer	760	760
	Temp.	46.71	46.99
	Reading mg/L	11.73	0.42
	Cal. to	12.01	
Final	Barometer	760	760
	Temp.	45.91	46.10
	Reading mg/L	12.33	0.49

3. ORP Calibration +240 mV Zobell			
	Temp.	Initial	Cal. to
Initial	58.06	208.0	220.0
Midday	59.02	221.3	220.0
Final	60.01	218.7	

5. Turbidity			
Initial	Reading	0.92	13.0
	Cal. to	1.00	10.0
Midday	Reading	1.10	12.5
	Cal. to	1.00	10.0
Final	Reading	0.97	11.91

pH 7 Calibration Solution — Lot Number: 7003K7	Expiration Date: 3-1-22
pH 4 Calibration Solution — Lot number: 7007187	Expiration Date: 7-22-22
pH 10 Calibration Solution — Lot Number: 7005144	Expiration Date: 5-1-22
Specific Conductance Calibration Solution — Lot Number: 7406263	Expiration Date: 6/1/2021
ORP Calibration Solution — Lot number: 8010435	Expiration Date: 8/1/2021
0 NTU Calibration Solution — Lot Number: NA	Expiration Date: NA
1 NTU Calibration Solution — Lot Number: NA	Expiration Date: NA
10 NTU Calibration Solution — Lot Number: NA	Expiration Date: NA
— NTU Calibration Solution — Lot Number: —	Expiration Date: —
Multiparameter Probe — Model: 556MPS	Rental #: 8772734
Turbidity Meter — Model: Lamotte 8020	Rental #: 832787
Comments (rental, condition, problems, etc.):	

# METER CALIBRATION FORM

10211 Wincopin Circle, 4th Floor  
Columbia, Maryland 21044  
Tel (410) 381-4333 Fax (410) 381-4499

Project Name: PRGS	Date: 12-9-2020
Project Number: MEM1974	Initial Calibration Completed at: 07:40
Field Personnel: PS, AA, FE	Midday Calibration Completed at: 10:05
Recorded By: PS	Final Calibration Completed at: 15:40
Weather: cold, sunny	

1. Specific Conductance Calibration 1413 µS/cm			
	Temp.	Initial	Cal. to
Initial	17.69	1387	1409
Midday	9.15	1415	1409
Final	6.72	1383	

2. pH Calibration		Buffer Solution		
		pH 7.0	pH 4.0	pH 10.0
Initial	Temp.	16.87	15.54	15.10
	Reading	7.11	4.05	10.15
	Cal. to	6.98	3.98	10.02
Midday	Temp.	13.21	13.43	13.04
	Reading	7.03	4.07	10.11
	Cal. to	7.00	3.98	10.00
Final	Temp.	7.18	7.27	7.06
	Reading	6.98	3.96	9.98

3. ORP Calibration +240 mV Zobell			
	Temp.	Initial	Cal. to
Initial	15.77	196.8	220.0
Midday	12.32	218.0	220.0
Final	6.56	177.2	

		5. Turbidity			
		0 NTU	1 NTU	10 NTU	NTU
Initial	Reading	0.29	0.76	13.20	
	Cal. to	-	1.00	10.00	
Midday	Reading	0.25	0.78	13.6	
	Cal. to	-	1.00	10.00	
Final	Reading	0.44	0.99	10.24	

4. Dissolved Oxygen Calibration		Saturation	
		100%	0%
Initial	Barometer	760	760
	Temp.	7.45	7.89
	Reading mg/L	12.69	10.40
	Cal. to	12.01	
Midday	Barometer	760	760
	Temp.	9.18	8.44
	Reading mg/L	12.04	0.54
	Cal. to	12.01	
Final	Barometer	760	760
	Temp.	5.78	6.27
	Reading mg/L	11.81	0.44

pH 7 Calibration Solution — Lot Number: 7003167	Expiration Date: 3-1-22
pH 4 Calibration Solution — Lot number: 7007167	Expiration Date: 7-22-22
pH 10 Calibration Solution — Lot Number: 7005144	Expiration Date: 5-1-22
Specific Conductance Calibration Solution — Lot Number: 7406263	Expiration Date: 6-1-21
ORP Calibration Solution — Lot number: 8010435	Expiration Date: 8-1-21
NTU Calibration Solution — Lot Number:	Expiration Date:
NTU Calibration Solution — Lot Number:	Expiration Date:
NTU Calibration Solution — Lot Number:	Expiration Date:
NTU Calibration Solution — Lot Number:	Expiration Date:
Multiparameter Probe — Model: YSI-666-MPS Rental #: 57680	SN#: 08K100253
Turbidity Meter — Model: Lamotte 202042 Rental #: 025743	SN#: 3983
Comments (rental, condition, problems, etc.):	



# METER CALIBRATION FORM

10211 Wincopin Circle, 4th Floor  
Columbia, Maryland 21044  
Tel (410) 381-4333 Fax (410) 381-4499

Project Name: PRGS	Date: 12/10/2020
Project Number: MEM1974	Initial Calibration Completed at: 0812
Field Personnel: A. Ambrose P. Stierwalt F. Ezell	Midday Calibration Completed at: 1203
Recorded By: F. Ezell	Final Calibration Completed at: 1540
Weather: Clear 40s	

1. Specific Conductance Calibration 1413 µS/cm			
	Temp.	Initial	Cal. to
Initial	12.90	1387	1413
Midday	11.57	1405	1413
Final	15.45	1399	

2. pH Calibration		Buffer Solution		
		pH 7.0	pH 4.0	pH 10.0
Initial	Temp.	11.42	10.92	12.57
	Reading	7.44	3.46	10.37
	Cal. to	7.00	4.00	10.09
Midday	Temp.	11.34	12.49	10.99
	Reading	7.21	3.77	10.24
	Cal. to	7.00	4.00	10.00
Final	Temp.	14.92	14.80	15.12
	Reading	7.40	4.03	10.31

4. Dissolved Oxygen Calibration		Saturation	
		100%	0%
Initial	Barometer	760	
	Temp.	6.94	
	Reading mg/L	11.16	
	Cal. to	12.16	
Midday	Barometer	760	
	Temp.	7.50	
	Reading mg/L	11.62	
	Cal. to	11.99	
Final	Barometer	760	
	Temp.	15.52	
	Reading mg/L	10.48	

3. ORP Calibration +240 mV Zobell			
	Temp.	Initial	Cal. to
Initial	7.43	177.9	220
Midday	8.00	187.5	220
Final	10.13	220.1	

5. Turbidity			
	0 NTU	1 NTU	10 NTU
Initial	Reading	0.31	0.98
	Cal. to	0.34	1.00
Midday	Reading	0.02	0.89
	Cal. to	0.00	1.00
Final	Reading	0.44	1.39

pH 7 Calibration Solution — Lot Number: 700967	Expiration Date: 3/22
pH 4 Calibration Solution — Lot number: 7007159	Expiration Date: 7/22
pH 10 Calibration Solution — Lot Number: 7907128	Expiration Date: 7/21
Specific Conductance Calibration Solution — Lot Number: 7906263	Expiration Date: 6/21
ORP Calibration Solution — Lot number: 8010435	Expiration Date: 8/21
1 NTU Calibration Solution — Lot Number: 19520075	Expiration Date: 3/21
10 NTU Calibration Solution — Lot Number: 19230122	Expiration Date: 3/21
NTU Calibration Solution — Lot Number:	Expiration Date:
NTU Calibration Solution — Lot Number:	Expiration Date:
Multiparameter Probe — Model: YSI 556MPS Rental #: 65715	SN#: 11F100175
Turbidity Meter — Model: Lamotte 2020WE Rental #: 029484	SN#: 4949-4114
Comments (rental, condition, problems, etc.):	

# METER CALIBRATION FORM

10211 Wincopin Circle, 4th Floor  
Columbia, Maryland 21044  
Tel (410) 381-4333 Fax (410) 381-4499

Project Name: PRGS	Date: 12-10-2020
Project Number: MEM1974	Initial Calibration Completed at: 07:35
Field Personnel: PS, FE, AA	Midday Calibration Completed at: 12:00
Recorded By: PS	Final Calibration Completed at: 4:25
Weather:	

1. Specific Conductance Calibration 1413 µS/cm			
	Temp.	Initial	Cal. to
Initial	17.34	1395	1409
Midday	13.86	1401	1409
Final	8.9	1360	

2. pH Calibration		Buffer Solution		
		pH 7.0	pH 4.0	pH 10.0
Initial	Temp.	16.75	16.24	16.84
	Reading	7.15	3.91	9.84
	Cal. to	7.01	4.00	9.97
Midday	Temp.	14.31	14.47	14.12
	Reading	7.04	3.94	9.93
	Cal. to	7.00	4.00	9.99
Final	Temp.	8.62	8.63	8.83
	Reading	7.13	4.23	10.07

4. Dissolved Oxygen Calibration		Saturation	
		100%	0%
Initial	Barometer	760	
	Temp.	10.37	
	Reading mg/L	9.77	
	Cal. to	11.22	
Midday	Barometer	760	
	Temp.	12.13	
	Reading mg/L	10.84	
	Cal. to	11.21	
Final	Barometer	760	
	Temp.	8.10	
	Reading mg/L	12.94	

3. ORP Calibration +240 mV Zobell			
	Temp.	Initial	Cal. to
Initial	11.37	247.6	220.0
Midday	12.72	228.0	220.0
Final	8.99	216.0	

5. Turbidity				
	0 NTU	1 NTU	10 NTU	NTU
Initial	Reading	0.26	1.24	8.79
	Cal. to	-	1.00	10.00
Midday	Reading	-0.24	0.78	11.00
	Cal. to	-	1.00	10.00
Final	Reading	-0.49	1.37	10.76

pH 7 Calibration Solution — Lot Number: 7003167	Expiration Date: 3-1-22
pH 4 Calibration Solution — Lot number: 7007157	Expiration Date: 7-22-22
pH 10 Calibration Solution — Lot Number: 7005144	Expiration Date: 5-1-22
Specific Conductance Calibration Solution — Lot Number: 7406 263	Expiration Date: 6-1-21
ORP Calibration Solution — Lot number: 8010435	Expiration Date: 8-1-21
0 NTU Calibration Solution — Lot Number:	Expiration Date: 4-21
1 NTU Calibration Solution — Lot Number:	Expiration Date: 2-21
10 NTU Calibration Solution — Lot Number:	Expiration Date: 3-21
NTU Calibration Solution — Lot Number:	Expiration Date:
Multiparameter Probe — Model: YSI-666-MB Rental #: 57670	SN#: 08K100253
Turbidity Meter — Model: 2020 We Rental #: 20911	SN#: 2410-3012
Comments (rental, condition, problems, etc.):	



# METER CALIBRATION FORM

10211 Wincopin Circle, 4th Floor  
Columbia, Maryland 21044  
Tel (410) 381-4333 Fax (410) 381-4499

Project Name: PRGS	Date: 12-10-20
Project Number: MEM1974	Initial Calibration Completed at: 0805
Field Personnel: A Ambrosino, R Silverheart, F. Eze 11	Midday Calibration Completed at: 1305
Recorded By: AA	Final Calibration Completed at: —
Weather: 40s, sunny	

1. Specific Conductance Calibration 1413 $\mu\text{S}/\text{cm}$			
	Temp.	Initial	Cal. to
Initial	59.88	1361	1409
Midday	60.10	1401	1409
Final	—	—	—

2. pH Calibration		Buffer Solution		
		pH 7.0	pH 4.0	pH 10.0
Initial	Temp.	61.27	59.86	57.14
	Reading	7.05	3.98	9.94
	Cal. to	7.00	4.00	9.99
Midday	Temp.	62.31	60.91	58.93
	Reading	7.08	4.02	10.01
	Cal. to	7.00	4.00	10.01
Final	Temp.	—	—	—
	Reading	—	—	—

4. Dissolved Oxygen Calibration		Saturation	
		100%	0%
Initial	Barometer	760	760
	Temp.	46.88	47.02
	Reading mg/L	11.08	0.43
	Cal. to	11.77	—
Midday	Barometer	760	760
	Temp	47.10	48.01
	Reading mg/L	11.63	0.62
	Cal. to	11.91	—
Final	Barometer	—	—
	Temp	—	—
	Reading mg/L	—	—

3. ORP Calibration +240 mV Zobell			
	Temp.	Initial	Cal. to
Initial	47.53	227.2	220.0
Midday	48.93	223.1	220.0
Final	—	—	—

		1.00 NTU	10 NTU	— NTU	— NTU
Initial	Reading	0.29	12.0	—	—
	Cal. to	0.40	10.0		
Midday	Reading	0.61	10.71	—	—
	Cal. to	0.83	10.0		
Final	Reading	—	—	—	—

pH 7 Calibration Solution — Lot Number: 7003K7	Expiration Date: 3-1-22
pH 4 Calibration Solution — Lot number: 7007157	Expiration Date: 7-22-22
pH 10 Calibration Solution — Lot Number: 7005144	Expiration Date: 5-1-22
Specific Conductance Calibration Solution — Lot Number: 7406263	Expiration Date: 6/1/2021
ORP Calibration Solution — Lot number: 8010435	Expiration Date: 8/1/2021
0 NTU Calibration Solution — Lot Number: NA	Expiration Date: NA
1 NTU Calibration Solution — Lot Number: NA	Expiration Date: NA
10 NTU Calibration Solution — Lot Number: NA	Expiration Date: NA
— NTU Calibration Solution — Lot Number: NA	Expiration Date: NA
Multiparameter Probe — Model: 556 MP	Rental #: 877273X
Turbidity Meter — Model: La Motte 2020	Rental #: 872787
Comments (rental, condition, problems, etc.):	SN#: 14801474
SN#: 516-5014	
No final cal	



## GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 / 9 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	PS

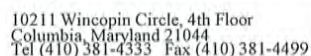
Sample Type	Grab	Location Type	Flush	DTW (feet)	22.82
Location ID	MW-015	Depth Measurement Location	TOIC	DTB (feet) from prior data	27
Duplicate ID	-	Screen Interval (ft)	on file	Pump Setting (feet)	23
		Well Diameter (inches)	4		

Purge Method Low Flow								
Time	DTW (ft)	pH (S.U.)	Conductivity (µS/cm)	Temp. (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
09:55	pump on							
10:00		6.77	939	15.9	9	-13.5	0.59	150
10:05		6.80	935	14.43	2	-26.3	0.49	150
10:10		6.81	935	14.57		-26.4	0.48	150
10:15	24.01	6.81	940	14.29	22	-29.7	0.40	150
10:20	24.1	6.80	935	14.83	22	-30.2	0.40	156
10:25	see comments	6.21	925	16.26	19.8	0.2	0.32	200
10:30		6.23	921	16.33	43.3	-31.6	0.30	150
10:35	23.15	6.28	899	15.32	32.9	-35.7	0.32	150
10:40		6.28	893	14.79	31.0	-36.2	0.33	150
10:45		6.45	894	15.93	29.5	-19	0.20	150
10:50		6.77	902	16.54	22.1	-37.5	0.27	120
10:55		6.78	912	16.40	24.9	-39.3	0.27	120
11:00		6.75	922	15.98	19.2	-39.4	0.29	120
11:05	begin sampling							

Sample Method	Low Flow	Rate (mL/min)	120	Date	12-9-2020	Time	11:10
Final/Sample Field Parameters		Stabilization Guidance		NOTES:			
pH (S.U.)	6.75	0.1 S.U.	met? <input checked="" type="checkbox"/> / N	and 10:05 turbidity reading @ 10:00 is erroneous and looks turbid Water level appears to be inconsistent with two different interface probes. Readings are suspect. Where no DTW is recorded on sheet (entire comments)			
Conductivity (µS/cm)	922	3%	met? <input checked="" type="checkbox"/> / N				
Temp. (°C)	15.58	none	met? <input checked="" type="checkbox"/> / N				
Turbidity (NTU)	19.2	10% or 3 read < 10 NTU	met? <input checked="" type="checkbox"/> / N				
ORP (mV)	-39.4	10 mV	met? <input checked="" type="checkbox"/> / N				
DO (mg/L)	0.29	10% or 3 read < 0.5 mg/L	met? <input checked="" type="checkbox"/> / N	SAMPLE COLOR:			

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

COMMENTS: the interface probe either detected water at multiple depths in the well, inconsistently and these depths were inconsistent when one measurement was taken directly following the other, or the probe detected no water, despite the pump still producing water



Project Name	PRGS	Date	12 / 9 / 20
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	AP

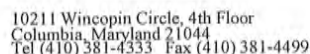
Sample Type	<b>Grab</b>	Location Type	<b>Flush</b>	DTW (feet)	<u>21.37</u>
Location ID	<u>MW-085</u>	Depth Measurement Location	<b>TOIC</b>	DTB (feet) from prior data	<u>24.75</u>
Duplicate ID	<u>      </u>	Screen Interval (ft)	<u>On file</u>	Pump Setting (feet)	<u>~23.5</u>
		Well Diameter (inches)	<u>4</u>		

[illegible]

Sample Method	Low Flow	Rate (mL/min)	120	Date	12-9-20	Time	10:25
Final/Sample Field Parameters			Stabilization Guidance		NOTES:		
pH (S.U.)	6.67	0.1 S.U.	met?	Y / N			
Conductivity (uS/cm)	1058	3%	met?	Y / N			
Temp. (°C)	62.53	none					
Turbidity (NTU)	13.3	10% or 3 read < 10 NTU	met?	Y / N			
ORP (mV)	77.7	10 mV	met?	Y / N			
DO (mg/L)	0.33	10% or 3 read < 0.5 mg/L	met?	Y / N			
					SAMPLE COLOR: Clear		

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS:				





Project Name	PRGS	Date	12 / 10 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	PS

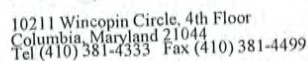
Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>71.94</u>
	Depth Measurement Location	<u>TOIC</u>		DTB (feet) from prior data	<u>26.1</u>
Location ID	<u>MW-10J</u>	Screen Interval (ft)	<u>on file</u>	Pump Setting (feet)	<u>25</u>
Duplicate ID	<u>—</u>	Well Diameter (inches)			

[illegible]

Sample Method	Low Flow	Rate (mL/min)	100	Date	12-10-2020	Time	09:20
Final/Sample Field Parameters			Stabilization Guidance		NOTES:       SAMPLE COLOR:		
pH (S.U.)	6.65	0.1 S.U.	met? <input checked="" type="radio"/> Y / <input type="radio"/> N				
Conductivity (uS/cm)	1931	3%	met? <input checked="" type="radio"/> Y / <input type="radio"/> N				
Temp. (°C)	16.99	none					
Turbidity (NTU)	7.89	10% or 3 read < 10 NTU	met? <input checked="" type="radio"/> Y / <input type="radio"/> N				
ORP (mV)	-14.9	10 mV	met? <input checked="" type="radio"/> Y / <input type="radio"/> N				
DO (mg/L)	0.38	10% or 3 read < 0.5 mg/L	met? <input checked="" type="radio"/> Y / <input type="radio"/> N				

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

**COMMENTS:**



Project Name <u>PRGS</u>		Date <u>12 / 10 / 2020</u>
Project Number <u>MEM1974</u>	Phase <u></u>	Task <u></u>
Location <u>Alexandria, VA</u>	Personnel <u>F. Fall</u>	

Location	DTW (feet)	
Sample Type <u>Grab</u>	Location Type <u>Flush</u>	DTW (feet) <u>324.1</u>
Depth Measurement Location	TOIC	DTB (feet) from prior data <u>36.6</u>
Location ID <u>MW-14</u>	Screen Interval (ft) <u>11.0</u>	Pump Setting (feet) <u>134</u>
Duplicate ID <u>-</u>	Well Diameter (inches) <u>4</u>	

Purge Method	Low Flow							Flow rate (mL/min)
Time	DTW (ft)	pH (S.U.)	Conductivity ( $\mu\text{S/cm}$ )	Temp. (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	
0905	Dump	5.62	307	16.68	19.4	70.0	1.02	350
0915	32.30	5.45	296	15.66	13.4	60.3	1.08	350
0925	32.20	5.36	276	16.47	11.9	54.4	1.19	350
0935	32.70	5.33	268	16.60	13.7	53.0	1.25	350
0940	32.74	5.32	267	16.54	14.2	52.9	1.22	350
0945	32.80	5.32	260	15.99	11.5	53.4	1.26	350
0950	32.30	5.32	256	16.57	10.23	53.5	1.34	350
0955	32.35	5.30	254	16.65	9.99	53.2	1.37	350
1000	32.31	5.30	253	16.79	9.22	53.2	1.32	350
1005	32.40							
1010	Samples collected							

Sample Method		Low Flow	Rate (mL/min)	350	Date	12/10/2020	Time	10:10
Final/Sample Field Parameters				Stabilization Guidance		NOTES:		
pH (S.U.)		5.30	0.1 S.U.	met?	Y / N			
Conductivity (uS/cm)		293	3%	met?	Y / N			
Temp. (°C)		16.39	none					
Turbidity (NTU)		4.82	10% or 3 read < 10 NTU	met?	Y / N			
ORP (mV)		53.2	10 mV	met?	Y / N			
DO (mg/L)		1.92	10% or 3 read < 0.5 mg/L	met?	Y / N	SAMPLE COLOR: clear		
						Greenwater		
						Filtered?		

DO (mg/L)	1.32	10% or 3 read < 0.5 mg/L	metr 17 N	CAAM 22-0000	0.00
Constituent	Method	Container	Preservative	Filtered?	
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No	

**COMMENTS:**





Project Name	PRGS	Date	14 / 10 / 2020
Project Number	MEM1974	Task	12 / 11 / 2020
Location	Alexandria, VA	Personnel	F. Eze

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>23.75</u>
Location ID	<u>MW15</u>	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>62.64</u>
Duplicate ID	<u>-</u>	Screen Interval (ft)	<u>on file</u>	Pump Setting (feet)	<u>24</u>
		Well Diameter (inches)	<u>4</u>		

[illegible]

Sample Method	Low Flow	Rate (mL/min)	3000	Date	12/11/2020	Time	0825-PE 0945
Final/Sample Field Parameters			Stabilization Guidance		NOTES: well run dry first day came back next day to collect sample  SAMPLE COLOR: clear		
pH (S.U.)	4.57	0.1 S.U.	met? Y / N				
Conductivity (uS/cm)	4298	3%	met? Y / N				
Temp. (°C)	17.61	none					
Turbidity (NTU)	120.66	10% or 3 read < 10 NTU	met? Y / N				
ORP (mV)	39.7	10 mV	met? Y / N				
DO (mg/L)	1.05	10% or 3 read < 0.5 mg/L	met? Y / N				

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

**COMMENTS:**

## GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 / 10 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	PS

Sample Type	Grab	Location Type	Flush	DTW (feet)	30.86
Location ID	MW-16	Depth Measurement Location	TOIC	DTB (feet) from prior data	35.54
Duplicate ID	—	Screen Interval (ft)	on file	Pump Setting (feet)	
		Well Diameter (inches)			

Purge Method Low Flow								
Time	DTW (ft)	pH (S.U.)	Conductivity (µS/cm)	Temp. (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
13:40	pump on							
13:45	31.57	6.08	633	15.78	7.40	12.4	3.86	100
13:50	31.45	6.12	630	15.49	7.40	11.1	3.77	80
13:55	31.5	6.06	620	16.26	7.4	12.2	3.91	90
14:00	31.5	6.08	617	16.45	47.5	10.5	3.87	90
14:05	31.55	6.06	620	16.81	34.5	12.2	3.70	100
14:10	31.5	6.04	626	17.10	21.5	13.6	3.75	100
14:15	31.6	6.04	626	16.92	24.8	14.9	3.69	100
14:20	31.5	6.05	630	17.13	25.9	14.8	3.56	100
14:25	31.6	6.05	631	17.11	23.7	15.5	3.65	100
14:30	begin sampling							

Sample Method	Low Flow	Rate (mL/min)	100	Date	12-10-2020	Time	14:35		
Final/Sample Field Parameters				Stabilization Guidance		NOTES:			
pH (S.U.)	6.05	0.1 S.U.	met? <input checked="" type="checkbox"/> N						
Conductivity (µS/cm)	631	3%	met? <input checked="" type="checkbox"/> N						
Temp. (°C)	17.11	none							
Turbidity (NTU)	23.7	10% or 3 read < 10 NTU	met? <input checked="" type="checkbox"/> N						
ORP (mV)	15.5	10 mV	met? <input checked="" type="checkbox"/> N						
DO (mg/L)	3.65	10% or 3 read < 0.5 mg/L	met? <input checked="" type="checkbox"/> N			SAMPLE COLOR:			

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS:				





Project Name	PRGS	Date	12 / 10 / 20
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	AA

Sample Type	<b>Grab</b>	Location Type	<b>Flush</b>	DTW (feet)	36.69
Location ID	MW-25	Depth Measurement Location	<b>TOIC</b>	DTB (feet) from prior data	35.62
Duplicate ID	—	Screen Interval (ft)	on file	Pump Setting (feet)	~35
		Well Diameter (inches)	4		

[illegible]

Sample Method	Low Flow	Rate (mL/min)	120	Date	12-10-20	Time	1805
Final/Sample Field Parameters			Stabilization Guidance		NOTES:      SAMPLE COLOR: <i>clear</i>		
pH (S.U.)	5.22	0.1 S.U.	met? Y / N				
Conductivity (uS/cm)	233	3%	met? Y / N				
Temp. (°C)	62.30	none					
Turbidity (NTU)	15.3	10% or 3 read < 10 NTU	met? Y / N				
ORP (mV)	121.3	10 mV	met? Y / N				
DO (mg/L)	0.49	10% or 3 read < 0.5 mg/L	met? Y / N				

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

**COMMENTS:**



## GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 / 10 / 20
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	RAA

Sample Type	Grab	Location Type	Flush	DTW (feet)	21.80
Location ID	MW-255	Depth Measurement Location	TOIC	DTB (feet) from prior data	24.45
Duplicate ID	—	Screen Interval (ft)	onfile	Pump Setting (feet)	24
		Well Diameter (inches)	4		

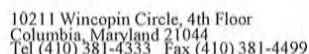
Purge Method Low Flow								
Time	DTW (ft)	pH (S.U.)	Conductivity (µS/cm)	Temp. (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
1255	21.80	Begin sampling						
1300	21.95	6.39	1690	58.36	49.3	-97.4	0.46	150
1305	22.10	6.51	1709	61.50	28.4	-112.1	0.37	150
1310	22.13	6.63	1754	62.50	18.4	-124.5	0.24	150
1315	22.19	6.65	1709	61.39	16.6	-133.2	0.22	150
1320	22.37	6.64	1701	62.65	14.9	-123.7	0.21	150
1325	22.48	6.63	1712	63.02	14.5	-111.9	0.19	150
1330	22.57	6.63	1717	63.72	14.4	-115.7	0.13	150
1335	22.63	6.63	1715	63.43	14.4	-120.1	0.16	150
1340	Sample collected							

Sample Method	Low Flow	Rate (mL/min)	150	Date	12-10-20	Time	1345		
Final/Sample Field Parameters				Stabilization Guidance		NOTES:			
pH (S.U.)	6.63	0.1 S.U.	met? / N						
Conductivity (µS/cm)	1715	3%	met? / N						
Temp. (°C)	63.43	none							
Turbidity (NTU)	14.4	10% or 3 read < 10 NTU	met? / N						
ORP (mV)	-120.1	10 mV	met? / N						
DO (mg/L)	0.16	10% or 3 read < 0.5 mg/L	met? / N			SAMPLE COLOR: Clear			

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

COMMENTS: ~~RAA~~ Could not collect vials w/o bubbles





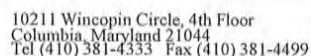
Project Name	PRGS	Date	12 / 4 / 2020
Project Number	MEM1974	Phase	12 / 2020
Location	Alexandria, VA	Task	
		Personnel	F. Ezell

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>32.8</u>
Location ID	<u>MW-27</u>	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>33.8</u>
Duplicate ID	<u>-</u>	Screen Interval (ft)	<u>4</u>	Pump Setting (feet)	<u>N32</u>

[illegible]

Sample Method		Low Flow	Rate (mL/min)	Date	Time
Final/Sample Field Parameters			Stabilization Guidance	NOTES:	
pH (S.U.)		0.1 S.U.	met? Y / N		
Conductivity (uS/cm)		3%	met? Y / N		
Temp. (°C)		none			
Turbidity (NTU)		10% or 3 read < 10 NTU	met? Y / N		
ORP (mV)		10 mV	met? Y / N		
DO (mg/L)		10% or 3 read < 0.5 mg/L	met? Y / N		
				SAMPLE COLOR:	

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS:				



Project Name	PRGS	Date	12 / 7 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	MT, PS.

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u><del>23.06</del> 23.0</u>
Location ID	<u>RW-285</u>	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>26.09</u>
Duplicate ID	<u>—</u>	Screen Interval (ft)	<u>3</u>	Pump Setting (feet)	<u>25.5</u>
		Well Diameter (inches)	<u>4</u>		

[illegible]

Sample Method	Low Flow	Rate (mL/min)	200	Date	12-7-2006	Time	1505
Final/Sample Field Parameters			Stabilization Guidance		NOTES:       SAMPLE COLOR:		
pH (S.U.)	6.78	0.1 S.U.	met? <input checked="" type="checkbox"/> / N				
Conductivity (uS/cm)	1976	3%	met? <input checked="" type="checkbox"/> N				
Temp. (°C)	17.12	none					
Turbidity (NTU)	118 NTU	10% or 3 read < 10 NTU	met? Y / N				
ORP (mV)	40.1	10 mV	met? <input checked="" type="checkbox"/> N				
DO (mg/L)	0.47	10% or 3 read < 0.5 mg/L	met? <input checked="" type="checkbox"/> N				

Constituent	Method	Container	Preservative	Filtered?
HEM (Oil & Grease)	Grab	2x1000mL glass	HCL	No
TPH-GRO 8015 B	Grab	3x40mL vial	HCL	No
VOCS 8260B	Grab	3x40mL vial	HCL	No
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	HCL	No
PAHs 8270C SIM	Grab	2x250mL amber	None	No

**COMMENTS:**



# GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 FEB 1 7 18 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	mt FE

Sample Type	<b>Grab</b>	Location Type	<b>Flush</b>	DTW (feet)	<u>31.92</u> 31.57
Location ID	<u>Mw-31</u>	Depth Measurement Location	<b>TOIC</b>	DTB (feet) from prior data	<u>33.65</u>
		Screen Interval (ft)	<u>?</u>	Pump Setting (feet)	<u>~ 33</u>
Duplicate ID	<u>—</u>	Well Diameter (inches)	<u>4</u>		

[illegible]

Sample Method	Low Flow	Rate (mL/min)	200	Date	12/8/2020	Time	1120
Final/Sample Field Parameters			Stabilization Guidance		NOTES: Piped on 12/7/20 1/2 grab taken on 12/8/20.  SAMPLE COLOR: Brown/orange		
pH (S.U.)	7.05	0.1 S.U.	met? Y / N				
Conductivity (uS/cm)	752	3%	met? Y / N				
Temp. (°C)	15.46	none					
Turbidity (NTU)		10% or 3 read < 10 NTU	met? Y / N				
ORP (mV)	107.64	10 mV	met? Y / N				
DO (mg/L)	4.7	10% or 3 read < 0.5 mg/L	met? Y / N				

Constituent	Method	Container	Preservative	Filtered?
HEM (Oil & Grease)	Grab	2x1000mL glass	HCL	No
TPH-DRO 8045-B	Grab	3x40mL vial	HCL	No
VOCS 8260B	Grab	3x40mL vial	HCL	No
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	HCL	No
RAHS 8270C SIM	Grab	2x250mL amber	None	No

COMMENTS: only TPH-DRO Grabs





Project Name PRGS Date 12 / 8 / 2020  
 Project Number MEM1974 Phase \_\_\_\_\_ Task \_\_\_\_\_  
 Location Alexandria, VA Personnel F. Ezell

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>32.05</u>
Location ID	<u>MW-33</u>	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>34.80</u>
Duplicate ID	<u>-</u>	Screen Interval (ft)	<u>4</u>	Pump Setting (feet)	<u>031</u>

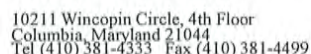
[illegible]

Sample Method	Low Flow	Rate (mL/min)	300	Date	12/8/2020	Time	1045
Final/Sample Field Parameters			Stabilization Guidance		<b>NOTES:</b> Sampled for over an hr all parameters stable except for turbidity which was inconsistent throughout. Needed to sample before dry.  <b>SAMPLE COLOR:</b> Cloudy/brown		
pH (S.U.)	6.13	0.1 S.U.	met? Y / N				
Conductivity (uS/cm)	862	3%	met? Y / N				
Temp. (°C)	17.84	none					
Turbidity (NTU)	113	10% or 3 read < 10 NTU	met? Y / N				
ORP (mV)	93.2	10 mV	met? Y / N				
DO (mg/L)	1.86	10% or 3 read < 0.5 mg/L	met? Y / N				

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

**COMMENTS:**





Project Name	PRGS	Date	12 / 9 / 202
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	F. Ezell

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>32.46</u>
Location ID	<u>MW-51</u>	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>36.3</u>
Duplicate ID	<u>-</u>	Screen Interval (ft)	<u>4</u>	Pump Setting (feet)	<u>234</u>

[illegible]

Sample Method	Low Flow	Rate (mL/min)	200	Date	11/19/2020	Time	1240
Final/Sample Field Parameters			Stabilization Guidance		NOTES:		
pH (S.U.)	5.36	0.1 S.U.	met? Y / N				
Conductivity (uS/cm)	246	3%	met? Y / N				
Temp. (°C)	16.94	none					
Turbidity (NTU)	2.05	10% or 3 read < 10 NTU	met? Y / N				
ORP (mV)	2.9	10 mV	met? Y / N				
DO (mg/L)	2.02	10% or 3 read < 0.5 mg/L	met? Y / N				
SAMPLE COLOR:					Clear		

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS:				

## GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	11/9/2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	F. Ezell

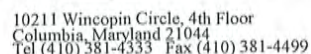
Sample Type	Grab	Location Type	Flush	DTW (feet)	21.01
Location ID	W-518	Depth Measurement Location	TOIC	DTB (feet) from prior data	25.3
Duplicate ID	-	Screen Interval (ft)		Pump Setting (feet)	21.5
		Well Diameter (inches)	4		

Purge Method Low Flow								
Time	DTW (ft)	pH (S.U.)	Conductivity (µS/cm)	Temp. (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
0955	Pump	Find Solutes						
1005	22.15	7.13	1175	16.39	19.7	46.5	1.40	200
1015	22.16	7.38	1138	16.48	19.1	26.7	0.71	200
1025	22.65	7.42	1132	16.81	12.3	-26.1	0.59	200
1030	23.40	7.54	1115	16.70	13.3	-55.3	0.54	200
1035	23.41	7.57	1104	16.47	12.2	-69.8	0.52	200
1040	23.46	7.60	1094	16.37	13.7	-85.4	0.50	200
1045	23.46	7.62	1098	16.27	13.1	-103.2	0.49	200
1050	23.99	7.64	1075	16.64	12.8	-116.7	0.47	200
1055	24.10	7.67	1072	16.44	12.6	-123.2	0.48	200
1100	24.11	7.69	1071	16.45	12.3	-127.3	0.46	200
1105	Sample	Collecting						

Sample Method	Low Flow	Rate (mL/min)	200	Date	11/9/2020	Time	1105
Final/Sample Field Parameters			Stabilization Guidance		NOTES:		
pH (S.U.)	7.68	0.1 S.U.	met?	Y/N			
Conductivity (µS/cm)	1071	3%	met?	Y/N			
Temp. (°C)	16.45	none					
Turbidity (NTU)	12.3	10% or 3 read < 10 NTU	met?	Y/N			
ORP (mV)	-127.3	10 mV	met?	Y/N			
DO (mg/L)	0.46	10% or 3 read < 0.5 mg/L	met?	Y/N	SAMPLE COLOR: Clear		

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS:				





Project Name	PRGS	Date	12 / 10 / 28
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	BA

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>32.19</u>
	Depth Measurement Location	<u>TOIC</u>		DTB (feet) from prior data	<u>33.10</u>
Location ID	<u>MW-72</u>	Screen Interval (ft)	<u>On file</u>	Pump Setting (feet)	<u>~32.8</u>
Duplicate ID	<u>—</u>	Well Diameter (inches)	<u>4</u>		

Purge Method	Low Flow							
Time	DTW (ft)	pH (S.U.)	Conductivity ( $\mu$ S/cm)	Temp. ( $^{\circ}$ C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
11:00	32.19							
11:05	32.13	3.79	2071	60.60	1000AV	198.7	1.05	120
11:10	TOP	3.66	2099	60.46	660	256.4	0.78	120
11:15	TOP	3.67	2095	62.13	1871AV	268.5	0.79	120
11:20	well ran dry							
came back on 0900								
DTW: 32.20								
sample collected @ 0915								

Sample Method	Low Flow	Rate (mL/min)	120	Date	12-11-20	Time	0915
Final/Sample Field Parameters			Stabilization Guidance		NOTES:		
pH (S.U.)	3.67	0.1 S.U.	met? Y / N				
Conductivity (uS/cm)	2093	3%	met? Y / N				
Temp. (°C)	60.13	none					
Turbidity (NTU)	1821 AU	10% or 3 read < 10 NTU	met? Y / N				
ORP (mV)	258.5	10 mV	met? Y / N				
DO (mg/L)	0.77	10% or 3 read < 0.5 mg/L	met? Y / N				
					SAMPLE COLOR: turbid / brown		

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

COMMENTS: TOP = TOP of Pump





Project Name	PRGS	Date	12 / 10 / 20
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	AA

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>21.14</u>
	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>23.8</u>	
Location ID	<u>MW-725</u>	Screen Interval (ft)	<u>on file</u>	Pump Setting (feet)	<u>~23</u>
Duplicate ID	<u>—</u>	Well Diameter (inches)	<u>4</u>		

Purge Method	Low Flow							
Time	DTW (ft)	pH (S.U.)	Conductivity ( $\mu\text{S/cm}$ )	Temp ( $^{\circ}\text{C}$ )	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
0950	21.14							
0955	21.76	4.99	1748	64.07	115AV	75.1	0.61	150
1000	21.95	4.93	1744	63.32	89AV	86.3	0.63	120
1005	22.09	4.87	1738	63.38	72AV	99.3	0.55	120
1010	22.63	4.83	1725	63.75	69AV	108.1	0.49	120
1015	TOP	4.78	1716	64.9	64AV	118.2	0.36	120
1020	TOP	4.76	1711	63.70	67	122.4	0.40	120
1025	TOP	4.75	1711	63.72	56	124.4	0.35	120
1030	TOP	4.74	1710	64.01	42	125.8	0.33	
1035	well ran dry							
12/11/2020 @ 0950 Sample collected								
0955								

Sample Method	Low Flow	Rate (mL/min)	150	Date	12/11/2020	Time	0850
Final/Sample Field Parameters			Stabilization Guidance		NOTES:		
pH (S.U.)	4.24	0.1 S.U.	met? <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N	<div style="border: 1px solid black; padding: 5px;"> <p>mostlY clear, slightly turbid</p> </div>			
Conductivity (uS/cm)	1710	3%	met? <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N				
Temp. (°C)	64.01	none					
Turbidity (NTU)	42	10% or 3 read < 10 NTU	met? <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N				
ORP (mV)	125.8	10 mV	met? <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N				
DO (mg/L)	0.33	10% or 3 read < 0.5 mg/L	met? <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N				

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

**COMMENTS:**

TOP: TOP of pump





Project Name	PRGS	Date	12 / 8 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	F. Ewell

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>32.75</u>
Location ID	<u>MW-100</u>	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>36.14</u>
Duplicate ID	<u>—</u>	Screen Interval (ft)	<u>—</u>	Pump Setting (feet)	<u>130</u>
		Well Diameter (inches)	<u>2</u>		

[illegible]

Sample Method		Low Flow	Rate (mL/min)	200	Date	01/12/20	Time	14:05
Final/Sample Field Parameters				Stabilization Guidance		NOTES: Turbid throughout purging & sampling.  SAMPLE COLOR: Brown		
pH (S.U.)	5.95	0.1 S.U.		met? Y / N	3			
Conductivity (uS/cm)	489	3%		met? Y / N	0			
Temp. (°C)	17.62	none						
Turbidity (NTU)	67.5	10% or 3 read < 10 NTU		met? Y / N	0			
ORP (mV)	91.4	10 mV		met? Y / N	0			
DO (mg/L)	3.31	10% or 3 read < 0.5 mg/L		met? Y / N	0			

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

**COMMENTS:**









Project Name	PRGS	Date	12 / 8 / 20
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	PS

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>6.82</u>
Location ID	<u>MW-106</u>	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>8.40</u>
Duplicate ID	<u>—</u>	Screen Interval (ft)	<u>Onfile</u>	Pump Setting (feet)	<u>~8</u>
		Well Diameter (inches)	<u>2</u>		

[illegible]

Sample Method	Low Flow	Rate (mL/min)	90	Date	12-8-2020	Time	09:10
Final/Sample Field Parameters			Stabilization Guidance		NOTES:		
pH (S.U.)	3.35	0.1 S.U.	met? Y / N				
Conductivity (uS/cm)	1770	3%	met? Y / N				
Temp. (°C)	18.62	none					
Turbidity (NTU)	16.8	10% or 3 read < 10 NTU	met? Y / N				
ORP (mV)	57.7	10 mV	met? Y / N				
DO (mg/L)	1.03	10% or 3 read < 0.5 mg/L	met? Y / N				
				SAMPLE COLOR:			


Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS:				



Project Name	PRGS	Date	12 / 8 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	CS

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>8.38</u>
	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>11.04</u>	
Location ID	<u>MW-10-7</u>	Screen Interval (ft)	<u>on file</u>	Pump Setting (feet)	<u>~10.5</u>
Duplicate ID	<u>-</u>	Well Diameter (inches)	<u>2</u>		

[illegible]

Sample Method	Low Flow	Rate (mL/min)	Date	Time
<b>Final/Sample Field Parameters</b>			<b>Stabilization Guidance</b>	
pH (S.U.)	2.90	0.1 S.U.	met? Y / <input checked="" type="checkbox"/>	<b>NOTES:</b>  
Conductivity (uS/cm)	1683	3%	met? Y / <input checked="" type="checkbox"/>	
Temp. (°C)	15.60	none		
Turbidity (NTU)	34.4	10% or 3 read < 10 NTU	met? Y / <input checked="" type="checkbox"/>	
ORP (mV)	121.9	10 mV	met? Y / <input checked="" type="checkbox"/>	
DO (mg/L)	1.57	10% or 3 read < 0.5 mg/L	met? Y / <input checked="" type="checkbox"/>	
<b>SAMPLE COLOR:</b>				

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext.	Grab	2x40mL vial	None	No
COMMENTS:				



## GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 / 8 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	PS

Sample Type	Grab	Location Type	Flush	DTW (feet)	7.88
Location ID	MW-108	Depth Measurement Location	TOIC	DTB (feet) from prior data	9.25
Duplicate ID		Screen Interval (ft)	on file	Pump Setting (feet)	~9
		Well Diameter (inches)	2		

Purge Method Low Flow								
Time	DTW (ft)	pH (S.U.)	Conductivity (µS/cm)	Temp. (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
11:15	begin pumping							
11:20	7.93	3.95	0757	15.70	11.2	119.9	3.39	100
11:25	7.93	4.01	0732	15.85	6.14	108.9	3.17	100
11:30	7.94	4.07	0707	15.80	2.97	106.8	3.15	100
11:35	7.94	4.16	0695	15.90	2.41	103.0	3.23	100
11:40	7.94	4.29	0684	15.83	1.20	96.0	3.22	100
11:45	7.94	4.21	0678	15.84	0.96	101.7	3.12	100
11:50	7.96	4.76	0671	15.95	0.34	71.0	3.02	100
11:55	7.96	4.70	0670	15.91	0.40	75.9	2.96	100
12:00	7.96	4.67	0673	16.07	0.38	83.1	3.12	100
12:05	begin sampling							

Sample Method	Low Flow	Rate (mL/min)	100	Date	12-8-2020	Time	12:10
Final/Sample Field Parameters				Stabilization Guidance		NOTES:     SAMPLE COLOR:	
pH (S.U.)	4.67	0.1 S.U.	met? <input checked="" type="checkbox"/> N				
Conductivity (µS/cm)	673	3%	met? <input checked="" type="checkbox"/> N				
Temp. (°C)	16.07	none					
Turbidity (NTU)	0.38	10% or 3 read < 10 NTU	met? <input checked="" type="checkbox"/> N				
ORP (mV)	83.1	10 mV	met? <input checked="" type="checkbox"/> N				
DO (mg/L)	3.12	10% or 3 read < 0.5 mg/L	met? <input checked="" type="checkbox"/> N				

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS:				



## GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 / 10 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	PS

Sample Type	Grab	Location Type	Flush	DTW (feet)	22.46
Location ID	RW-1165	Depth Measurement Location	TOIC	DTB (feet) from prior data	25.95
Duplicate ID		Screen Interval (ft)	on file	Pump Setting (feet)	25.5
		Well Diameter (inches)	4		

Purge Method Low Flow								
Time	DTW (ft)	pH (S.U.)	Conductivity (µS/cm)	Temp. (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
10:55	Pump on							
11:00	23.11	6.45	3034	15.99	-125	12.9	0.52	100
11:05	23.3	6.46	3015	15.75	7AU	7.8	0.51	100
11:10	23.4	6.47	2974	16.05	7AU	4.7	0.48	100
11:15	23.51	6.48	2960	16.14	7AU	2.6	0.47	100
11:20	23.64	6.49	2955	16.18	13.20	0.3	0.43	100
11:25	23.83	6.51	2946	16.32	14.83	-2.3	0.41	90
11:30	24.03	6.50	2930	16.60	14.63	-3.4	0.34	90
11:35	24.95	6.48	2967	16.92	14.27	-4.5	0.37	90
11:40	begin sampling							

Sample Method	Low Flow	Rate (mL/min)		Date	12-10-2020	Time	11:45
Final/Sample Field Parameters			Stabilization Guidance	NOTES:			
pH (S.U.)	6.118		0.1 S.U.	met?	Y	N	
Conductivity (µS/cm)	2967		3%	met?	Y	N	
Temp. (°C)	16.92		none				
Turbidity (NTU)	14.27		10% or 3 read < 10 NTU	met?	Y	N	
ORP (mV)	-4.5		10 mV	met?	Y	N	
DO (mg/L)	0.37		10% or 3 read < 0.5 mg/L	met?	Y	N	
SAMPLE COLOR:							

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS: Turbidity reading @ 11:00 is erroneous. Visually turbid.				

## GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 / 10 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	PS

Sample Type	Grab	Location Type	Flush	DTW (feet)	22.45
Location ID	RW-1175	Depth Measurement Location	TOIC	DTB (feet) from prior data	24.55
Duplicate ID	-	Screen Interval (ft)	On file	Pump Setting (feet)	22
		Well Diameter (inches)	4		

Purge Method    Low Flow								
Time	DTW (ft)	pH (S.U.)	Conductivity (µS/cm)	Temp. (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
09:55	pump on							
10:00	23.03	6.18	1320	15.46	25.4	9.5	0.50	100
10:05	23.24	6.16	1297	16.75	24.2	-0.4	0.39	120
10:10	23.72	6.20	1322	17.27	20.6	-11.1	0.37	120
<del>10:15</del>	<del>begin sampling</del>							
10:20	well went dry							
Came back on 12/11								
08:24	DTW 22.5							
10:25	begin sampling							

Sample Method	Low Flow	Rate (mL/min)	170	Date	12-10-2020	Time	10:25
Final/Sample Field Parameters			Stabilization Guidance		NOTES:		
pH (S.U.)	6.20	0.1 S.U.	met?	Y/N			
Conductivity (µS/cm)	1322	3%	met?	Y/N			
Temp. (°C)	17.27	none					
Turbidity (NTU)	20.6	10% or 3 read < 10 NTU	met?	Y/N			
ORP (mV)	-11.1	10 mV	met?	Y/N			
DO (mg/L)	0.37	10% or 3 read < 0.5 mg/L	met?	Y/N	SAMPLE COLOR:		

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS:				





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Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>20.93</u>
Location ID	<u>RW-1185</u>	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>24.2</u>
Duplicate ID	<u>—</u>	Screen Interval (ft)		Pump Setting (feet)	<u>22</u>
		Well Diameter (inches)	<u>4</u>		

Sample Method	Low Flow	Rate (mL/min)	350	Date	12/10/2020	Time	11:00
Final/Sample Field Parameters			Stabilization Guidance		NOTES:		
pH (S.U.)	6.75	0.1 S.U.	met?	Y / N			
Conductivity (uS/cm)	131.2	3%	met?	Y / N			
Temp. (°C)	15.43	none					
Turbidity (NTU)	4.44	10% or 3 read < 10 NTU	met?	Y / N			
ORP (mV)	39.9	10 mV	met?	Y / N			
DO (mg/L)	0.46	10% or 3 read < 0.5 mg/L	met?	Y / N			
SAMPLE COLOR:					Clear		
					Filtered?		

DO (mg/L)	0.45	10% of 3 read < 0.5 mg/L	Method	Container	Preservative	Filtered?
Constituent		Method				
TPH-DRO 801s Micro Ext		Grab		2x40mL vial	None	No
COMMENTS:						

## GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 / 9 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	PS

Sample Type	Grab	Location Type	Flush	DTW (feet)	20.7
Location ID	Rm-1195	Depth Measurement Location	TOIC	DTB (feet) from prior data	26
Duplicate ID		Screen Interval (ft)	on file	Pump Setting (feet)	24
		Well Diameter (inches)	4		

Purge Method Low Flow								
Time	DTW (ft)	pH (S.U.)	Conductivity (µS/cm)	Temp. (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
12:35	begin pumping							
12:45	21.05	6.64	972	16.05	45.5	-1.2	0.58	150
12:55	22.14	6.59	860	16.88	29.1	-1.0	0.59	100
13:00	22.2	6.53	841	16.00	25.9	4	0.65	100
13:05	22.4	6.54	830	16.07	22.8	3.9	0.69	100
13:10	22.7	6.08	806	17.14	21.2	31.1	0.70	100
13:15	23.25	6.50	794	16.90	18.7	4.8	0.71	100
13:20	23.7	6.84	797	17.4	17.9	25.8	0.67	100
13:25	24.5	6.50	817	18.08	23.1	4.1	1.02	100
13:30	24.3	6.67	820	17.77	19.3	3.2	0.72	100
13:35	25.2	6.60	824	17.60	19.1	2.4	0.50	90
13:40	begin sampling							

Sample Method	Low Flow	Rate (mL/min)	90	Date	12-9-2020	Time	13:45
Final/Sample Field Parameters			Stabilization Guidance		NOTES:		
pH (S.U.)	6.60	0.1 S.U.	met? Y	<input checked="" type="checkbox"/>			
Conductivity (µS/cm)	824	3%	met? Y	<input checked="" type="checkbox"/>			
Temp. (°C)	17.60	none	met? Y	<input checked="" type="checkbox"/>			
Turbidity (NTU)	19.1	10% or 3 read < 10 NTU	met? Y	<input checked="" type="checkbox"/>			
ORP (mV)	2.4	10 mV	met? Y	<input checked="" type="checkbox"/>			
DO (mg/L)	0.50	10% or 3 read < 0.5 mg/L	met? Y	<input checked="" type="checkbox"/>	SAMPLE COLOR: mostly clear, slightly cloudy		

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

COMMENTS:



# GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 / 9 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	F. Zell

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>32.4</u>
Location ID	<u>MW-121</u>	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>37.06</u>
Duplicate ID	<u>-</u>	Screen Interval (ft)	<u>4</u>	Pump Setting (feet)	<u>34</u>
		Well Diameter (inches)			

[illegible]

Sample Method		Low Flow	Rate (mL/min)	300	Date	12/1/2020	Time	1400
Final/Sample Field Parameters				Stabilization Guidance		NOTES:		
pH (S.U.)	6.24	0.1 S.U.		met?	Y / N			
Conductivity (uS/cm)	623	3%		met?	Y / N			
Temp. (°C)	14.90	none						
Turbidity (NTU)	3.05	10% or 3 read < 10 NTU		met?	Y / N			
ORP (mV)	-11.5	10 mV		met?	Y / N			
DO (mg/L)	0.41	10% or 3 read < 0.5 mg/L		met?	Y / N			
SAMPLE COLOR:						clear		

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS:				



Project Name	PRGS	Date	12 / 9 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	PS

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>32.35</u>
Location ID	<u>MW-122</u>	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>35</u>
Duplicate ID		Screen Interval (ft)	<u>On File</u>	Pump Setting (feet)	<u>34</u>
		Well Diameter (inches)	<u>4</u>		

[illegible]

Sample Method	Low Flow	Rate (mL/min)	100	Date	12-10-2020	Time	12:35
Final/Sample Field Parameters			Stabilization Guidance		NOTES: (5)		
pH (S.U.)	5.94	0.1 S.U.	met? Y / <input checked="" type="radio"/> N				
Conductivity (uS/cm)	1602	3%	met? Y / <input checked="" type="radio"/> N				
Temp. (°C)	17.12	none					
Turbidity (NTU)	259140	10% or 3 read < 10 NTU	met? Y / <input checked="" type="radio"/> N				
ORP (mV)	27.7	10 mV	met? Y / <input checked="" type="radio"/> N				
DO (mg/L)	0.99	10% or 3 read < 0.5 mg/L	met? Y / <input checked="" type="radio"/> N				
				SAMPLE COLOR:			

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS:				



# GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 / 9 / 20
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	AA

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>21.52</u>
	Depth Measurement Location	<u>TOIC</u>		DTB (feet) from prior data	<u>25.32</u>
Location ID	<u>MW-1285</u>	Screen Interval (ft)	<u>0.5 ft</u>	Pump Setting (feet)	<u>~23.5</u>
Duplicate ID	<u>—</u>	Well Diameter (inches)	<u>4</u>		

[illegible]

Sample Method	Low Flow	Rate (mL/min)	120	Date	12-10-20	Time	1210
Final/Sample Field Parameters			Stabilization Guidance		NOTES:      Tan/slightly orange		
pH (S.U.)	6.99	0.1 S.U.	met? Y / <input checked="" type="checkbox"/> N				
Conductivity (uS/cm)	1280	3%	met? Y / <input checked="" type="checkbox"/> N				
Temp. (°C)	64.70	none					
Turbidity (NTU)	1826 AU	10% or 3 read < 10 NTU	met? Y / <input checked="" type="checkbox"/> N				
ORP (mV)	-206.5	10 mV	met? Y / <input checked="" type="checkbox"/> N				
DO (mg/L)	0.40	10% or 3 read < 0.5 mg/L	met? Y / <input checked="" type="checkbox"/> N				
SAMPLE COLOR:							

DO (mg/L)	0.90	10% O/S read < 0.5 mg/L	Method	Container	Preservative	Filtered?
Constituent		Method				
TPH-DRO 801s Micro Ext		Grab		2x40mL vial	None	No
COMMENTS:						





Project Name	<u>PRGS</u>	Date	<u>12 / 10 / 2020</u>
Project Number	<u>MEM1974</u>	Phase	<u></u>
Location	<u>Alexandria, VA</u>	Personnel	<u>PS</u>

Sample Type Grab Location Type Flush DTW (feet) 32.4  
 Depth Measurement Location TOIC DTB (feet) from prior data ~~39~~ 41  
 Location ID ~~RW-1~~ (P3) Screen Interval (ft) on file Pump Setting (feet) ~36  
 Duplicate ID - Well Diameter (inches) 4

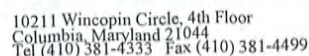
[illegible]

Sample Method	Low Flow	Rate (mL/min)	90	Date	12-10-2020	Time	15:05
Final/Sample Field Parameters			Stabilization Guidance		NOTES:		
pH (S.U.)	5.97	0.1 S.U.	met? <input checked="" type="checkbox"/> Y	N			
Conductivity (uS/cm)	286	3%	met? <input checked="" type="checkbox"/> Y	N	SAMPLE COLOR:		
Temp. (°C)	16.09	none					
Turbidity (NTU)	3.91	10% or 3 read < 10 NTU	met? <input checked="" type="checkbox"/> Y	N			
ORP (mV)	-0.5	10 mV	met? <input checked="" type="checkbox"/> Y	N			
DO (mg/L)	0.97	10% or 3 read < 0.5 mg/L	met? <input checked="" type="checkbox"/> Y	N			

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

**COMMENTS:**





Project Name	PRGS	Date	2 / 10 / 2020
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	F. Fzeil

Sample Type	<b>Grab</b>	Location Type	<b>Flush</b>	DTW (feet)	<b>24.22</b>
	Depth Measurement Location	<b>TOIC</b>		DTB (feet) from prior data	<b>32.3</b>
Location ID	<b>RW-05</b>	Screen Interval (ft)		Pump Setting (feet)	<b>26</b>
Duplicate ID	<b>-</b>	Well Diameter (inches)	<b>4</b>		

[illegible]

Sample Method		Low Flow	Rate (mL/min)	300	Date	12/10/2020	Time	1435
Final/Sample Field Parameters				Stabilization Guidance		NOTES:      SAMPLE COLOR: Brown/turbid		
pH (S.U.)		6.94	0.1 S.U.	met? Y / N	Y			
Conductivity (uS/cm)		1450	3%	met? Y / N	Y			
Temp. (°C)		17.06	none					
Turbidity (NTU)		24.9	10% or 3 read < 10 NTU	met? Y / N	Y			
ORP (mV)		23.8	10 mV	met? Y / N	Y			
DO (mg/L)		0.44	10% or 3 read < 0.5 mg/L	met? Y / N	Y			

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

**COMMENTS:**



## GROUNDWATER SAMPLING LOG

Project Name PRGS Date 12 / 9 / 2020  
Project Number MEM1974 Phase  Task   
Location Alexandria, VA Personnel F. Ezel

Sample Type Grab Location Type Flush DTW (feet) 22.70  
Depth Measurement Location TOIC DTB (feet) from prior data 26.75  
Location ID RW-055 Screen Interval (ft)  Pump Setting (feet) 124  
Duplicate ID - Well Diameter (inches) 4

Purge Method	Low Flow								
Time	DTW (ft)	pH (S.U.)	Conductivity (µS/cm)	Temp. (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)	
1435	22.50	6.80	1051	15.89	12.2	6.5	0.45	350	
1455	22.20	6.83	1044	16.23	9.97	-7.2	0.55	350	
1505	21.85	6.85	1059	16.37	637 AU	-25.3	0.46	350	
1510	21.75	6.86	1067	17.28	13.70 AU	-31.7	0.37	350	
1515	21.77	6.91	1088	17.05	347 AU	-46.9	0.40	350	
1520	Water appears very dark with white dry								
Comp	back 12/10/2020 to collect sample								
1310	samples collected 12/10/2020								

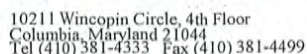
Sample Method Low Flow Rate (mL/min) 300 Date 12/9/2020 Time 1310

Final/Sample Field Parameters	Stabilization Guidance	NOTES:
pH (S.U.) <u>6.91</u>	0.1 S.U. met? Y/N <u>N</u>	well went dry 12/9/2020 comp back 12/10/2020 to collect sample
Conductivity (µS/cm) <u>1088</u>	3% met? Y/N <u>N</u>	
Temp. (°C) <u>17.05</u>	none	
Turbidity (NTU) <u>347 AU</u>	10% or 3 read < 10 NTU met? Y/N <u>N</u>	
ORP (mV) <u>-46.9</u>	10 mV met? Y/N <u>N</u>	
DO (mg/L) <u>0.40</u>	10% or 3 read < 0.5 mg/L met? Y/N <u>N</u>	SAMPLE COLOR: <u>cloudy w/ dark particles</u>

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

COMMENTS:





Project Name	PRGS	Date	12 / 10 / 20
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	AA

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>22.92</u>
	Depth Measurement Location	<u>TOIC</u>		DTB (feet) from prior data	<u>24.8</u>
Location ID	<u>RW255</u>	Screen Interval (ft)	<u>on file</u>	Pump Setting (feet)	<u>~23.5</u>
Duplicate ID	<u>—</u>	Well Diameter (inches)	<u>4</u>		

[illegible]

Sample Method	Low Flow	Rate (mL/min)	100	Date	12-11-20	Time	0845
Final/Sample Field Parameters			Stabilization Guidance		NOTES:		
pH (S.U.)	6.96	0.1 S.U.	met? Y / N				
Conductivity (uS/cm)	1744	3%	met? Y / N				
Temp. (°C)	61.43	none					
Turbidity (NTU)	834 AU	10% or 3 read < 10 NTU	met? Y / N				
ORP (mV)	158.7	10 mV	met? Y / N				
DO (mg/L)	1.38	10% or 3 read < 0.5 mg/L	met? Y / N				
					SAMPLE COLOR:		

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No

**COMMENTS:**

came back on 12-11-20  
@ 0830  
DTW: 23.4  
sample collected @ 0845



Project Name PRGS Date 12 / 8 / 20  
 Project Number MEM1974 Phase \_\_\_\_\_ Task \_\_\_\_\_  
 Location Alexandria, VA Personnel PS

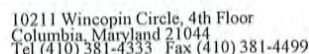
Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>13.2</u>
	Depth Measurement Location	<u>TOIC</u>		DTB (feet) from prior data	<u>24</u>
Location ID	<u>TW-02</u>	Screen Interval (ft)	<u>On record</u>	Pump Setting (feet)	<u>~23</u>
Duplicate ID	<u>MS/MSD</u>	Well Diameter (inches)	<u>1</u>		

[illegible]

Sample Method		Low Flow	Rate (mL/min)	90	Date	12-8	Time	13:45
Final/Sample Field Parameters				Stabilization Guidance		NOTES:      SAMPLE COLOR:		
pH (S.U.)		6.40	0.1 S.U.	met?	Y / N			
Conductivity (uS/cm)		687	3%	met?	Y / N			
Temp. (°C)		16.41	none					
Turbidity (NTU)		2.78	10% or 3 read < 10 NTU	met?	Y / N			
ORP (mV)		21.7	10 mV	met?	Y / N			
DO (mg/L)		0.54	10% or 3 read < 0.5 mg/L	met?	Y / N			

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS:				





Project Name	PRGS	Date	12 / 8 / 20
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	AA

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>38.00 - 25.90</u>
<u>TW-03</u>	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>38.00 - 13.5</u>	
Location ID	<u>MW-33</u>	Screen Interval (ft)	<u>0 on file</u>	Pump Setting (feet)	<u>~12</u>
Duplicate ID	<u>—</u>	Well Diameter (inches)	<u>1</u>		

[illegible]

Sample Method	Low Flow	Rate (mL/min)	120	Date	12-8-20	Time	1350
Final/Sample Field Parameters			Stabilization Guidance		NOTES:      SAMPLE COLOR: clear		
pH (S.U.)	4.98	0.1 S.U.	met? Y / N				
Conductivity (uS/cm)	773	3%	met? Y / N				
Temp. (°C)	61.76	none					
Turbidity (NTU)	8.84	10% or 3 read < 10 NTU	met? Y / N				
ORP (mV)	117.5	10 mV	met? Y / N				
DO (mg/L)	0.27	10% or 3 read < 0.5 mg/L	met? Y / N				

Constituent	Method	Container	Preservative	Filtered?
HEM (Oil & Grease)	Grab	2x1000mL glass	HCL	No
TPH-GRO 8015 B	Grab	3x40mL vial	HCL	No
VOCS 8260B	Grab	3x40mL vial	HCL	No
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	HCL	No
PAHs 8270C SIM	Grab	2x250mL amber	None	No

**COMMENTS:**



## GROUNDWATER SAMPLING LOG

Project Name PRGS Date 12 / 8 / 20  
Project Number MEM1974 Phase AA  
Location Alexandria, VA Personnel AA

Sample Type Grab Location Type Flush DTW (feet) 5.85  
Depth Measurement Location TOIC DTB (feet) from prior data 14.90  
Location ID TW-04 Screen Interval (ft) on file Pump Setting (feet) 20-14  
Duplicate ID 1 Well Diameter (inches) 1

Purge Method	Low Flow							
Time	DTW (ft)	pH (S.U.)	Conductivity (µS/cm)	Temp. (°F)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
0845	5.85	Begin Pumping						
0850	7.93	4.55	2132	59.43	54.0	97.3	2.11	100
0855	11.57	4.51	2030	60.45	27.8	17.3	2.43	100
0900	13.79	4.55	1823	60.81	23.7	14.5	3.01	100
0905	well ran dry							
came back on 12/9/20 @ 0930								
DTW: 6.98								
collected 10 bottles - not all HEM OF G								

Sample Method Low Flow Rate (mL/min) 100 Date 12-9-20 Time 0940

Final/Sample Field Parameters	Stabilization Guidance	NOTES:
pH (S.U.) <u>4.55</u>	0.1 S.U. met? Y <input checked="" type="checkbox"/> N	
Conductivity (µS/cm) <u>1823</u>	3% met? Y <input checked="" type="checkbox"/> N	
Temp. (°C) <u>60.81</u>	none	
Turbidity (NTU) <u>23.7</u>	10% or 3 read < 10 NTU met? Y <input checked="" type="checkbox"/> N	
ORP (mV) <u>14.5</u>	10 mV met? Y <input checked="" type="checkbox"/> N	
DO (mg/L) <u>3.01</u>	10% or 3 read < 0.5 mg/L met? Y <input checked="" type="checkbox"/> N	

SAMPLE COLOR: turbid - light to dark tan

Constituent	Method	Container	Preservative	Filtered?
<u>only -</u> HEM (Oil & Grease)	Grab	2x1000mL glass	HCL	No
TPH-GRO 8015 B	Grab	3x40mL vial	HCL	No
VOCS 8260B	Grab	3x40mL vial	HCL	No
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	HCL	No
PAHs 8270C SIM	Grab	2x250mL amber	None	No

COMMENTS:



# GROUNDWATER SAMPLING LOG

Project Name PRGS Date 12 / 8 / 20  
 Project Number MEM1974 Phase \_\_\_\_\_ Task \_\_\_\_\_  
 Location Alexandria, VA Personnel AA

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>4.64</u>
Location ID	<u>TW-06</u>	Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>12.64</u>
Duplicate ID	<u>DUP20201208</u>	Screen Interval (ft)	<u>on the</u>	Pump Setting (feet)	<u>~11.5</u>
		Well Diameter (inches)	<u>1</u>		

[illegible]

Sample Method	Low Flow	Rate (mL/min)	120	Date	12/8/20	Time	1155
Final/Sample Field Parameters			Stabilization Guidance		NOTES:		
pH (S.U.)	5.89	0.1 S.U.	met? Y / N				
Conductivity (uS/cm)	383	3%	met? Y / N				
Temp. (°C)	59.98	none					
Turbidity (NTU)	4.76	10% or 3 read < 10 NTU	met? Y / N				
ORP (mV)	34.9	10 mV	met? Y / N				
DO (mg/L)	8.40	10% or 3 read < 0.5 mg/L	met? Y / N				
				SAMPLE COLOR: clear			

Constituent	Method	Container	Preservative	Filtered?
HEM (Oil & Grease)	Grab	2x1000mL glass	HCL	No
TPH-GRO 8015 B	Grab	3x40mL vial	HCL	No
VOCS 8260B	Grab	3x40mL vial	HCL	No
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	HCL	No
PAHs 8270C SIM	Grab	2x250mL amber	None	No

**COMMENTS:**



## GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 / 8 / 20
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	AA

Sample Type	Grab	Location Type	Flush	DTW (feet)	7.35
Location ID	MB-107	Depth Measurement Location	TOIC	DTB (feet) from prior data	13.63
Duplicate ID		Screen Interval (ft)	On file	Pump Setting (feet)	~13
		Well Diameter (inches)	1		

Purge Method Low Flow								
Time	DTW (ft)	pH (S.U.)	Conductivity (µS/cm)	Temp. (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
0935	7.35	Begin	Ramping					
0940	11.51	4.60	806	54.84	78	81.3	0.70	100
0945	13.82	4.74	701	54.81	838	79.9	1.46	100
0950	13.51	4.86	645	54.25	653	86.5	2.23	100
0955	well ran dry							
Came back on	12-9-20 @ 1015							
	DTW: 7.70							
	Full bottle set collected							

Sample Method	Low Flow	Rate (mL/min)	100	Date	12-9-20	Time	1030
Final/Sample Field Parameters			Stabilization Guidance	NOTES:			
pH (S.U.)	4.86	0.1 S.U.	met? Y / N	Mostly clear slightly tan			
Conductivity (µS/cm)	645	3%	met? Y / N				
Temp. (°C)	54.25	none	met? Y / N				
Turbidity (NTU)	653	10% or 3 read < 10 NTU	met? Y / N				
ORP (mV)	86.5	10 mV	met? Y / N				
DO (mg/L)	2.23	10% or 3 read < 0.5 mg/L	met? Y / N	SAMPLE COLOR:			

Constituent	Method	Container	Preservative	Filtered?
HEM (Oil & Grease)	Grab	2x1000mL glass	HCL	No
TPH-GRO 8015 B	Grab	3x40mL vial	HCL	No
VOCS 8260B	Grab	3x40mL vial	HCL	No
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	HCL	No
PAHs 8270C SIM	Grab	2x250mL amber	None	No

COMMENTS:



# GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 / 8 / 20
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Task	
		Personnel	AA

Sample Type	<u>Grab</u>	Location Type	<u>Flush</u>	DTW (feet)	<u>31.00 - 4.50</u>
<u>TW-05</u>		Depth Measurement Location	<u>TOIC</u>	DTB (feet) from prior data	<u>33.0 - 13.3</u>
Location ID	<u>MW-27</u>	Screen Interval (ft)	<u>on file</u>	Pump Setting (feet)	<u>~13</u>
Duplicate ID	<u>—</u>	Well Diameter (inches)	<u>1</u>		

[illegible]

Sample Method		Low Flow	Rate (mL/min)	Date	Time
Final/Sample Field Parameters			Stabilization Guidance	NOTES:	
pH (S.U.)	5.13	0.1 S.U.	met? Y / N	<div>Mostly clear slightly tan</div>	
Conductivity (uS/cm)	535	3%	met? Y / N		
Temp. (°C)	57.42	none			
Turbidity (NTU)	36.0	10% or 3 read < 10 NTU	met? Y / N		
ORP (mV)	117.7	10 mV	met? Y / N		
DO (mg/L)	2.36	10% or 3 read < 0.5 mg/L	met? Y / N		
				SAMPLE COLOR:	

Constituent	Method	Container	Preservative	Filtered?
HEM (Oil & Grease)	Grab	2x1000mL glass	HCL	No
TPH-GRO 8015 B	Grab	3x40mL vial	HCL	No
VOCS 8260B	Grab	3x40mL vial	HCL	No
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	HCL	No
PAHs 8270C SIM	Grab	2x250mL amber	None	No

**COMMENTS:**



## GROUNDWATER SAMPLING LOG

Project Name	PRGS	Date	12 / 7 / 20
Project Number	MEM1974	Phase	
Location	Alexandria, VA	Personnel	AA

Sample Type	Grab	Location Type	Flush	DTW (feet)	31.673.03
Location ID	AW-123	Depth Measurement Location	TOIC	DTB (feet) from prior data	35.32-6.17
Duplicate ID		Screen Interval (ft)	0.75	Pump Setting (feet)	25-6
		Well Diameter (inches)	4		

Purge Method Low Flow								
Time	DTW (ft)	pH (S.U.)	Conductivity (uS/cm)	Temp. (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Flow rate (mL/min)
14:40	3.03	Begin Pumping						
14:45	3.07	6.88	519	52.94	26.0	-85.4	2.37	120
14:50	3.05	6.94	543	52.38	10.63	-77.2	3.66	120
14:55	3.07	6.91	536	51.77	5.92	-53.3	4.08	120
15:00	3.01	6.98	517	51.63	3.51	-39.6	4.09	120
15:05	3.07	6.99	514	51.58	2.27	-30.2	3.98	120
15:10	3.07	6.99	513	51.53	1.30	-27.1	3.90	120
15:15	3.07	6.99	514	51.48	0.85	-23.2	3.85	120
15:20	sample collected							

Sample Method	Low Flow	Rate (mL/min)	120	Date	12/7/2020	Time	1520		
Final/Sample Field Parameters				Stabilization Guidance		NOTES:			
pH (S.U.)	6.99	0.1 S.U.	met? Y / N						
Conductivity (uS/cm)	514	3%	met? Y / N						
Temp. (°C)	51.48	none							
Turbidity (NTU)	0.85	10% or 3 read < 10 NTU	met? Y / N						
ORP (mV)	-23.2	10 mV	met? Y / N						
DO (mg/L)	3.85	10% or 3 read < 0.5 mg/L	met? Y / N	SAMPLE COLOR: Clear					

Constituent	Method	Container	Preservative	Filtered?
TPH-DRO 801s Micro Ext	Grab	2x40mL vial	None	No
COMMENTS:				
EB collected @ 1605 on 12-7-20				



**ATTACHMENT B**

**Laboratory Analytical Reports – Fourth  
Quarter 2020**

## ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC  
2425 New Holland Pike  
Lancaster, PA 17601  
Tel: (717)656-2300

Laboratory Job ID: 410-23429-1  
Client Project/Site: PRGS Monitoring

**For:**

Geosyntec Consultants, Inc.  
10211 Wincopin Circle  
4'th Floor  
Columbia, Maryland 21044

Attn: Mr. Mark Bauer



Authorized for release by:  
12/21/2020 12:02:34 PM

Elizabeth Zonar, Project Manager  
(717)556-7290  
[Elizabeth.Zonar@eurofinset.com](mailto:Elizabeth.Zonar@eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*





Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
  - Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
  - Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
- Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Elizabeth Zanar

Project Manager

12/21/2020 12:02:34 PM

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## Definitions/Glossary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

### Qualifiers

#### GC/MS Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

## Case Narrative

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

### Job ID: 410-23429-1

#### Laboratory: Eurofins Lancaster Laboratories Env, LLC

#### Narrative

#### Job Narrative 410-23429-1

##### Receipt

The samples were received on 12/9/2020 8:35 PM; the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.2°C, 1.4°C, 1.5°C and 4.1°C

##### GC/MS VOA

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

##### GC/MS Semi VOA

Method 8270C\_SIM\_Alkyl: The following samples were prepared outside the method required holding time due to laboratory error: TW-14 (410-23429-2) and EB20201207 (410-23429-3).

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

##### Gasoline Range Organics

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

##### Diesel Range Organics

Method 8015B\_DRO: Individual peaks were present in the chromatogram for sample TW07 (410-23429-15) that are indicative of contamination introduced into the sample during preparation and/or analysis. The sample was re-extracted outside of the method holding time to confirm the initial result. The pattern was again observed in the re-extract at a lesser amount. The result of the re-extract was 55 ug/L.

Method 8015B\_DRO: Individual peaks were present in the chromatogram for sample MW-51 (410-23429-21) that are indicative of contamination introduced into the sample during preparation and/or analysis. The sample was re-extracted outside of the method holding time to confirm the initial result. The pattern was not observed in the re-extract. The result of the re-extract was 59 ug/L.

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

##### General Chemistry

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



## Detection Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

### Client Sample ID: RW-28S

Lab Sample ID: 410-23429-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	360		110	56	ug/L	1		8015B	Total/NA

### Client Sample ID: TW-14

Lab Sample ID: 410-23429-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HEM (Oil & Grease)	1.8	J	5.9	1.6	mg/L	1		1664B	Total/NA

### Client Sample ID: EB20201207

Lab Sample ID: 410-23429-3

No Detections.

### Client Sample ID: MW-106

Lab Sample ID: 410-23429-4

No Detections.

### Client Sample ID: MW-108

Lab Sample ID: 410-23429-5

No Detections.

### Client Sample ID: TW02

Lab Sample ID: 410-23429-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	0.025	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Acenaphthene	0.073	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Anthracene	0.048	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Benzo[a]anthracene	0.049	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Benzo[a]pyrene	0.057	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	0.036	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Biphenyl	0.046	J	0.11	0.042	ug/L	1		8270C SIM	Total/NA
Chrysene	0.050	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	0.034	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Dibenzofuran	0.045	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Fluoranthene	0.083	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Fluorene	0.050	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Phenanthrene	0.073	J	0.17	0.063	ug/L	1		8270C SIM	Total/NA
Pyrene	0.077	J	0.11	0.042	ug/L	1		8270C SIM	Total/NA

### Client Sample ID: TW06

Lab Sample ID: 410-23429-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.036	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Pyrene	0.074	J	0.11	0.042	ug/L	1		8270C SIM	Total/NA
DRO (C10-C28) (1C)	65	J	110	57	ug/L	1		8015B	Total/NA

### Client Sample ID: DUP20201208

Lab Sample ID: 410-23429-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	0.023	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Acenaphthene	0.062	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Anthracene	0.068	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Benzo[a]anthracene	0.060	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Benzo[a]pyrene	0.064	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	0.047	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Chrysene	0.062	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	0.044	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

## Detection Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

### Client Sample ID: DUP20201208 (Continued)

Lab Sample ID: 410-23429-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dibenzofuran	0.043	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Fluoranthene	0.069	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Fluorene	0.063	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Phenanthrene	0.066	J	0.17	0.063	ug/L	1		8270C SIM	Total/NA
Pyrene	0.12		0.11	0.042	ug/L	1		8270C SIM	Total/NA
DRO (C10-C28) (1C)	270		110	56	ug/L	1		8015B	Total/NA
HEM (Oil & Grease)	1.9	J	6.0	1.7	mg/L	1		1664B	Total/NA

### Client Sample ID: MW-31

Lab Sample ID: 410-23429-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	110		110	57	ug/L	1		8015B	Total/NA

### Client Sample ID: MW-100S

Lab Sample ID: 410-23429-10

No Detections.

### Client Sample ID: MW-100

Lab Sample ID: 410-23429-11

No Detections.

### Client Sample ID: MW-33

Lab Sample ID: 410-23429-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	380		110	57	ug/L	1		8015B	Total/NA

### Client Sample ID: TW03

Lab Sample ID: 410-23429-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.033	J	0.10	0.021	ug/L	1		8270C SIM	Total/NA
Benzo[a]anthracene	0.026	J	0.10	0.021	ug/L	1		8270C SIM	Total/NA
Benzo[a]pyrene	0.036	J	0.10	0.021	ug/L	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	0.077	J	0.15	0.063	ug/L	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	0.056	J	0.10	0.021	ug/L	1		8270C SIM	Total/NA
Chrysene	0.043	J	0.10	0.021	ug/L	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	0.072	J	0.10	0.021	ug/L	1		8270C SIM	Total/NA
Fluoranthene	0.024	J	0.10	0.021	ug/L	1		8270C SIM	Total/NA
Fluorene	0.098	J	0.10	0.021	ug/L	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.086	J	0.19	0.084	ug/L	1		8270C SIM	Total/NA
Pyrene	0.055	J	0.10	0.042	ug/L	1		8270C SIM	Total/NA
HEM (Oil & Grease)	2.3	J	6.1	1.7	mg/L	1		1664B	Total/NA

### Client Sample ID: TW04

Lab Sample ID: 410-23429-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	1.4		0.10	0.021	ug/L	1		8270C SIM	Total/NA
2-Methylnaphthalene	0.14	J	0.15	0.063	ug/L	1		8270C SIM	Total/NA
Acenaphthene	5.1		0.10	0.021	ug/L	1		8270C SIM	Total/NA
Acenaphthylene	0.097	J	0.10	0.021	ug/L	1		8270C SIM	Total/NA
Anthracene	0.40		0.10	0.021	ug/L	1		8270C SIM	Total/NA
Biphenyl	0.26		0.10	0.042	ug/L	1		8270C SIM	Total/NA
Dibenzofuran	1.0		0.10	0.021	ug/L	1		8270C SIM	Total/NA
Dibenzothiophene	0.099	J	0.10	0.042	ug/L	1		8270C SIM	Total/NA
Fluoranthene	0.21		0.10	0.021	ug/L	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC



## Detection Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

### Client Sample ID: TW04 (Continued)

Lab Sample ID: 410-23429-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluorene	2.3		0.10	0.021	ug/L	1		8270C SIM	Total/NA
Naphthalene	2.4		0.17	0.063	ug/L	1		8270C SIM	Total/NA
Phenanthrene	0.68		0.17	0.063	ug/L	1		8270C SIM	Total/NA
Pyrene	0.18		0.10	0.042	ug/L	1		8270C SIM	Total/NA
DRO (C10-C28) (1C)	260		110	57	ug/L	1		8015B	Total/NA
HEM (Oil & Grease)	3.6	J	6.0	1.7	mg/L	1		1664B	Total/NA

### Client Sample ID: TW07

Lab Sample ID: 410-23429-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.030	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
DRO (C10-C28) (1C)	99	J	110	57	ug/L	1		8015B	Total/NA
HEM (Oil & Grease)	2.3	J	6.0	1.7	mg/L	1		1664B	Total/NA

### Client Sample ID: TW05

Lab Sample ID: 410-23429-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.027	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Chrysene	0.021	J	0.11	0.021	ug/L	1		8270C SIM	Total/NA
Pyrene	0.30		0.11	0.043	ug/L	1		8270C SIM	Total/NA
GRO (1C)	33	J	50	23	ug/L	1		8015B	Total/NA
DRO (C10-C28) (1C)	16000		110	57	ug/L	1		8015B	Total/NA
HEM (Oil & Grease)	5.6	J	6.2	1.7	mg/L	1		1664B	Total/NA

### Client Sample ID: MW-107

Lab Sample ID: 410-23429-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	160		110	58	ug/L	1		8015B	Total/NA

### Client Sample ID: TB20336

Lab Sample ID: 410-23429-18

No Detections.

### Client Sample ID: MW-08S

Lab Sample ID: 410-23429-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	2200		110	58	ug/L	1		8015B	Total/NA

### Client Sample ID: RW-119S

Lab Sample ID: 410-23429-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	480		110	58	ug/L	1		8015B	Total/NA

### Client Sample ID: MW-51

Lab Sample ID: 410-23429-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	880		110	58	ug/L	1		8015B	Total/NA

### Client Sample ID: MW-01S

Lab Sample ID: 410-23429-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	1700		110	57	ug/L	1		8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

## Detection Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

### Client Sample ID: MW-121

Lab Sample ID: 410-23429-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	120		110	57	ug/L	1		8015B	Total/NA

### Client Sample ID: MW-515

Lab Sample ID: 410-23429-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	3100		110	57	ug/L	1		8015B	Total/NA

### Client Sample ID: MW-27

Lab Sample ID: 410-23429-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	1400		110	57	ug/L	1		8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Client Sample ID: RW-28S

Lab Sample ID: 410-23429-1

Date Collected: 12/07/20 15:05

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	360		110	56	ug/L		12/12/20 05:29	12/14/20 12:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-terphenyl (Surr) (1C)	103		52 - 132				12/12/20 05:29	12/14/20 12:28	1

Client Sample ID: TW-14

Lab Sample ID: 410-23429-2

Date Collected: 12/07/20 15:20

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.30	ug/L			12/13/20 20:27	1
1,2-Dichloroethane	ND		5.0	2.0	ug/L			12/13/20 20:27	1
Benzene	ND		1.0	0.20	ug/L			12/13/20 20:27	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/20 20:27	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			12/13/20 20:27	1
Toluene	ND		1.0	0.20	ug/L			12/13/20 20:27	1
Xylene (total)	ND		3.0	0.80	ug/L			12/13/20 20:27	1
t-Butyl alcohol	ND		25	10	ug/L			12/13/20 20:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		80 - 120					12/13/20 20:27	1
4-Bromofluorobenzene (Surr)	84		80 - 120					12/13/20 20:27	1
Dibromofluoromethane (Surr)	101		80 - 120					12/13/20 20:27	1
Toluene-d8 (Surr)	102		80 - 120					12/13/20 20:27	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
2-Methylnaphthalene	ND	H	0.15	0.063	ug/L		12/15/20 01:55	12/16/20 14:32	1
Acenaphthene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
Acenaphthylene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
Anthracene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
Benzo[a]anthracene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
Benzo[a]pyrene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
Benzo[b]fluoranthene	ND	H	0.19	0.084	ug/L		12/15/20 01:55	12/16/20 14:32	1
Benzo[e]pyrene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
Benzo[g,h,i]perylene	ND	H	0.15	0.063	ug/L		12/15/20 01:55	12/16/20 14:32	1
Benzo[k]fluoranthene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
Biphenyl	ND	H	0.10	0.042	ug/L		12/15/20 01:55	12/16/20 14:32	1
Chrysene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
Dibenz(a,h)anthracene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
Dibenzofuran	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
Dibenzothiophene	ND	H	0.10	0.042	ug/L		12/15/20 01:55	12/16/20 14:32	1
Fluoranthene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
Fluorene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 14:32	1
Indeno[1,2,3-cd]pyrene	ND	H	0.19	0.084	ug/L		12/15/20 01:55	12/16/20 14:32	1
Naphthalene	ND	H	0.17	0.063	ug/L		12/15/20 01:55	12/16/20 14:32	1
Naphthobenzothiophene	ND	H	0.10	0.042	ug/L		12/15/20 01:55	12/16/20 14:32	1
Perylene	ND	H	0.10	0.042	ug/L		12/15/20 01:55	12/16/20 14:32	1
Phenanthrene	ND	H	0.17	0.063	ug/L		12/15/20 01:55	12/16/20 14:32	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Client Sample ID: TW-14

Lab Sample ID: 410-23429-2

Date Collected: 12/07/20 15:20

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyrene	ND	H	0.10	0.042	ug/L		12/15/20 01:55	12/16/20 14:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Methylnaphthalene-d10 (Surr)	78		30 - 108				12/15/20 01:55	12/16/20 14:32	1
Benzo(a)pyrene-d12 (Surr)	83		31 - 99				12/15/20 01:55	12/16/20 14:32	1
Fluoranthene-d10 (Surr)	94		38 - 109				12/15/20 01:55	12/16/20 14:32	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (1C)	ND		50	23	ug/L			12/12/20 01:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	91		63 - 135					12/12/20 01:37	1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	58	ug/L		12/12/20 05:29	12/14/20 12:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-terphenyl (Surr) (1C)	110		52 - 132				12/12/20 05:29	12/14/20 12:52	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	1.8	J	5.9	1.6	mg/L			12/18/20 16:46	1

Client Sample ID: EB20201207

Lab Sample ID: 410-23429-3

Date Collected: 12/07/20 16:05

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.30	ug/L			12/13/20 17:14	1
1,2-Dichloroethane	ND		5.0	2.0	ug/L			12/13/20 17:14	1
Benzene	ND		1.0	0.20	ug/L			12/13/20 17:14	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/20 17:14	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			12/13/20 17:14	1
Toluene	ND		1.0	0.20	ug/L			12/13/20 17:14	1
Xylene (total)	ND		3.0	0.80	ug/L			12/13/20 17:14	1
t-Butyl alcohol	ND		25	10	ug/L			12/13/20 17:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		80 - 120					12/13/20 17:14	1
4-Bromofluorobenzene (Surr)	83		80 - 120					12/13/20 17:14	1
Dibromofluoromethane (Surr)	96		80 - 120					12/13/20 17:14	1
Toluene-d8 (Surr)	103		80 - 120					12/13/20 17:14	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1
2-Methylnaphthalene	ND	H	0.15	0.062	ug/L		12/15/20 01:55	12/16/20 15:14	1
Acenaphthene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1
Acenaphthylene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Client Sample ID: EB20201207

Lab Sample ID: 410-23429-3

Date Collected: 12/07/20 16:05

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1
Benzo[a]anthracene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1
Benzo[a]pyrene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1
Benzo[b]fluoranthene	ND	H	0.19	0.083	ug/L		12/15/20 01:55	12/16/20 15:14	1
Benzo[e]pyrene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1
Benzo[g,h,i]perylene	ND	H	0.15	0.062	ug/L		12/15/20 01:55	12/16/20 15:14	1
Benzo[k]fluoranthene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1
Biphenyl	ND	H	0.10	0.042	ug/L		12/15/20 01:55	12/16/20 15:14	1
Chrysene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1
Dibenz[a,h]anthracene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1
Dibenzofuran	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1
Dibenzothiophene	ND	H	0.10	0.042	ug/L		12/15/20 01:55	12/16/20 15:14	1
Fluoranthene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1
Fluorene	ND	H	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 15:14	1
Indeno[1,2,3-cd]pyrene	ND	H	0.19	0.083	ug/L		12/15/20 01:55	12/16/20 15:14	1
Naphthalene	ND	H	0.17	0.062	ug/L		12/15/20 01:55	12/16/20 15:14	1
Naphthobenzothiophene	ND	H	0.10	0.042	ug/L		12/15/20 01:55	12/16/20 15:14	1
Perylene	ND	H	0.10	0.042	ug/L		12/15/20 01:55	12/16/20 15:14	1
Phenanthrene	ND	H	0.17	0.062	ug/L		12/15/20 01:55	12/16/20 15:14	1
Pyrene	ND	H	0.10	0.042	ug/L		12/15/20 01:55	12/16/20 15:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene-d10 (Surr)	63		30 - 108	12/15/20 01:55	12/16/20 15:14	1
Benzo(a)pyrene-d12 (Surr)	86		31 - 99	12/15/20 01:55	12/16/20 15:14	1
Fluoranthene-d10 (Surr)	91		38 - 109	12/15/20 01:55	12/16/20 15:14	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (1C)	ND		50	23	ug/L			12/12/20 00:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	86		63 - 135		12/12/20 00:50	1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	57	ug/L		12/12/20 05:29	12/14/20 13:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr) (1C)	104		52 - 132	12/12/20 05:29	12/14/20 13:16	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		5.6	1.6	mg/L			12/18/20 16:46	1

Client Sample ID: MW-106

Lab Sample ID: 410-23429-4

Date Collected: 12/08/20 09:10

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	56	ug/L		12/12/20 05:29	12/14/20 13:40	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Client Sample ID: MW-106

Lab Sample ID: 410-23429-4

Date Collected: 12/08/20 09:10

Matrix: Water

Date Received: 12/09/20 20:35

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -terphenyl (Surr) (1C)	65		52 - 132	12/12/20 05:29	12/14/20 13:40	1

## Client Sample ID: MW-108

Lab Sample ID: 410-23429-5

Date Collected: 12/08/20 12:10

Matrix: Water

Date Received: 12/09/20 20:35

### Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	57	ug/L		12/12/20 05:29	12/14/20 14:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -terphenyl (Surr) (1C)	110		52 - 132				12/12/20 05:29	12/14/20 14:04	1

## Client Sample ID: TW02

Lab Sample ID: 410-23429-6

Date Collected: 12/08/20 13:45

Matrix: Water

Date Received: 12/09/20 20:35

### Method: 8260B/UST - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.30	ug/L			12/13/20 18:02	1
1,2-Dichloroethane	ND		5.0	2.0	ug/L			12/13/20 18:02	1
Benzene	ND		1.0	0.20	ug/L			12/13/20 18:02	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/20 18:02	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			12/13/20 18:02	1
Toluene	ND		1.0	0.20	ug/L			12/13/20 18:02	1
Xylene (total)	ND		3.0	0.80	ug/L			12/13/20 18:02	1
t-Butyl alcohol	ND		25	10	ug/L			12/13/20 18:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		80 - 120					12/13/20 18:02	1
4-Bromofluorobenzene (Surr)	82		80 - 120					12/13/20 18:02	1
Dibromofluoromethane (Surr)	96		80 - 120					12/13/20 18:02	1
Toluene-d8 (Surr)	104		80 - 120					12/13/20 18:02	1

### Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	0.025	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
2-Methylnaphthalene	ND		0.15	0.063	ug/L		12/15/20 01:55	12/16/20 12:26	1
Acenaphthene	0.073	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
Acenaphthylene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
Anthracene	0.048	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
Benzo[a]anthracene	0.049	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
Benzo[a]pyrene	0.057	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
Benzo[b]fluoranthene	ND		0.19	0.085	ug/L		12/15/20 01:55	12/16/20 12:26	1
Benzo[e]pyrene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
Benzo[g,h,i]perylene	ND		0.15	0.063	ug/L		12/15/20 01:55	12/16/20 12:26	1
Benzo[k]fluoranthene	0.036	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
Biphenyl	0.046	J	0.11	0.042	ug/L		12/15/20 01:55	12/16/20 12:26	1
Chrysene	0.050	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
Dibenz(a,h)anthracene	0.034	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
Dibenzofuran	0.045	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
Dibenzothiophene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 12:26	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Client Sample ID: TW02

Lab Sample ID: 410-23429-6

Date Collected: 12/08/20 13:45

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	0.083	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
Fluorene	0.050	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 12:26	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.085	ug/L		12/15/20 01:55	12/16/20 12:26	1
Naphthalene	ND		0.17	0.063	ug/L		12/15/20 01:55	12/16/20 12:26	1
Naphthobenzothiophene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 12:26	1
Perylene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 12:26	1
Phenanthrene	0.073	J	0.17	0.063	ug/L		12/15/20 01:55	12/16/20 12:26	1
Pyrene	0.077	J	0.11	0.042	ug/L		12/15/20 01:55	12/16/20 12:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Methylnaphthalene-d10 (Surr)	58		30 - 108				12/15/20 01:55	12/16/20 12:26	1
Benzo(a)pyrene-d12 (Surr)	64		31 - 99				12/15/20 01:55	12/16/20 12:26	1
Fluoranthene-d10 (Surr)	81		38 - 109				12/15/20 01:55	12/16/20 12:26	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (1C)	ND		50	23	ug/L			12/12/20 02:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	91		63 - 135					12/12/20 02:01	1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND	F2 F1	110	57	ug/L		12/12/20 05:29	12/14/20 14:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-terphenyl (Surr) (1C)	60		52 - 132				12/12/20 05:29	12/14/20 14:28	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		6.2	1.7	mg/L			12/18/20 16:46	1

Client Sample ID: TW06

Lab Sample ID: 410-23429-7

Date Collected: 12/08/20 11:55

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.30	ug/L			12/13/20 20:51	1
1,2-Dichloroethane	ND		5.0	2.0	ug/L			12/13/20 20:51	1
Benzene	ND		1.0	0.20	ug/L			12/13/20 20:51	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/20 20:51	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			12/13/20 20:51	1
Toluene	ND		1.0	0.20	ug/L			12/13/20 20:51	1
Xylene (total)	ND		3.0	0.80	ug/L			12/13/20 20:51	1
t-Butyl alcohol	ND		25	10	ug/L			12/13/20 20:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120					12/13/20 20:51	1
4-Bromofluorobenzene (Surr)	86		80 - 120					12/13/20 20:51	1
Dibromofluoromethane (Surr)	99		80 - 120					12/13/20 20:51	1
Toluene-d8 (Surr)	104		80 - 120					12/13/20 20:51	1

Eurofins Lancaster Laboratories Env, LLC

# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Client Sample ID: TW06

Lab Sample ID: 410-23429-7

Date Collected: 12/08/20 11:55

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
2-Methylnaphthalene	ND		0.15	0.063	ug/L		12/15/20 01:55	12/16/20 15:56	1
Acenaphthene	0.036	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
Acenaphthylene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
Anthracene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
Benzo[a]anthracene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
Benzo[a]pyrene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
Benzo[b]fluoranthene	ND		0.19	0.084	ug/L		12/15/20 01:55	12/16/20 15:56	1
Benzo[e]pyrene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
Benzo[g,h,i]perylene	ND		0.15	0.063	ug/L		12/15/20 01:55	12/16/20 15:56	1
Benzo[k]fluoranthene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
Biphenyl	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 15:56	1
Chrysene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
Dibenz(a,h)anthracene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
Dibenzofuran	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
Dibenzothiophene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 15:56	1
Fluoranthene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
Fluorene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 15:56	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.084	ug/L		12/15/20 01:55	12/16/20 15:56	1
Naphthalene	ND		0.17	0.063	ug/L		12/15/20 01:55	12/16/20 15:56	1
Naphthobenzothiophene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 15:56	1
Perylene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 15:56	1
Phenanthrene	ND		0.17	0.063	ug/L		12/15/20 01:55	12/16/20 15:56	1
Pyrene	0.074	J	0.11	0.042	ug/L		12/15/20 01:55	12/16/20 15:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene-d10 (Surr)	61		30 - 108	12/15/20 01:55	12/16/20 15:56	1
Benzo(a)pyrene-d12 (Surr)	81		31 - 99	12/15/20 01:55	12/16/20 15:56	1
Fluoranthene-d10 (Surr)	82		38 - 109	12/15/20 01:55	12/16/20 15:56	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (1C)	ND		50	23	ug/L			12/12/20 03:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	91		63 - 135		12/12/20 03:11	1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	65	J	110	57	ug/L		12/12/20 05:29	12/14/20 15:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-terphenyl (Surr) (1C)	88		52 - 132	12/12/20 05:29	12/14/20 15:40	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		6.0	1.7	mg/L			12/18/20 16:46	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Client Sample ID: DUP20201208

Lab Sample ID: 410-23429-8

Date Collected: 12/08/20 00:00

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.30	ug/L			12/13/20 21:15	1
1,2-Dichloroethane	ND		5.0	2.0	ug/L			12/13/20 21:15	1
Benzene	ND		1.0	0.20	ug/L			12/13/20 21:15	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/20 21:15	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			12/13/20 21:15	1
Toluene	ND		1.0	0.20	ug/L			12/13/20 21:15	1
Xylene (total)	ND		3.0	0.80	ug/L			12/13/20 21:15	1
t-Butyl alcohol	ND		25	10	ug/L			12/13/20 21:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		80 - 120		12/13/20 21:15	1
4-Bromofluorobenzene (Surr)	83		80 - 120		12/13/20 21:15	1
Dibromofluoromethane (Surr)	99		80 - 120		12/13/20 21:15	1
Toluene-d8 (Surr)	105		80 - 120		12/13/20 21:15	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	0.023	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
2-Methylnaphthalene	ND		0.15	0.063	ug/L		12/15/20 01:55	12/16/20 16:38	1
Acenaphthene	0.062	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
Acenaphthylene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
Anthracene	0.068	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
Benzo[a]anthracene	0.060	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
Benzo[a]pyrene	0.064	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
Benzo[b]fluoranthene	ND		0.19	0.085	ug/L		12/15/20 01:55	12/16/20 16:38	1
Benzo[e]pyrene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
Benzo[g,h,i]perylene	ND		0.15	0.063	ug/L		12/15/20 01:55	12/16/20 16:38	1
Benzo[k]fluoranthene	0.047	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
Biphenyl	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 16:38	1
Chrysene	0.062	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
Dibenz(a,h)anthracene	0.044	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
Dibenzofuran	0.043	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
Dibenzothiophene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 16:38	1
Fluoranthene	0.069	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
Fluorene	0.063	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 16:38	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.085	ug/L		12/15/20 01:55	12/16/20 16:38	1
Naphthalene	ND		0.17	0.063	ug/L		12/15/20 01:55	12/16/20 16:38	1
Naphthobenzothiophene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 16:38	1
Perylene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 16:38	1
Phenanthrene	0.066	J	0.17	0.063	ug/L		12/15/20 01:55	12/16/20 16:38	1
Pyrene	0.12		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 16:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene-d10 (Surr)	58		30 - 108	12/15/20 01:55	12/16/20 16:38	1
Benzo(a)pyrene-d12 (Surr)	80		31 - 99	12/15/20 01:55	12/16/20 16:38	1
Fluoranthene-d10 (Surr)	80		38 - 109	12/15/20 01:55	12/16/20 16:38	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (1C)	ND		50	23	ug/L			12/12/20 03:35	1

Eurofins Lancaster Laboratories Env, LLC

# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Client Sample ID: DUP20201208

Lab Sample ID: 410-23429-8

Date Collected: 12/08/20 00:00

Matrix: Water

Date Received: 12/09/20 20:35

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	85		63 - 135					12/12/20 03:35	1
Method: 8015B - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	270		110	56	ug/L		12/12/20 05:29	12/14/20 16:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	108		52 - 132				12/12/20 05:29	12/14/20 16:04	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	1.9	J	6.0	1.7	mg/L			12/18/20 16:46	1

Client Sample ID: MW-31

Lab Sample ID: 410-23429-9

Date Collected: 12/08/20 11:20

Matrix: Water

Date Received: 12/09/20 20:35

Method: 8015B - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	110		110	57	ug/L		12/12/20 05:29	12/14/20 17:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	90		52 - 132				12/12/20 05:29	12/14/20 17:15	1

Client Sample ID: MW-100S

Lab Sample ID: 410-23429-10

Date Collected: 12/08/20 15:05

Matrix: Water

Date Received: 12/09/20 20:35

Method: 8015B - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	57	ug/L		12/12/20 05:29	12/14/20 17:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	105		52 - 132				12/12/20 05:29	12/14/20 17:39	1

Client Sample ID: MW-100

Lab Sample ID: 410-23429-11

Date Collected: 12/08/20 14:05

Matrix: Water

Date Received: 12/09/20 20:35

Method: 8015B - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	58	ug/L		12/12/20 05:29	12/14/20 18:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	103		52 - 132				12/12/20 05:29	12/14/20 18:03	1

Client Sample ID: MW-33

Lab Sample ID: 410-23429-12

Date Collected: 12/08/20 10:45

Matrix: Water

Date Received: 12/09/20 20:35

Method: 8015B - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	380		110	57	ug/L		12/12/20 05:29	12/14/20 18:27	1

Eurofins Lancaster Laboratories Env, LLC



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

**Client Sample ID: MW-33**

**Lab Sample ID: 410-23429-12**

**Date Collected: 12/08/20 10:45**

**Matrix: Water**

**Date Received: 12/09/20 20:35**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-terphenyl (Surr) (1C)</i>	114		52 - 132	12/12/20 05:29	12/14/20 18:27	1

**Client Sample ID: TW03**

**Lab Sample ID: 410-23429-13**

**Date Collected: 12/08/20 13:50**

**Matrix: Water**

**Date Received: 12/09/20 20:35**

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.30	ug/L			12/13/20 21:39	1
1,2-Dichloroethane	ND		5.0	2.0	ug/L			12/13/20 21:39	1
Benzene	ND		1.0	0.20	ug/L			12/13/20 21:39	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/20 21:39	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			12/13/20 21:39	1
Toluene	ND		1.0	0.20	ug/L			12/13/20 21:39	1
Xylene (total)	ND		3.0	0.80	ug/L			12/13/20 21:39	1
t-Butyl alcohol	ND		25	10	ug/L			12/13/20 21:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>1,2-Dichloroethane-d4 (Surr)</i>	91		80 - 120		12/13/20 21:39	1
<i>4-Bromofluorobenzene (Surr)</i>	84		80 - 120		12/13/20 21:39	1
<i>Dibromofluoromethane (Surr)</i>	99		80 - 120		12/13/20 21:39	1
<i>Toluene-d8 (Surr)</i>	105		80 - 120		12/13/20 21:39	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
2-Methylnaphthalene	ND		0.15	0.063	ug/L		12/15/20 01:55	12/16/20 17:20	1
Acenaphthene	0.033	J	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
Acenaphthylene	ND		0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
Anthracene	ND		0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
Benzo[a]anthracene	0.026	J	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
Benzo[a]pyrene	0.036	J	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
Benzo[b]fluoranthene	ND		0.19	0.084	ug/L		12/15/20 01:55	12/16/20 17:20	1
Benzo[e]pyrene	ND		0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
Benzo[g,h,i]perylene	0.077	J	0.15	0.063	ug/L		12/15/20 01:55	12/16/20 17:20	1
Benzo[k]fluoranthene	0.056	J	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
Biphenyl	ND		0.10	0.042	ug/L		12/15/20 01:55	12/16/20 17:20	1
Chrysene	0.043	J	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
Dibenz(a,h)anthracene	0.072	J	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
Dibenzofuran	ND		0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
Dibenzothiophene	ND		0.10	0.042	ug/L		12/15/20 01:55	12/16/20 17:20	1
Fluoranthene	0.024	J	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
Fluorene	0.098	J	0.10	0.021	ug/L		12/15/20 01:55	12/16/20 17:20	1
Indeno[1,2,3-cd]pyrene	0.086	J	0.19	0.084	ug/L		12/15/20 01:55	12/16/20 17:20	1
Naphthalene	ND		0.17	0.063	ug/L		12/15/20 01:55	12/16/20 17:20	1
Naphthobenzothiophene	ND		0.10	0.042	ug/L		12/15/20 01:55	12/16/20 17:20	1
Perylene	ND		0.10	0.042	ug/L		12/15/20 01:55	12/16/20 17:20	1
Phenanthrene	ND		0.17	0.063	ug/L		12/15/20 01:55	12/16/20 17:20	1
Pyrene	0.055	J	0.10	0.042	ug/L		12/15/20 01:55	12/16/20 17:20	1

# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Client Sample ID: TW03

Lab Sample ID: 410-23429-13

Date Collected: 12/08/20 13:50

Matrix: Water

Date Received: 12/09/20 20:35

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene-d10 (Surr)	62		30 - 108	12/15/20 01:55	12/16/20 17:20	1
Benzo(a)pyrene-d12 (Surr)	78		31 - 99	12/15/20 01:55	12/16/20 17:20	1
Fluoranthene-d10 (Surr)	86		38 - 109	12/15/20 01:55	12/16/20 17:20	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (1C)	ND		50	23	ug/L	-		12/12/20 03:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	92		63 - 135					12/12/20 03:58	1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	57	ug/L		12/12/20 05:29	12/14/20 18:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-terphenyl (Surr) (1C)	115		52 - 132				12/12/20 05:29	12/14/20 18:51	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	2.3	J	6.1	1.7	mg/L	-		12/18/20 16:46	1

Client Sample ID: TW04

Lab Sample ID: 410-23429-14

Date Collected: 12/09/20 09:40

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.30	ug/L			12/13/20 22:03	1
1,2-Dichloroethane	ND		5.0	2.0	ug/L			12/13/20 22:03	1
Benzene	ND		1.0	0.20	ug/L			12/13/20 22:03	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/20 22:03	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			12/13/20 22:03	1
Toluene	ND		1.0	0.20	ug/L			12/13/20 22:03	1
Xylene (total)	ND		3.0	0.80	ug/L			12/13/20 22:03	1
t-Butyl alcohol	ND		25	10	ug/L			12/13/20 22:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120					12/13/20 22:03	1
4-Bromofluorobenzene (Surr)	85		80 - 120					12/13/20 22:03	1
Dibromofluoromethane (Surr)	101		80 - 120					12/13/20 22:03	1
Toluene-d8 (Surr)	103		80 - 120					12/13/20 22:03	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	1.4		0.10	0.021	ug/L	-	12/15/20 01:55	12/16/20 18:02	1
2-Methylnaphthalene	0.14	J	0.15	0.063	ug/L	-	12/15/20 01:55	12/16/20 18:02	1
Acenaphthene	5.1		0.10	0.021	ug/L	-	12/15/20 01:55	12/16/20 18:02	1
Acenaphthylene	0.097	J	0.10	0.021	ug/L	-	12/15/20 01:55	12/16/20 18:02	1
Anthracene	0.40		0.10	0.021	ug/L	-	12/15/20 01:55	12/16/20 18:02	1
Benzo[a]anthracene	ND		0.10	0.021	ug/L	-	12/15/20 01:55	12/16/20 18:02	1
Benzo[a]pyrene	ND		0.10	0.021	ug/L	-	12/15/20 01:55	12/16/20 18:02	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Client Sample ID: TW04

Lab Sample ID: 410-23429-14

Date Collected: 12/09/20 09:40

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		0.19	0.084	ug/L		12/15/20 01:55	12/16/20 18:02	1
Benzo[e]pyrene	ND		0.10	0.021	ug/L		12/15/20 01:55	12/16/20 18:02	1
Benzo[g,h,i]perylene	ND		0.15	0.063	ug/L		12/15/20 01:55	12/16/20 18:02	1
Benzo[k]fluoranthene	ND		0.10	0.021	ug/L		12/15/20 01:55	12/16/20 18:02	1
Biphenyl	0.26		0.10	0.042	ug/L		12/15/20 01:55	12/16/20 18:02	1
Chrysene	ND		0.10	0.021	ug/L		12/15/20 01:55	12/16/20 18:02	1
Dibenz(a,h)anthracene	ND		0.10	0.021	ug/L		12/15/20 01:55	12/16/20 18:02	1
Dibenzofuran	1.0		0.10	0.021	ug/L		12/15/20 01:55	12/16/20 18:02	1
Dibenzothiophene	0.099	J	0.10	0.042	ug/L		12/15/20 01:55	12/16/20 18:02	1
Fluoranthene	0.21		0.10	0.021	ug/L		12/15/20 01:55	12/16/20 18:02	1
Fluorene	2.3		0.10	0.021	ug/L		12/15/20 01:55	12/16/20 18:02	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.084	ug/L		12/15/20 01:55	12/16/20 18:02	1
Naphthalene	2.4		0.17	0.063	ug/L		12/15/20 01:55	12/16/20 18:02	1
Naphthobenzothiophene	ND		0.10	0.042	ug/L		12/15/20 01:55	12/16/20 18:02	1
Perylene	ND		0.10	0.042	ug/L		12/15/20 01:55	12/16/20 18:02	1
Phenanthrene	0.68		0.17	0.063	ug/L		12/15/20 01:55	12/16/20 18:02	1
Pyrene	0.18		0.10	0.042	ug/L		12/15/20 01:55	12/16/20 18:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene-d10 (Surr)	63		30 - 108	12/15/20 01:55	12/16/20 18:02	1
Benzo(a)pyrene-d12 (Surr)	77		31 - 99	12/15/20 01:55	12/16/20 18:02	1
Fluoranthene-d10 (Surr)	81		38 - 109	12/15/20 01:55	12/16/20 18:02	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (1C)	ND		50	23	ug/L			12/12/20 04:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	91		63 - 135					12/12/20 04:22	1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	260		110	57	ug/L		12/12/20 05:29	12/14/20 19:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	104		52 - 132				12/12/20 05:29	12/14/20 19:15	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	3.6	J	6.0	1.7	mg/L			12/18/20 16:46	1

Client Sample ID: TW07

Lab Sample ID: 410-23429-15

Date Collected: 12/09/20 10:30

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.30	ug/L			12/13/20 22:27	1
1,2-Dichloroethane	ND		5.0	2.0	ug/L			12/13/20 22:27	1
Benzene	ND		1.0	0.20	ug/L			12/13/20 22:27	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/20 22:27	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Client Sample ID: TW07

Lab Sample ID: 410-23429-15

Date Collected: 12/09/20 10:30

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			12/13/20 22:27	1
Toluene	ND		1.0	0.20	ug/L			12/13/20 22:27	1
Xylene (total)	ND		3.0	0.80	ug/L			12/13/20 22:27	1
t-Butyl alcohol	ND		25	10	ug/L			12/13/20 22:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		80 - 120					12/13/20 22:27	1
4-Bromofluorobenzene (Surr)	83		80 - 120					12/13/20 22:27	1
Dibromofluoromethane (Surr)	99		80 - 120					12/13/20 22:27	1
Toluene-d8 (Surr)	103		80 - 120					12/13/20 22:27	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
2-Methylnaphthalene	ND		0.15	0.064	ug/L		12/15/20 01:55	12/16/20 18:44	1
Acenaphthene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
Acenaphthylene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
Anthracene	0.030	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
Benzo[a]anthracene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
Benzo[a]pyrene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
Benzo[b]fluoranthene	ND		0.19	0.085	ug/L		12/15/20 01:55	12/16/20 18:44	1
Benzo[e]pyrene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
Benzo[g,h,i]perylene	ND		0.15	0.064	ug/L		12/15/20 01:55	12/16/20 18:44	1
Benzo[k]fluoranthene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
Biphenyl	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 18:44	1
Chrysene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
Dibenz(a,h)anthracene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
Dibenzofuran	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
Dibenzothiophene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 18:44	1
Fluoranthene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
Fluorene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 18:44	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.085	ug/L		12/15/20 01:55	12/16/20 18:44	1
Naphthalene	ND		0.17	0.064	ug/L		12/15/20 01:55	12/16/20 18:44	1
Naphthobenzothiophene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 18:44	1
Perylene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 18:44	1
Phenanthrene	ND		0.17	0.064	ug/L		12/15/20 01:55	12/16/20 18:44	1
Pyrene	ND		0.11	0.042	ug/L		12/15/20 01:55	12/16/20 18:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Methylnaphthalene-d10 (Surr)	65		30 - 108				12/15/20 01:55	12/16/20 18:44	1
Benzo(a)pyrene-d12 (Surr)	80		31 - 99				12/15/20 01:55	12/16/20 18:44	1
Fluoranthene-d10 (Surr)	93		38 - 109				12/15/20 01:55	12/16/20 18:44	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (1C)	ND		50	23	ug/L			12/12/20 04:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	90		63 - 135					12/12/20 04:46	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Client Sample ID: TW07

Lab Sample ID: 410-23429-15

Date Collected: 12/09/20 10:30

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	99	J	110	57	ug/L		12/12/20 05:29	12/14/20 19:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -terphenyl (Surr) (1C)	110		52 - 132	12/12/20 05:29	12/14/20 19:38	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	2.3	J	6.0	1.7	mg/L			12/18/20 16:46	1

Client Sample ID: TW05

Lab Sample ID: 410-23429-16

Date Collected: 12/09/20 11:10

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.30	ug/L			12/13/20 22:51	1
1,2-Dichloroethane	ND		5.0	2.0	ug/L			12/13/20 22:51	1
Benzene	ND		1.0	0.20	ug/L			12/13/20 22:51	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/20 22:51	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			12/13/20 22:51	1
Toluene	ND		1.0	0.20	ug/L			12/13/20 22:51	1
Xylene (total)	ND		3.0	0.80	ug/L			12/13/20 22:51	1
<i>t</i> -Butyl alcohol	ND		25	10	ug/L			12/13/20 22:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		80 - 120		12/13/20 22:51	1
4-Bromofluorobenzene (Surr)	86		80 - 120		12/13/20 22:51	1
Dibromofluoromethane (Surr)	102		80 - 120		12/13/20 22:51	1
Toluene-d8 (Surr)	104		80 - 120		12/13/20 22:51	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
2-Methylnaphthalene	ND		0.15	0.064	ug/L		12/15/20 01:55	12/16/20 19:26	1
Acenaphthene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
Acenaphthylene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
Anthracene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
Benzo[a]anthracene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
Benzo[a]pyrene	0.027	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
Benzo[b]fluoranthene	ND		0.19	0.086	ug/L		12/15/20 01:55	12/16/20 19:26	1
Benzo[e]pyrene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
Benzo[g,h,i]perylene	ND		0.15	0.064	ug/L		12/15/20 01:55	12/16/20 19:26	1
Benzo[k]fluoranthene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
Biphenyl	ND		0.11	0.043	ug/L		12/15/20 01:55	12/16/20 19:26	1
Chrysene	0.021	J	0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
Dibenz(a,h)anthracene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
Dibenzofuran	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
Dibenzothiophene	ND		0.11	0.043	ug/L		12/15/20 01:55	12/16/20 19:26	1
Fluoranthene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
Fluorene	ND		0.11	0.021	ug/L		12/15/20 01:55	12/16/20 19:26	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.086	ug/L		12/15/20 01:55	12/16/20 19:26	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Client Sample ID: TW05

Lab Sample ID: 410-23429-16

Date Collected: 12/09/20 11:10

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.17	0.064	ug/L		12/15/20 01:55	12/16/20 19:26	1
Naphthobenzothiophene	ND		0.11	0.043	ug/L		12/15/20 01:55	12/16/20 19:26	1
Perylene	ND		0.11	0.043	ug/L		12/15/20 01:55	12/16/20 19:26	1
Phenanthrene	ND		0.17	0.064	ug/L		12/15/20 01:55	12/16/20 19:26	1
Pyrene	0.30		0.11	0.043	ug/L		12/15/20 01:55	12/16/20 19:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Methylnaphthalene-d10 (Surr)	80		30 - 108				12/15/20 01:55	12/16/20 19:26	1
Benzo(a)pyrene-d12 (Surr)	81		31 - 99				12/15/20 01:55	12/16/20 19:26	1
Fluoranthene-d10 (Surr)	69		38 - 109				12/15/20 01:55	12/16/20 19:26	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (1C)	33	J	50	23	ug/L			12/12/20 05:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	87		63 - 135					12/12/20 05:10	1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	16000		110	57	ug/L		12/12/20 05:29	12/14/20 20:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-terphenyl (Surr) (1C)	80		52 - 132				12/12/20 05:29	12/14/20 20:02	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	5.6	J	6.2	1.7	mg/L			12/18/20 16:46	1

Client Sample ID: MW-107

Lab Sample ID: 410-23429-17

Date Collected: 12/09/20 12:00

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	160		110	58	ug/L		12/12/20 05:29	12/14/20 20:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-terphenyl (Surr) (1C)	109		52 - 132				12/12/20 05:29	12/14/20 20:26	1

Client Sample ID: TB20336

Lab Sample ID: 410-23429-18

Date Collected: 12/09/20 00:00

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.30	ug/L			12/13/20 17:38	1
1,2-Dichloroethane	ND		5.0	2.0	ug/L			12/13/20 17:38	1
Benzene	ND		1.0	0.20	ug/L			12/13/20 17:38	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/20 17:38	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			12/13/20 17:38	1
Toluene	ND		1.0	0.20	ug/L			12/13/20 17:38	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

**Client Sample ID: TB20336**

**Lab Sample ID: 410-23429-18**

**Date Collected: 12/09/20 00:00**

**Matrix: Water**

**Date Received: 12/09/20 20:35**

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylene (total)	ND		3.0	0.80	ug/L			12/13/20 17:38	1
t-Butyl alcohol	ND		25	10	ug/L			12/13/20 17:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120					12/13/20 17:38	1
4-Bromofluorobenzene (Surr)	83		80 - 120					12/13/20 17:38	1
Dibromofluoromethane (Surr)	96		80 - 120					12/13/20 17:38	1
Toluene-d8 (Surr)	104		80 - 120					12/13/20 17:38	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (1C)	ND		50	23	ug/L			12/12/20 01:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	91		63 - 135					12/12/20 01:14	1

**Client Sample ID: MW-08S**

**Lab Sample ID: 410-23429-19**

**Date Collected: 12/09/20 15:25**

**Matrix: Water**

**Date Received: 12/09/20 20:35**

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	2200		110	58	ug/L		12/12/20 05:29	12/14/20 20:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	73		52 - 132				12/12/20 05:29	12/14/20 20:50	1

**Client Sample ID: RW-119S**

**Lab Sample ID: 410-23429-20**

**Date Collected: 12/09/20 13:45**

**Matrix: Water**

**Date Received: 12/09/20 20:35**

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	480		110	58	ug/L		12/12/20 05:29	12/14/20 21:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	96		52 - 132				12/12/20 05:29	12/14/20 21:14	1

**Client Sample ID: MW-51**

**Lab Sample ID: 410-23429-21**

**Date Collected: 12/09/20 12:40**

**Matrix: Water**

**Date Received: 12/09/20 20:35**

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	880		110	58	ug/L		12/12/20 05:29	12/14/20 21:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	107		52 - 132				12/12/20 05:29	12/14/20 21:38	1

# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

**Client Sample ID: MW-01S**

**Lab Sample ID: 410-23429-22**

Date Collected: 12/09/20 11:10

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	1700		110	57	ug/L		12/14/20 04:42	12/15/20 01:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	71		52 - 132				12/14/20 04:42	12/15/20 01:36	1

**Client Sample ID: MW-121**

**Lab Sample ID: 410-23429-23**

Date Collected: 12/09/20 14:00

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	120		110	57	ug/L		12/14/20 04:42	12/15/20 02:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	110		52 - 132				12/14/20 04:42	12/15/20 02:00	1

**Client Sample ID: MW-515**

**Lab Sample ID: 410-23429-24**

Date Collected: 12/09/20 11:05

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	3100		110	57	ug/L		12/14/20 04:42	12/15/20 02:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	96		52 - 132				12/14/20 04:42	12/15/20 02:25	1

**Client Sample ID: MW-27**

**Lab Sample ID: 410-23429-25**

Date Collected: 12/09/20 09:00

Matrix: Water

Date Received: 12/09/20 20:35

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	1400		110	57	ug/L		12/14/20 04:42	12/15/20 02:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	52		52 - 132				12/14/20 04:42	12/15/20 02:49	1

# Surrogate Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (80-120)	BFB (80-120)	DBFM (80-120)	TOL (80-120)
410-23429-2	TW-14	89	84	101	102
410-23429-3	EB20201207	89	83	96	103
410-23429-6	TW02	86	82	96	104
410-23429-6 MS	TW02MS	90	88	96	105
410-23429-6 MSD	TW02MSD	93	88	101	105
410-23429-7	TW06	91	86	99	104
410-23429-8	DUP20201208	90	83	99	105
410-23429-13	TW03	91	84	99	105
410-23429-14	TW04	91	85	101	103
410-23429-15	TW07	88	83	99	103
410-23429-16	TW05	90	86	102	104
410-23429-18	TB20336	91	83	96	104
LCS 410-76156/6	Lab Control Sample	91	87	95	106
MB 410-76156/9	Method Blank	89	82	96	105
<b>Surrogate Legend</b>					
DCA = 1,2-Dichloroethane-d4 (Surr)					
BFB = 4-Bromofluorobenzene (Surr)					
DBFM = Dibromofluoromethane (Surr)					
TOL = Toluene-d8 (Surr)					

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		MNPd10 (30-108)	BAPd12 (31-99)	FLN10 (38-109)
410-23429-2	TW-14	78	83	94
410-23429-3	EB20201207	63	86	91
410-23429-6	TW02	58	64	81
410-23429-6 MS	TW02MS	47	70	71
410-23429-6 MSD	TW02MSD	52	62	87
410-23429-7	TW06	61	81	82
410-23429-8	DUP20201208	58	80	80
410-23429-13	TW03	62	78	86
410-23429-14	TW04	63	77	81
410-23429-15	TW07	65	80	93
410-23429-16	TW05	80	81	69
LCS 410-76770/2-A	Lab Control Sample	61	89	92
MB 410-76770/1-A	Method Blank	64	77	88
<b>Surrogate Legend</b>				
MNPd10 = 1-Methylnaphthalene-d10 (Surr)				
BAPd12 = Benzo(a)pyrene-d12 (Surr)				
FLN10 = Fluoranthene-d10 (Surr)				



## Surrogate Summary

Client: Geosyntec Consultants, Inc.

Job ID: 410-23429-1

Project/Site: PRGS Monitoring

### Method: 8015B - Gasoline Range Organics - (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	TFT-F1 (63-135)					
410-23429-2	TW-14	91					
410-23429-3	EB20201207	86					
410-23429-6	TW02	91					
410-23429-6 MS	TW02MS	96					
410-23429-6 MSD	TW02MSD	91					
410-23429-7	TW06	91					
410-23429-8	DUP20201208	85					
410-23429-13	TW03	92					
410-23429-14	TW04	91					
410-23429-15	TW07	90					
410-23429-16	TW05	87					
410-23429-18	TB20336	91					
LCS 410-75953/6	Lab Control Sample	93					
LCSD 410-75953/7	Lab Control Sample Dup	93					
MB 410-75953/5	Method Blank	92					
<b>Surrogate Legend</b>							
TFT-F = a,a,a-Trifluorotoluene (fid)							

### Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	OTP1 (52-132)					
410-23429-1	RW-28S	103					
410-23429-2	TW-14	110					
410-23429-3	EB20201207	104					
410-23429-4	MW-106	65					
410-23429-5	MW-108	110					
410-23429-6	TW02	60					
410-23429-6 MS	TW02MS	114					
410-23429-6 MSD	TW02MSD	120					
410-23429-7	TW06	88					
410-23429-8	DUP20201208	108					
410-23429-9	MW-31	90					
410-23429-10	MW-100S	105					
410-23429-11	MW-100	103					
410-23429-12	MW-33	114					
410-23429-13	TW03	115					
410-23429-14	TW04	104					
410-23429-15	TW07	110					
410-23429-16	TW05	80					
410-23429-17	MW-107	109					
410-23429-19	MW-08S	73					
410-23429-20	RW-119S	96					
410-23429-21	MW-51	107					
410-23429-22	MW-01S	71					
410-23429-23	MW-121	110					
410-23429-24	MW-515	96					
410-23429-25	MW-27	52					

## Surrogate Summary

Client: Geosyntec Consultants, Inc.

Job ID: 410-23429-1

Project/Site: PRGS Monitoring

### Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

#### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTP1 (52-132)
LCS 410-76035/2-A	Lab Control Sample	119
LCS 410-76230/2-A	Lab Control Sample	116
LCSD 410-76230/3-A	Lab Control Sample Dup	119
MB 410-76035/1-A	Method Blank	120
MB 410-76230/1-A	Method Blank	113

#### Surrogate Legend

OTP = o- terphenyl (Surr)

# QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-76156/9

Matrix: Water

Analysis Batch: 76156

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.30	ug/L			12/13/20 14:05	1
1,2-Dichloroethane	ND		5.0	2.0	ug/L			12/13/20 14:05	1
Benzene	ND		1.0	0.20	ug/L			12/13/20 14:05	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/13/20 14:05	1
Methyl tertiary butyl ether	ND		1.0	0.20	ug/L			12/13/20 14:05	1
Toluene	ND		1.0	0.20	ug/L			12/13/20 14:05	1
Xylene (total)	ND		3.0	0.80	ug/L			12/13/20 14:05	1
t-Butyl alcohol	ND		25	10	ug/L			12/13/20 14:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		80 - 120		12/13/20 14:05	1
4-Bromofluorobenzene (Surr)	82		80 - 120		12/13/20 14:05	1
Dibromofluoromethane (Surr)	96		80 - 120		12/13/20 14:05	1
Toluene-d8 (Surr)	105		80 - 120		12/13/20 14:05	1

Lab Sample ID: LCS 410-76156/6

Matrix: Water

Analysis Batch: 76156

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane	20.0	19.2		ug/L		96	77 - 120
1,2-Dichloroethane	20.0	14.5		ug/L		73	73 - 124
Benzene	20.0	16.7		ug/L		83	80 - 120
Ethylbenzene	20.0	19.5		ug/L		98	80 - 120
Methyl tertiary butyl ether	20.0	15.5		ug/L		77	69 - 122
Toluene	20.0	19.7		ug/L		99	80 - 120
Xylene (total)	60.0	59.1		ug/L		99	80 - 120
m&p-Xylene	40.0	39.1		ug/L		98	80 - 120
o-Xylene	20.0	20.0		ug/L		100	80 - 120
t-Butyl alcohol	200	182		ug/L		91	60 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		80 - 120
4-Bromofluorobenzene (Surr)	87		80 - 120
Dibromofluoromethane (Surr)	95		80 - 120
Toluene-d8 (Surr)	106		80 - 120

Lab Sample ID: 410-23429-6 MS

Matrix: Water

Analysis Batch: 76156

Client Sample ID: TW02MS

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane	ND		20.0	20.5		ug/L		103	77 - 120
1,2-Dichloroethane	ND		20.0	14.9		ug/L		75	73 - 124
Benzene	ND		20.0	18.4		ug/L		92	80 - 120
Ethylbenzene	ND		20.0	21.5		ug/L		108	80 - 120
Methyl tertiary butyl ether	ND		20.0	16.0		ug/L		80	69 - 122
Toluene	ND		20.0	21.5		ug/L		107	80 - 120

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# QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Method: 8260B/UST - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 410-23429-6 MS

Matrix: Water

Analysis Batch: 76156

Client Sample ID: TW02MS

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Xylene (total)	ND		60.0	64.4		ug/L		107	80 - 120
m&p-Xylene	ND		40.0	43.0		ug/L		108	80 - 120
o-Xylene	ND		20.0	21.4		ug/L		107	80 - 120
t-Butyl alcohol	ND		200	215		ug/L		108	60 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	90		80 - 120						
4-Bromofluorobenzene (Surr)	88		80 - 120						
Dibromofluoromethane (Surr)	96		80 - 120						
Toluene-d8 (Surr)	105		80 - 120						

Lab Sample ID: 410-23429-6 MSD

Matrix: Water

Analysis Batch: 76156

Client Sample ID: TW02MSD

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane	ND		20.0	19.9		ug/L		100	77 - 120	3	30
1,2-Dichloroethane	ND		20.0	15.3		ug/L		77	73 - 124	3	30
Benzene	ND		20.0	18.5		ug/L		92	80 - 120	0	30
Ethylbenzene	ND		20.0	21.1		ug/L		106	80 - 120	2	30
Methyl tertiary butyl ether	ND		20.0	15.9		ug/L		80	69 - 122	1	30
Toluene	ND		20.0	21.6		ug/L		108	80 - 120	0	30
Xylene (total)	ND		60.0	64.2		ug/L		107	80 - 120	0	30
m&p-Xylene	ND		40.0	42.7		ug/L		107	80 - 120	1	30
o-Xylene	ND		20.0	21.5		ug/L		107	80 - 120	0	30
t-Butyl alcohol	ND		200	196		ug/L		98	60 - 130	9	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	93		80 - 120								
4-Bromofluorobenzene (Surr)	88		80 - 120								
Dibromofluoromethane (Surr)	101		80 - 120								
Toluene-d8 (Surr)	105		80 - 120								

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 410-76770/1-A

Matrix: Water

Analysis Batch: 77254

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 76770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
2-Methylnaphthalene	ND		0.14	0.060	ug/L		12/15/20 01:55	12/16/20 11:02	1
Acenaphthene	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
Acenaphthylene	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
Anthracene	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
Benzo[a]anthracene	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
Benzo[a]pyrene	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
Benzo[b]fluoranthene	ND		0.18	0.080	ug/L		12/15/20 01:55	12/16/20 11:02	1

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# QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 410-76770/1-A

Matrix: Water

Analysis Batch: 77254

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 76770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[e]pyrene	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
Benzo[g,h,i]perylene	ND		0.14	0.060	ug/L		12/15/20 01:55	12/16/20 11:02	1
Benzo[k]fluoranthene	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
Biphenyl	ND		0.10	0.040	ug/L		12/15/20 01:55	12/16/20 11:02	1
Chrysene	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
Dibenz(a,h)anthracene	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
Dibenzofuran	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
Dibenzothiophene	ND		0.10	0.040	ug/L		12/15/20 01:55	12/16/20 11:02	1
Fluoranthene	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
Fluorene	ND		0.10	0.020	ug/L		12/15/20 01:55	12/16/20 11:02	1
Indeno[1,2,3-cd]pyrene	ND		0.18	0.080	ug/L		12/15/20 01:55	12/16/20 11:02	1
Naphthalene	ND		0.16	0.060	ug/L		12/15/20 01:55	12/16/20 11:02	1
Naphthobenzothiophene	ND		0.10	0.040	ug/L		12/15/20 01:55	12/16/20 11:02	1
Perylene	ND		0.10	0.040	ug/L		12/15/20 01:55	12/16/20 11:02	1
Phenanthrene	ND		0.16	0.060	ug/L		12/15/20 01:55	12/16/20 11:02	1
Pyrene	ND		0.10	0.040	ug/L		12/15/20 01:55	12/16/20 11:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene-d10 (Surr)	64		30 - 108	12/15/20 01:55	12/16/20 11:02	1
Benzo(a)pyrene-d12 (Surr)	77		31 - 99	12/15/20 01:55	12/16/20 11:02	1
Fluoranthene-d10 (Surr)	88		38 - 109	12/15/20 01:55	12/16/20 11:02	1

Lab Sample ID: LCS 410-76770/2-A

Matrix: Water

Analysis Batch: 77254

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 76770

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	2.00	1.88		ug/L		94	
2-Methylnaphthalene	2.01	1.92		ug/L		96	
Acenaphthene	2.01	1.87		ug/L		93	
Acenaphthylene	2.02	2.15		ug/L		106	
Anthracene	2.02	2.07		ug/L		102	
Benzo[a]anthracene	2.00	2.09		ug/L		105	
Benzo[a]pyrene	2.00	1.86		ug/L		93	
Benzo[b]fluoranthene	2.02	1.98		ug/L		98	
Benzo[e]pyrene	2.00	1.98		ug/L		99	
Benzo[g,h,i]perylene	2.00	1.73		ug/L		86	
Benzo[k]fluoranthene	2.01	1.98		ug/L		98	
Biphenyl	2.00	1.98		ug/L		99	
Chrysene	2.02	1.89		ug/L		94	
Dibenz(a,h)anthracene	2.00	1.81		ug/L		90	
Dibenzofuran	2.01	1.82		ug/L		90	
Dibenzothiophene	2.01	2.00		ug/L		99	
Fluoranthene	2.01	2.09		ug/L		104	
Fluorene	2.00	1.93		ug/L		96	
Indeno[1,2,3-cd]pyrene	2.01	1.97		ug/L		98	
Naphthalene	2.02	2.00		ug/L		99	
Perylene	2.00	2.33		ug/L		117	

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# QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 410-76770/2-A

Matrix: Water

Analysis Batch: 77254

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 76770

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenanthrene	2.01	1.89		ug/L		94	
Pyrene	2.01	1.89		ug/L		94	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Methylnaphthalene-d10 (Surr)	61		30 - 108
Benzo(a)pyrene-d12 (Surr)	89		31 - 99
Fluoranthene-d10 (Surr)	92		38 - 109

Lab Sample ID: 410-23429-6 MS

Matrix: Water

Analysis Batch: 77254

Client Sample ID: TW02MS

Prep Type: Total/NA

Prep Batch: 76770

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	0.025	J	2.10	1.96		ug/L		92	54 - 106
2-Methylnaphthalene	ND		2.10	2.09		ug/L		100	43 - 114
Acenaphthene	0.073	J	2.11	1.95		ug/L		89	39 - 125
Acenaphthylene	ND		2.12	2.05		ug/L		97	50 - 110
Anthracene	0.048	J	2.12	2.14		ug/L		99	56 - 111
Benzo[a]anthracene	0.049	J	2.09	2.27		ug/L		106	68 - 116
Benzo[a]pyrene	0.057	J	2.10	1.81		ug/L		84	63 - 118
Benzo[b]fluoranthene	ND		2.12	1.91		ug/L		90	62 - 125
Benzo[e]pyrene	ND		2.10	1.96		ug/L		94	66 - 115
Benzo[g,h,i]perylene	ND		2.10	1.82		ug/L		87	66 - 109
Benzo[k]fluoranthene	0.036	J	2.11	1.87		ug/L		87	55 - 121
Biphenyl	0.046	J	2.10	2.11		ug/L		99	74 - 101
Chrysene	0.050	J	2.12	1.97		ug/L		91	66 - 108
Dibenz(a,h)anthracene	0.034	J	2.10	1.98		ug/L		93	62 - 117
Dibenzofuran	0.045	J	2.11	1.79		ug/L		83	52 - 106
Dibenzothiophene	ND		2.11	2.08		ug/L		99	76 - 111
Fluoranthene	0.083	J	2.11	1.83		ug/L		83	67 - 109
Fluorene	0.050	J	2.10	2.13		ug/L		99	53 - 115
Indeno[1,2,3-cd]pyrene	ND		2.11	1.98		ug/L		94	69 - 117
Naphthalene	ND		2.12	2.01		ug/L		95	26 - 122
Perylene	ND		2.10	2.41		ug/L		115	70 - 130
Phenanthrene	0.073	J	2.11	2.00		ug/L		91	64 - 111
Pyrene	0.077	J	2.11	2.08		ug/L		95	65 - 107

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Methylnaphthalene-d10 (Surr)	47		30 - 108
Benzo(a)pyrene-d12 (Surr)	70		31 - 99
Fluoranthene-d10 (Surr)	71		38 - 109

Lab Sample ID: 410-23429-6 MSD

Matrix: Water

Analysis Batch: 77254

Client Sample ID: TW02MSD

Prep Type: Total/NA

Prep Batch: 76770

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1-Methylnaphthalene	0.025	J	2.08	1.96		ug/L		93	54 - 106	0	30

Eurofins Lancaster Laboratories Env, LLC



# QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 410-23429-6 MSD

Matrix: Water

Analysis Batch: 77254

Client Sample ID: TW02MSD

Prep Type: Total/NA

Prep Batch: 76770

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylnaphthalene	ND		2.09	1.98		ug/L		95	43 - 114	6	30
Acenaphthene	0.073	J	2.09	2.01		ug/L		93	39 - 125	3	30
Acenaphthylene	ND		2.10	2.23		ug/L		106	50 - 110	9	30
Anthracene	0.048	J	2.10	2.14		ug/L		99	56 - 111	0	30
Benzo[a]anthracene	0.049	J	2.08	2.13		ug/L		100	68 - 116	7	30
Benzo[a]pyrene	0.057	J	2.08	1.81		ug/L		84	63 - 118	0	30
Benzo[b]fluoranthene	ND		2.10	1.88		ug/L		89	62 - 125	2	30
Benzo[e]pyrene	ND		2.08	1.88		ug/L		90	66 - 115	4	30
Benzo[g,h,i]perylene	ND		2.08	1.64		ug/L		79	66 - 109	10	30
Benzo[k]fluoranthene	0.036	J	2.09	1.78		ug/L		83	55 - 121	5	30
Biphenyl	0.046	J	2.08	2.02		ug/L		95	74 - 101	5	30
Chrysene	0.050	J	2.10	1.95		ug/L		90	66 - 108	1	30
Dibenz(a,h)anthracene	0.034	J	2.08	1.76		ug/L		83	62 - 117	12	30
Dibenzofuran	0.045	J	2.09	1.92		ug/L		89	52 - 106	7	30
Dibenzothiophene	ND		2.09	2.11		ug/L		101	76 - 111	1	30
Fluoranthene	0.083	J	2.09	2.19		ug/L		100	67 - 109	18	30
Fluorene	0.050	J	2.08	2.04		ug/L		95	53 - 115	4	30
Indeno[1,2,3-cd]pyrene	ND		2.09	1.92		ug/L		92	69 - 117	3	30
Naphthalene	ND		2.10	2.03		ug/L		97	26 - 122	1	30
Perylene	ND		2.08	2.38		ug/L		114	70 - 130	1	30
Phenanthrene	0.073	J	2.09	1.96		ug/L		90	64 - 111	2	30
Pyrene	0.077	J	2.09	1.95		ug/L		89	65 - 107	7	30
<b>MSD MSD</b>											
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
1-Methylnaphthalene-d10 (Surr)	52		30 - 108								
Benzo(a)pyrene-d12 (Surr)	62		31 - 99								
Fluoranthene-d10 (Surr)	87		38 - 109								

## Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 410-75953/5

Matrix: Water

Analysis Batch: 75953

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (1C)	ND		50	23	ug/L			12/11/20 20:53	1
<b>MB MB</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene (fid) (1C)	92		63 - 135					12/11/20 20:53	1

Lab Sample ID: LCS 410-75953/6

Matrix: Water

Analysis Batch: 75953

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (1C)	1100	1130		ug/L		103	70 - 123

# QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Method: 8015B - Gasoline Range Organics - (GC) (Continued)

Lab Sample ID: LCS 410-75953/6

Matrix: Water

Analysis Batch: 75953

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	93		63 - 135

Lab Sample ID: LCSD 410-75953/7

Matrix: Water

Analysis Batch: 75953

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
GRO (1C)		1100	1140		ug/L		103	70 - 123	0	30
Surrogate	LCS	LCS								
	%Recovery	Qualifier	Limits							
a,a,a-Trifluorotoluene (fid) (1C)	93		63 - 135							

Lab Sample ID: 410-23429-6 MS

Matrix: Water

Analysis Batch: 75953

Client Sample ID: TW02MS

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
GRO (1C)	ND		1120	1310		ug/L		117	70 - 123		
Surrogate	MS	MS									
	%Recovery	Qualifier	Limits								
a,a,a-Trifluorotoluene (fid) (1C)	96		63 - 135								

Lab Sample ID: 410-23429-6 MSD

Matrix: Water

Analysis Batch: 75953

Client Sample ID: TW02MSD

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
GRO (1C)	ND		1120	1320		ug/L		118	70 - 123	1	30
Surrogate	MSD	MSD									
	%Recovery	Qualifier	Limits								
a,a,a-Trifluorotoluene (fid) (1C)	91		63 - 135								

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 410-76035/1-A

Matrix: Water

Analysis Batch: 76338

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 76035

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	57	ug/L		12/12/20 05:29	12/14/20 11:40	1
Surrogate	MB	MB							
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-terphenyl (Surr) (1C)	120		52 - 132				12/12/20 05:29	12/14/20 11:40	1

# QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 410-76035/2-A

Matrix: Water

Analysis Batch: 76338

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 76035

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
DRO (C10-C28) (1C)			2730	2670		ug/L		98	47 - 116		
Surrogate		LCS %Recovery	LCS Qualifier	Limits							
o- terphenyl (Surr) (1C)		119		52 - 132							

Lab Sample ID: 410-23429-6 MS

Matrix: Water

Analysis Batch: 76338

Client Sample ID: TW02MS

Prep Type: Total/NA

Prep Batch: 76035

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
DRO (C10-C28) (1C)	ND	F2 F1	2740	3020		ug/L		110	47 - 116		
Surrogate		MS %Recovery	MS Qualifier	Limits							
o- terphenyl (Surr) (1C)		114		52 - 132							

Lab Sample ID: 410-23429-6 MSD

Matrix: Water

Analysis Batch: 76338

Client Sample ID: TW02MSD

Prep Type: Total/NA

Prep Batch: 76035

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
DRO (C10-C28) (1C)	ND	F2 F1	2710	2370	F2	ug/L		88	47 - 116	24	20
Surrogate		MSD %Recovery	MSD Qualifier	Limits							
o- terphenyl (Surr) (1C)		120		52 - 132							

Lab Sample ID: MB 410-76230/1-A

Matrix: Water

Analysis Batch: 76338

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 76230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	58	ug/L		12/14/20 04:42	12/15/20 00:25	1
Surrogate		MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)		113		52 - 132			12/14/20 04:42	12/15/20 00:25	1

Lab Sample ID: LCS 410-76230/2-A

Matrix: Water

Analysis Batch: 76338

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 76230

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
DRO (C10-C28) (1C)			2740	2730		ug/L		100	47 - 116		
Surrogate		LCS %Recovery	LCS Qualifier	Limits							
o- terphenyl (Surr) (1C)		116		52 - 132							



## QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

### Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 410-76230/3-A

Matrix: Water

Analysis Batch: 76338

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 76230

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
DRO (C10-C28) (1C)	2730	2610		ug/L		96	47 - 116	4	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
<i>o</i> -terphenyl (Surr) (1C)	119		52 - 132						

### Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 410-78242/1

Matrix: Water

Analysis Batch: 78242

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	ND		5.0	1.4	mg/L			12/18/20 16:46	1

Lab Sample ID: LCS 410-78242/2

Matrix: Water

Analysis Batch: 78242

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
HEM (Oil & Grease)	40.0	31.6		mg/L		79	78 - 114		

Lab Sample ID: LCSD 410-78242/3

Matrix: Water

Analysis Batch: 78242

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM (Oil & Grease)	40.0	34.4		mg/L		86	78 - 114	8	13

Lab Sample ID: 410-23429-6 MS

Matrix: Water

Analysis Batch: 78242

Client Sample ID: TW02MS

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
HEM (Oil & Grease)	ND		49.4	39.6		mg/L		80	78 - 114		

## QC Association Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

### GC/MS VOA

#### Analysis Batch: 76156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-23429-2	TW-14	Total/NA	Water	8260B/UST	
410-23429-3	EB20201207	Total/NA	Water	8260B/UST	
410-23429-6	TW02	Total/NA	Water	8260B/UST	
410-23429-7	TW06	Total/NA	Water	8260B/UST	
410-23429-8	DUP20201208	Total/NA	Water	8260B/UST	
410-23429-13	TW03	Total/NA	Water	8260B/UST	
410-23429-14	TW04	Total/NA	Water	8260B/UST	
410-23429-15	TW07	Total/NA	Water	8260B/UST	
410-23429-16	TW05	Total/NA	Water	8260B/UST	
410-23429-18	TB20336	Total/NA	Water	8260B/UST	
MB 410-76156/9	Method Blank	Total/NA	Water	8260B/UST	
LCS 410-76156/6	Lab Control Sample	Total/NA	Water	8260B/UST	
410-23429-6 MS	TW02MS	Total/NA	Water	8260B/UST	
410-23429-6 MSD	TW02MSD	Total/NA	Water	8260B/UST	

### GC/MS Semi VOA

#### Prep Batch: 76770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-23429-2	TW-14	Total/NA	Water	3510C	
410-23429-3	EB20201207	Total/NA	Water	3510C	
410-23429-6	TW02	Total/NA	Water	3510C	
410-23429-7	TW06	Total/NA	Water	3510C	
410-23429-8	DUP20201208	Total/NA	Water	3510C	
410-23429-13	TW03	Total/NA	Water	3510C	
410-23429-14	TW04	Total/NA	Water	3510C	
410-23429-15	TW07	Total/NA	Water	3510C	
410-23429-16	TW05	Total/NA	Water	3510C	
MB 410-76770/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-76770/2-A	Lab Control Sample	Total/NA	Water	3510C	
410-23429-6 MS	TW02MS	Total/NA	Water	3510C	
410-23429-6 MSD	TW02MSD	Total/NA	Water	3510C	

#### Analysis Batch: 77254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-23429-2	TW-14	Total/NA	Water	8270C SIM	76770
410-23429-3	EB20201207	Total/NA	Water	8270C SIM	76770
410-23429-6	TW02	Total/NA	Water	8270C SIM	76770
410-23429-7	TW06	Total/NA	Water	8270C SIM	76770
410-23429-8	DUP20201208	Total/NA	Water	8270C SIM	76770
410-23429-13	TW03	Total/NA	Water	8270C SIM	76770
410-23429-14	TW04	Total/NA	Water	8270C SIM	76770
410-23429-15	TW07	Total/NA	Water	8270C SIM	76770
410-23429-16	TW05	Total/NA	Water	8270C SIM	76770
MB 410-76770/1-A	Method Blank	Total/NA	Water	8270C SIM	76770
LCS 410-76770/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	76770
410-23429-6 MS	TW02MS	Total/NA	Water	8270C SIM	76770
410-23429-6 MSD	TW02MSD	Total/NA	Water	8270C SIM	76770

## QC Association Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

### GC VOA

#### Analysis Batch: 75953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-23429-2	TW-14	Total/NA	Water	8015B	
410-23429-3	EB20201207	Total/NA	Water	8015B	
410-23429-6	TW02	Total/NA	Water	8015B	
410-23429-7	TW06	Total/NA	Water	8015B	
410-23429-8	DUP20201208	Total/NA	Water	8015B	
410-23429-13	TW03	Total/NA	Water	8015B	
410-23429-14	TW04	Total/NA	Water	8015B	
410-23429-15	TW07	Total/NA	Water	8015B	
410-23429-16	TW05	Total/NA	Water	8015B	
410-23429-18	TB20336	Total/NA	Water	8015B	
MB 410-75953/5	Method Blank	Total/NA	Water	8015B	
LCS 410-75953/6	Lab Control Sample	Total/NA	Water	8015B	
LCSD 410-75953/7	Lab Control Sample Dup	Total/NA	Water	8015B	
410-23429-6 MS	TW02MS	Total/NA	Water	8015B	
410-23429-6 MSD	TW02MSD	Total/NA	Water	8015B	

### GC Semi VOA

#### Prep Batch: 76035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-23429-1	RW-28S	Total/NA	Water	3511	
410-23429-2	TW-14	Total/NA	Water	3511	
410-23429-3	EB20201207	Total/NA	Water	3511	
410-23429-4	MW-106	Total/NA	Water	3511	
410-23429-5	MW-108	Total/NA	Water	3511	
410-23429-6	TW02	Total/NA	Water	3511	
410-23429-7	TW06	Total/NA	Water	3511	
410-23429-8	DUP20201208	Total/NA	Water	3511	
410-23429-9	MW-31	Total/NA	Water	3511	
410-23429-10	MW-100S	Total/NA	Water	3511	
410-23429-11	MW-100	Total/NA	Water	3511	
410-23429-12	MW-33	Total/NA	Water	3511	
410-23429-13	TW03	Total/NA	Water	3511	
410-23429-14	TW04	Total/NA	Water	3511	
410-23429-15	TW07	Total/NA	Water	3511	
410-23429-16	TW05	Total/NA	Water	3511	
410-23429-17	MW-107	Total/NA	Water	3511	
410-23429-19	MW-08S	Total/NA	Water	3511	
410-23429-20	RW-119S	Total/NA	Water	3511	
410-23429-21	MW-51	Total/NA	Water	3511	
MB 410-76035/1-A	Method Blank	Total/NA	Water	3511	
LCS 410-76035/2-A	Lab Control Sample	Total/NA	Water	3511	
410-23429-6 MS	TW02MS	Total/NA	Water	3511	
410-23429-6 MSD	TW02MSD	Total/NA	Water	3511	

#### Prep Batch: 76230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-23429-22	MW-01S	Total/NA	Water	3511	
410-23429-23	MW-121	Total/NA	Water	3511	
410-23429-24	MW-515	Total/NA	Water	3511	
410-23429-25	MW-27	Total/NA	Water	3511	



## QC Association Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

### GC Semi VOA (Continued)

#### Prep Batch: 76230 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-76230/1-A	Method Blank	Total/NA	Water	3511	
LCS 410-76230/2-A	Lab Control Sample	Total/NA	Water	3511	
LCSD 410-76230/3-A	Lab Control Sample Dup	Total/NA	Water	3511	

#### Analysis Batch: 76338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-23429-1	RW-28S	Total/NA	Water	8015B	76035
410-23429-2	TW-14	Total/NA	Water	8015B	76035
410-23429-3	EB20201207	Total/NA	Water	8015B	76035
410-23429-4	MW-106	Total/NA	Water	8015B	76035
410-23429-5	MW-108	Total/NA	Water	8015B	76035
410-23429-6	TW02	Total/NA	Water	8015B	76035
410-23429-7	TW06	Total/NA	Water	8015B	76035
410-23429-8	DUP20201208	Total/NA	Water	8015B	76035
410-23429-9	MW-31	Total/NA	Water	8015B	76035
410-23429-10	MW-100S	Total/NA	Water	8015B	76035
410-23429-11	MW-100	Total/NA	Water	8015B	76035
410-23429-12	MW-33	Total/NA	Water	8015B	76035
410-23429-13	TW03	Total/NA	Water	8015B	76035
410-23429-14	TW04	Total/NA	Water	8015B	76035
410-23429-15	TW07	Total/NA	Water	8015B	76035
410-23429-16	TW05	Total/NA	Water	8015B	76035
410-23429-17	MW-107	Total/NA	Water	8015B	76035
410-23429-19	MW-08S	Total/NA	Water	8015B	76035
410-23429-20	RW-119S	Total/NA	Water	8015B	76035
410-23429-21	MW-51	Total/NA	Water	8015B	76035
410-23429-22	MW-01S	Total/NA	Water	8015B	76230
410-23429-23	MW-121	Total/NA	Water	8015B	76230
410-23429-24	MW-515	Total/NA	Water	8015B	76230
410-23429-25	MW-27	Total/NA	Water	8015B	76230
MB 410-76035/1-A	Method Blank	Total/NA	Water	8015B	76035
MB 410-76230/1-A	Method Blank	Total/NA	Water	8015B	76230
LCS 410-76035/2-A	Lab Control Sample	Total/NA	Water	8015B	76035
LCS 410-76230/2-A	Lab Control Sample	Total/NA	Water	8015B	76230
LCSD 410-76230/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	76230
410-23429-6 MS	TW02MS	Total/NA	Water	8015B	76035
410-23429-6 MSD	TW02MSD	Total/NA	Water	8015B	76035

### General Chemistry

#### Analysis Batch: 78242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-23429-2	TW-14	Total/NA	Water	1664B	
410-23429-3	EB20201207	Total/NA	Water	1664B	
410-23429-6	TW02	Total/NA	Water	1664B	
410-23429-7	TW06	Total/NA	Water	1664B	
410-23429-8	DUP20201208	Total/NA	Water	1664B	
410-23429-13	TW03	Total/NA	Water	1664B	
410-23429-14	TW04	Total/NA	Water	1664B	
410-23429-15	TW07	Total/NA	Water	1664B	
410-23429-16	TW05	Total/NA	Water	1664B	

Eurofins Lancaster Laboratories Env, LLC

## QC Association Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

### General Chemistry (Continued)

#### Analysis Batch: 78242 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-78242/1	Method Blank	Total/NA	Water	1664B	
LCS 410-78242/2	Lab Control Sample	Total/NA	Water	1664B	
LCSD 410-78242/3	Lab Control Sample Dup	Total/NA	Water	1664B	
410-23429-6 MS	TW02MS	Total/NA	Water	1664B	

# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Client Sample ID: RW-28S

Lab Sample ID: 410-23429-1

Date Collected: 12/07/20 15:05

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 12:28	IUSB	ELLE

## Client Sample ID: TW-14

Lab Sample ID: 410-23429-2

Date Collected: 12/07/20 15:20

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/UST		1	76156	12/13/20 20:27	UKAD	ELLE
Total/NA	Prep	3510C			76770	12/15/20 01:55	USL7	ELLE
Total/NA	Analysis	8270C SIM		1	77254	12/16/20 14:32	UJM0	ELLE
Total/NA	Analysis	8015B		1	75953	12/12/20 01:37	JJT8	ELLE
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 12:52	IUSB	ELLE
Total/NA	Analysis	1664B		1	78242	12/18/20 16:46	QT6L	ELLE

## Client Sample ID: EB20201207

Lab Sample ID: 410-23429-3

Date Collected: 12/07/20 16:05

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/UST		1	76156	12/13/20 17:14	UKAD	ELLE
Total/NA	Prep	3510C			76770	12/15/20 01:55	USL7	ELLE
Total/NA	Analysis	8270C SIM		1	77254	12/16/20 15:14	UJM0	ELLE
Total/NA	Analysis	8015B		1	75953	12/12/20 00:50	JJT8	ELLE
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 13:16	IUSB	ELLE
Total/NA	Analysis	1664B		1	78242	12/18/20 16:46	QT6L	ELLE

## Client Sample ID: MW-106

Lab Sample ID: 410-23429-4

Date Collected: 12/08/20 09:10

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 13:40	IUSB	ELLE

## Client Sample ID: MW-108

Lab Sample ID: 410-23429-5

Date Collected: 12/08/20 12:10

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 14:04	IUSB	ELLE



# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Client Sample ID: TW02

Lab Sample ID: 410-23429-6

Date Collected: 12/08/20 13:45

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/UST		1	76156	12/13/20 18:02	UKAD	ELLE
Total/NA	Prep	3510C			76770	12/15/20 01:55	USL7	ELLE
Total/NA	Analysis	8270C SIM		1	77254	12/16/20 12:26	UJM0	ELLE
Total/NA	Analysis	8015B		1	75953	12/12/20 02:01	JJT8	ELLE
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 14:28	IUSB	ELLE
Total/NA	Analysis	1664B		1	78242	12/18/20 16:46	QT6L	ELLE

## Client Sample ID: TW06

Lab Sample ID: 410-23429-7

Date Collected: 12/08/20 11:55

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/UST		1	76156	12/13/20 20:51	UKAD	ELLE
Total/NA	Prep	3510C			76770	12/15/20 01:55	USL7	ELLE
Total/NA	Analysis	8270C SIM		1	77254	12/16/20 15:56	UJM0	ELLE
Total/NA	Analysis	8015B		1	75953	12/12/20 03:11	JJT8	ELLE
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 15:40	IUSB	ELLE
Total/NA	Analysis	1664B		1	78242	12/18/20 16:46	QT6L	ELLE

## Client Sample ID: DUP20201208

Lab Sample ID: 410-23429-8

Date Collected: 12/08/20 00:00

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/UST		1	76156	12/13/20 21:15	UKAD	ELLE
Total/NA	Prep	3510C			76770	12/15/20 01:55	USL7	ELLE
Total/NA	Analysis	8270C SIM		1	77254	12/16/20 16:38	UJM0	ELLE
Total/NA	Analysis	8015B		1	75953	12/12/20 03:35	JJT8	ELLE
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 16:04	IUSB	ELLE
Total/NA	Analysis	1664B		1	78242	12/18/20 16:46	QT6L	ELLE

## Client Sample ID: MW-31

Lab Sample ID: 410-23429-9

Date Collected: 12/08/20 11:20

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 17:15	IUSB	ELLE

# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Client Sample ID: MW-100S

Lab Sample ID: 410-23429-10

Date Collected: 12/08/20 15:05

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 17:39	IUSB	ELLE

## Client Sample ID: MW-100

Lab Sample ID: 410-23429-11

Date Collected: 12/08/20 14:05

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 18:03	IUSB	ELLE

## Client Sample ID: MW-33

Lab Sample ID: 410-23429-12

Date Collected: 12/08/20 10:45

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 18:27	IUSB	ELLE

## Client Sample ID: TW03

Lab Sample ID: 410-23429-13

Date Collected: 12/08/20 13:50

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/UST		1	76156	12/13/20 21:39	UKAD	ELLE
Total/NA	Prep	3510C			76770	12/15/20 01:55	USL7	ELLE
Total/NA	Analysis	8270C SIM		1	77254	12/16/20 17:20	UJM0	ELLE
Total/NA	Analysis	8015B		1	75953	12/12/20 03:58	JJT8	ELLE
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 18:51	IUSB	ELLE
Total/NA	Analysis	1664B		1	78242	12/18/20 16:46	QT6L	ELLE

## Client Sample ID: TW04

Lab Sample ID: 410-23429-14

Date Collected: 12/09/20 09:40

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/UST		1	76156	12/13/20 22:03	UKAD	ELLE
Total/NA	Prep	3510C			76770	12/15/20 01:55	USL7	ELLE
Total/NA	Analysis	8270C SIM		1	77254	12/16/20 18:02	UJM0	ELLE
Total/NA	Analysis	8015B		1	75953	12/12/20 04:22	JJT8	ELLE
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 19:15	IUSB	ELLE
Total/NA	Analysis	1664B		1	78242	12/18/20 16:46	QT6L	ELLE

# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Client Sample ID: TW07

Lab Sample ID: 410-23429-15

Date Collected: 12/09/20 10:30

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/UST		1	76156	12/13/20 22:27	UKAD	ELLE
Total/NA	Prep	3510C			76770	12/15/20 01:55	USL7	ELLE
Total/NA	Analysis	8270C SIM		1	77254	12/16/20 18:44	UJM0	ELLE
Total/NA	Analysis	8015B		1	75953	12/12/20 04:46	JJT8	ELLE
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 19:38	IUSB	ELLE
Total/NA	Analysis	1664B		1	78242	12/18/20 16:46	QT6L	ELLE

## Client Sample ID: TW05

Lab Sample ID: 410-23429-16

Date Collected: 12/09/20 11:10

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/UST		1	76156	12/13/20 22:51	UKAD	ELLE
Total/NA	Prep	3510C			76770	12/15/20 01:55	USL7	ELLE
Total/NA	Analysis	8270C SIM		1	77254	12/16/20 19:26	UJM0	ELLE
Total/NA	Analysis	8015B		1	75953	12/12/20 05:10	JJT8	ELLE
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 20:02	IUSB	ELLE
Total/NA	Analysis	1664B		1	78242	12/18/20 16:46	QT6L	ELLE

## Client Sample ID: MW-107

Lab Sample ID: 410-23429-17

Date Collected: 12/09/20 12:00

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 20:26	IUSB	ELLE

## Client Sample ID: TB20336

Lab Sample ID: 410-23429-18

Date Collected: 12/09/20 00:00

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/UST		1	76156	12/13/20 17:38	UKAD	ELLE
Total/NA	Analysis	8015B		1	75953	12/12/20 01:14	JJT8	ELLE

## Client Sample ID: MW-08S

Lab Sample ID: 410-23429-19

Date Collected: 12/09/20 15:25

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 20:50	IUSB	ELLE



# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

**Client Sample ID: RW-119S**

**Lab Sample ID: 410-23429-20**

Date Collected: 12/09/20 13:45

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 21:14	IUSB	ELLE

**Client Sample ID: MW-51**

**Lab Sample ID: 410-23429-21**

Date Collected: 12/09/20 12:40

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76035	12/12/20 05:29	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/14/20 21:38	IUSB	ELLE

**Client Sample ID: MW-01S**

**Lab Sample ID: 410-23429-22**

Date Collected: 12/09/20 11:10

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76230	12/14/20 04:42	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/15/20 01:36	IUSB	ELLE

**Client Sample ID: MW-121**

**Lab Sample ID: 410-23429-23**

Date Collected: 12/09/20 14:00

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76230	12/14/20 04:42	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/15/20 02:00	IUSB	ELLE

**Client Sample ID: MW-515**

**Lab Sample ID: 410-23429-24**

Date Collected: 12/09/20 11:05

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76230	12/14/20 04:42	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/15/20 02:25	IUSB	ELLE

**Client Sample ID: MW-27**

**Lab Sample ID: 410-23429-25**

Date Collected: 12/09/20 09:00

Matrix: Water

Date Received: 12/09/20 20:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76230	12/14/20 04:42	UMAD	ELLE
Total/NA	Analysis	8015B		1	76338	12/15/20 02:49	IUSB	ELLE

## Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

# Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

## Laboratory: Eurofins Lancaster Laboratories Env, LLC

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

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	10561	06-14-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1664B		Water	HEM (Oil & Grease)
8015B		Water	GRO (1C)
8015B	3511	Water	DRO (C10-C28) (1C)
8260B/UST		Water	1,2-Dibromoethane
8260B/UST		Water	1,2-Dichloroethane
8260B/UST		Water	Benzene
8260B/UST		Water	Ethylbenzene
8260B/UST		Water	Methyl tertiary butyl ether
8260B/UST		Water	t-Butyl alcohol
8260B/UST		Water	Toluene
8260B/UST		Water	Xylene (total)
8270C SIM	3510C	Water	1-Methylnaphthalene
8270C SIM	3510C	Water	2-Methylnaphthalene
8270C SIM	3510C	Water	Acenaphthene
8270C SIM	3510C	Water	Acenaphthylene
8270C SIM	3510C	Water	Anthracene
8270C SIM	3510C	Water	Benzo[a]anthracene
8270C SIM	3510C	Water	Benzo[a]pyrene
8270C SIM	3510C	Water	Benzo[b]fluoranthene
8270C SIM	3510C	Water	Benzo[e]pyrene
8270C SIM	3510C	Water	Benzo[g,h,i]perylene
8270C SIM	3510C	Water	Benzo[k]fluoranthene
8270C SIM	3510C	Water	Biphenyl
8270C SIM	3510C	Water	Chrysene
8270C SIM	3510C	Water	Dibenz(a,h)anthracene
8270C SIM	3510C	Water	Dibenzofuran
8270C SIM	3510C	Water	Dibenzothiophene
8270C SIM	3510C	Water	Fluoranthene
8270C SIM	3510C	Water	Fluorene
8270C SIM	3510C	Water	Indeno[1,2,3-cd]pyrene
8270C SIM	3510C	Water	Naphthalene
8270C SIM	3510C	Water	Naphthobenzothiophene
8270C SIM	3510C	Water	Perylene
8270C SIM	3510C	Water	Phenanthrene
8270C SIM	3510C	Water	Pyrene

## Method Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Method	Method Description	Protocol	Laboratory
8260B/UST	Volatile Organic Compounds (GC/MS)	SW846	ELLE
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	ELLE
8015B	Gasoline Range Organics - (GC)	SW846	ELLE
8015B	Diesel Range Organics (DRO) (GC)	SW846	ELLE
1664B	HEM and SGT-HEM	1664B	ELLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ELLE
3511	Microextraction of Organic Compounds	SW846	ELLE
5030B	Purge and Trap	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE

### Protocol References:

1664B = EPA-821-98-002

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

### Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



## Sample Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23429-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-23429-1	RW-28S	Water	12/07/20 15:05	12/09/20 20:35	
410-23429-2	TW-14	Water	12/07/20 15:20	12/09/20 20:35	
410-23429-3	EB20201207	Water	12/07/20 16:05	12/09/20 20:35	
410-23429-4	MW-106	Water	12/08/20 09:10	12/09/20 20:35	
410-23429-5	MW-108	Water	12/08/20 12:10	12/09/20 20:35	
410-23429-6	TW02	Water	12/08/20 13:45	12/09/20 20:35	
410-23429-7	TW06	Water	12/08/20 11:55	12/09/20 20:35	
410-23429-8	DUP20201208	Water	12/08/20 00:00	12/09/20 20:35	
410-23429-9	MW-31	Water	12/08/20 11:20	12/09/20 20:35	
410-23429-10	MW-100S	Water	12/08/20 15:05	12/09/20 20:35	
410-23429-11	MW-100	Water	12/08/20 14:05	12/09/20 20:35	
410-23429-12	MW-33	Water	12/08/20 10:45	12/09/20 20:35	
410-23429-13	TW03	Water	12/08/20 13:50	12/09/20 20:35	
410-23429-14	TW04	Water	12/09/20 09:40	12/09/20 20:35	
410-23429-15	TW07	Water	12/09/20 10:30	12/09/20 20:35	
410-23429-16	TW05	Water	12/09/20 11:10	12/09/20 20:35	
410-23429-17	MW-107	Water	12/09/20 12:00	12/09/20 20:35	
410-23429-18	TB20336	Water	12/09/20 00:00	12/09/20 20:35	
410-23429-19	MW-08S	Water	12/09/20 15:25	12/09/20 20:35	
410-23429-20	RW-119S	Water	12/09/20 13:45	12/09/20 20:35	
410-23429-21	MW-51	Water	12/09/20 12:40	12/09/20 20:35	
410-23429-22	MW-01S	Water	12/09/20 11:10	12/09/20 20:35	
410-23429-23	MW-121	Water	12/09/20 14:00	12/09/20 20:35	
410-23429-24	MW-515	Water	12/09/20 11:05	12/09/20 20:35	
410-23429-25	MW-27	Water	12/09/20 09:00	12/09/20 20:35	



## Chain of Custody Record

eurofins

Environmental Testing  
America

410-23429 Chain of Custody

Client Contact Mr. Mark Bauer		Sampler F. Ambrosino, F. Ezell, P. Silvestri		Lab PM Zanar, Elizabeth M		Camera Tracking No(s)		COC No 410-12267-2383 2																									
Company Geosyntec Consultants, Inc.		PWSID		E-Mail Elizabeth.Zanar@eurofinset.com		State of Origin VA		Page Page 2 of 2																									
Address 10211 Wincopin Circle 4th Floor		Due Date Requested:		Analysis Requested																													
City Columbia		TAT Requested (days): Standard		<table border="1"> <tr> <td>1664B_NP - HEM (Oil &amp; Grease)</td> <td>8260B_UST - 8260C - TBA, EDB, 1,2-DCE, BTEX, MTBE</td> <td>8015B_GRO - TPH GRO (C6-C10)</td> <td>8270C_SIM_Alkyd - 8270C SIM - PAHs</td> <td>8015B_DRO - TPH DRO (C10-C28)</td> </tr> </table>						1664B_NP - HEM (Oil & Grease)	8260B_UST - 8260C - TBA, EDB, 1,2-DCE, BTEX, MTBE	8015B_GRO - TPH GRO (C6-C10)	8270C_SIM_Alkyd - 8270C SIM - PAHs	8015B_DRO - TPH DRO (C10-C28)																			
1664B_NP - HEM (Oil & Grease)	8260B_UST - 8260C - TBA, EDB, 1,2-DCE, BTEX, MTBE	8015B_GRO - TPH GRO (C6-C10)	8270C_SIM_Alkyd - 8270C SIM - PAHs							8015B_DRO - TPH DRO (C10-C28)																							
State, Zip MD, 21044		Compliance Project: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No																															
Phone 410-381-4333(Tel)		PO # MEM1974																															
Email mbauer@geosyntec.com		WO #																															
Project Name PRGS Monitoring		Project # 41001123		Preservation Codes:																													
Site Virginia		SSOW#		<table border="0"> <tr> <td>A - HCL</td> <td>M - Hexane</td> </tr> <tr> <td>B - NaOH</td> <td>N - None</td> </tr> <tr> <td>C - Zn Acetate</td> <td>O - AsNaO2</td> </tr> <tr> <td>D - Nitric Acid</td> <td>P - Na2O4S</td> </tr> <tr> <td>E - NaHSO4</td> <td>Q - Na2SO3</td> </tr> <tr> <td>F - MeOH</td> <td>R - Na2S2O3</td> </tr> <tr> <td>G - Amchlor</td> <td>S - H2SO4</td> </tr> <tr> <td>H - Ascorbic Acid</td> <td>T - TSP Dodecahydrate</td> </tr> <tr> <td>I - Ice</td> <td>U - Acetone</td> </tr> <tr> <td>J - DI Water</td> <td>V - MCAA</td> </tr> <tr> <td>K - EDTA</td> <td>W - pH 4-5</td> </tr> <tr> <td>L - EDA</td> <td>Z - other (specify)</td> </tr> </table>						A - HCL	M - Hexane	B - NaOH	N - None	C - Zn Acetate	O - AsNaO2	D - Nitric Acid	P - Na2O4S	E - NaHSO4	Q - Na2SO3	F - MeOH	R - Na2S2O3	G - Amchlor	S - H2SO4	H - Ascorbic Acid	T - TSP Dodecahydrate	I - Ice	U - Acetone	J - DI Water	V - MCAA	K - EDTA	W - pH 4-5	L - EDA	Z - other (specify)
A - HCL	M - Hexane																																
B - NaOH	N - None																																
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J - DI Water	V - MCAA																																
K - EDTA	W - pH 4-5																																
L - EDA	Z - other (specify)																																
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, BT=tissue, A=air)	Total Number of Containers				Special Instructions/Note:																							
RW-285		12-7-20	1505	G	Water	XX																											
TW-14		12-7-20	1520	G	Water	NN	X	X	X	X																							
EB2020207		12-7-20	1605	G	Water	NN	X	X	X	X																							
MW-106		12-8-20	0910	G	Water	NN				X																							
MW-108		12-8-20	1210	G	W	NN				X																							
TW02		12-8-20	1345	G	W	NY	X	X	X	X																							
TW02MS		12-8-20	1345	G	W	NY	X	X	X	X																							
TW02MSD		12-8-20	1345	G	W	NY	X	X	X	X																							
TW06		12-8-20	1155	G	W	NN	X	X	X	X																							
DUP20201208		12-8-20	—	G	W	NN	X	X	X	X																							
MW-31		12-8-20	1120	G	W					X																							
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																											
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements																											
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment																											
Relinquished by: F. Ambrosino		Date/Time: 12-9-20 / 1210		Company: Geosyntec		Received by: Shuman		Date/Time: 12/9/20		Company:																							
Relinquished by: Shuman		Date/Time: 12/9/20 / 2020		Company:		Received by:		Date/Time:		Company:																							
Relinquished by:		Date/Time:		Company:		Received by: E. Ezell		Date/Time: 12-9-20 2035		Company: ECC																							
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.2 - 4.1																													

## Chain of Custody Record


 Environment Testing  
Australia

<b>Client Information</b>		Sampler A. Ambrosino, F. Eze, R. Silva		Lab PM Zanar, Elizabeth M		Camer Tracking No(s)		COC No 410-12267-2383_1		
Client Contact Mr. Mark Bauer		Phone		E-Mail Elizabeth.Zanar@eurofinset.com		State of Origin VA		Page Page 1 of 2		
Company Geosyntec Consultants, Inc.				PWSID		Job #				
Address 10211 Wincopin Circle 4th Floor		Due Date Requested:		<b>Analysis Requested</b>				<b>Preservation Codes:</b>		
City Columbia		TAT Requested (days): Standard								
State, Zip MD, 21044		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		1664B_NP - HEM (Oil & Grease) 8260B_UST - 8260C - TBA, EDB, 1,2-DCE, BTEX, MTBE 8018B_GRO - TPH GRO (C6-C10) 8270C_SIM_Alky - 8270C SIM - PAHs 8018B_DRO - TPH DRO (C10-C28)				A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		
Phone 410-381-4333(Tel)		PO # MEM1974								
Email mbauer@geosyntec.com		WO #		Total Number of Containers				Other:		
Project Name PRGS Monitoring		Project # 41001123								
Site Virginia		SSOW#								
<b>Sample Identification</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=comp, G=grab)</b>	<b>Matrix (W=water, S=solid, D=waste/oil, ST=tissue, A=air)</b>	<b>Special Instructions/Note:</b>				
MW-100S		12-8-20	1505	G	Water	N	N			- Could not grab
MW-100		12-8-20	1405	G	Water	N	N			- enough water volume
MW-33		12-8-20	1045	G	Water	N	N			- for TW-04-HEM
TW03		12-8-20	1350	G	Water	N	N	X	X	- Oil & grease - (1)
TW04		12-9-20	0940	G	Water	N	N	X	X	1,000 mL bottle
TW07		12-9-20	1030	G	Water	N	N	X	X	
TW05		12-9-20	1110	G	Water	N	N	X	X	
MW-107		12-9-20	1200	G	Water	N	N			
TB20336		12-9-20	-	-	Water	N	N	X	X	
MW-08 S		12-9-20	1525	G	Water					
RW-119S		12-9-20	1345	G	Water					
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:				
Empty Kit Relinquished by		Date		Time		Method of Shipment				
Relinquished by A. Ambrosino		Date/Time 12/9/20 / 1710		Company Geosyntec		Received by [Signature]		Date/Time 12/9/20 / 1720		
Relinquished by [Signature]		Date/Time 12/9/20 / 2020		Company		Received by [Signature]		Date/Time 12-9-20 2035		
Relinquished by		Date/Time		Company		Received by		Date/Time		
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.2 - L11						



**eurofins** Environmental Testing  
America

Ver 11/01/2020

## Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 410-23429-1

Login Number: 23429

List Source: Eurofins Lancaster Laboratories Env

List Number: 1

Creator: Rivera, Tatiana

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ( $\leq 6^{\circ}\text{C}$ , not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ( $\leq 6^{\circ}\text{C}$ , not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	

## ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC  
2425 New Holland Pike  
Lancaster, PA 17601  
Tel: (717)656-2300

Laboratory Job ID: 410-23823-1  
Client Project/Site: PRGS Monitoring  
Revision: 1

For:  
Geosyntec Consultants, Inc.  
10211 Wincopin Circle  
4'th Floor  
Columbia, Maryland 21044

Attn: Mr. Mark Bauer



Authorized for release by:  
1/11/2021 5:13:44 PM

Elizabeth Zanar, Project Manager  
(717)556-7290  
[Elizabeth.Zanar@eurofinset.com](mailto:Elizabeth.Zanar@eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



- 1
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- 12
- 13
- 14
- 15

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
  - Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
  - Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
- Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Elizabeth Zanar  
Project Manager  
1/11/2021 5:13:44 PM

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# Definitions/Glossary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

## Qualifiers

### GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count



# Case Narrative

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

## Job ID: 410-23823-1

### Laboratory: Eurofins Lancaster Laboratories Env, LLC

#### Narrative

#### Job Narrative 410-23823-1

#### Comments

No additional comments.

#### Revision

The report being provided is a revision of the original report sent on 12/23/2020. The report (revision 1) is being revised due to: sample ID "MW-75S" being revised to "MW-15S". Writing on COC was unclear.

#### Receipt

The samples were received on 12/11/2020 5:12 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8° C.

#### Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): MW-72S (410-23823-15). The COC lists a sample ID of MW-72S. The sample containers list an ID of MW-75S.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): MW-15S (410-23823-17). The COC lists a samples ID of MW-75S. The sample labels list an ID of MW-15S.

#### GC Semi VOA

Method 8015B: Surrogate recovery for the following sample was outside control limits: RW-116S (410-23823-9). Re-extraction and/or re-analysis was performed and surrogate recovery was outside control limits.

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

#### Organic Prep

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

# Detection Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

## Client Sample ID: TB20336

Lab Sample ID: 410-23823-1

No Detections.

## Client Sample ID: RW-25S

Lab Sample ID: 410-23823-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	39000	*1	110	60	ug/L	1		8015B	Total/NA

## Client Sample ID: MW-25S

Lab Sample ID: 410-23823-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	17000	*1	110	59	ug/L	1		8015B	Total/NA

## Client Sample ID: RW-05S

Lab Sample ID: 410-23823-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	3400	*1	110	58	ug/L	1		8015B	Total/NA

## Client Sample ID: RW-05

Lab Sample ID: 410-23823-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	15000	*1	110	59	ug/L	1		8015B	Total/NA

## Client Sample ID: MW-14

Lab Sample ID: 410-23823-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	1000	*1	110	56	ug/L	1		8015B	Total/NA

## Client Sample ID: MW-25

Lab Sample ID: 410-23823-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	2700	*1	110	59	ug/L	1		8015B	Total/NA

## Client Sample ID: RW-118S

Lab Sample ID: 410-23823-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	2300	*1	110	57	ug/L	1		8015B	Total/NA

## Client Sample ID: RW-116S

Lab Sample ID: 410-23823-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	6800	*1	110	58	ug/L	1		8015B	Total/NA

## Client Sample ID: MW-122

Lab Sample ID: 410-23823-10

No Detections.

## Client Sample ID: RW-1

Lab Sample ID: 410-23823-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	640	*1	110	59	ug/L	1		8015B	Total/NA

## Client Sample ID: MW-16

Lab Sample ID: 410-23823-12

No Detections.

## Client Sample ID: MW-10S

Lab Sample ID: 410-23823-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	4300	*1	110	58	ug/L	1		8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

## Detection Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

### Client Sample ID: MW-123S

Lab Sample ID: 410-23823-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	11000	*1	110	59	ug/L	1		8015B	Total/NA

### Client Sample ID: MW-72S

Lab Sample ID: 410-23823-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	1500	*1	110	57	ug/L	1		8015B	Total/NA

### Client Sample ID: MW-72

Lab Sample ID: 410-23823-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	380	*1	110	58	ug/L	1		8015B	Total/NA

### Client Sample ID: MW-15S

Lab Sample ID: 410-23823-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	400	*1	110	59	ug/L	1		8015B	Total/NA

### Client Sample ID: RW-117S

Lab Sample ID: 410-23823-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (C10-C28) (1C)	3200	*1	110	57	ug/L	1		8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

**Client Sample ID: TB20336**

**Lab Sample ID: 410-23823-1**

**Date Collected: 12/10/20 00:00**

**Matrix: Water**

**Date Received: 12/11/20 17:12**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	57	ug/L		12/16/20 04:19	12/16/20 22:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	119		52 - 132				12/16/20 04:19	12/16/20 22:21	1

**Client Sample ID: RW-25S**

**Lab Sample ID: 410-23823-2**

**Date Collected: 12/11/20 08:45**

**Matrix: Water**

**Date Received: 12/11/20 17:12**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	39000	*1	110	60	ug/L		12/15/20 05:16	12/15/20 23:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	75		52 - 132				12/15/20 05:16	12/15/20 23:49	1

**Client Sample ID: MW-25S**

**Lab Sample ID: 410-23823-3**

**Date Collected: 12/10/20 13:45**

**Matrix: Water**

**Date Received: 12/11/20 17:12**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	17000	*1	110	59	ug/L		12/15/20 05:16	12/16/20 00:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	79		52 - 132				12/15/20 05:16	12/16/20 00:13	1

**Client Sample ID: RW-05S**

**Lab Sample ID: 410-23823-4**

**Date Collected: 12/10/20 13:10**

**Matrix: Water**

**Date Received: 12/11/20 17:12**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	3400	*1	110	58	ug/L		12/15/20 05:16	12/16/20 00:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	57		52 - 132				12/15/20 05:16	12/16/20 00:37	1

**Client Sample ID: RW-05**

**Lab Sample ID: 410-23823-5**

**Date Collected: 12/10/20 14:35**

**Matrix: Water**

**Date Received: 12/11/20 17:12**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	15000	*1	110	59	ug/L		12/15/20 05:16	12/16/20 01:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	70		52 - 132				12/15/20 05:16	12/16/20 01:01	1

# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

**Client Sample ID: MW-14**

**Date Collected: 12/10/20 10:10**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-6**

**Matrix: Water**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	1000	*1	110	56	ug/L		12/15/20 05:16	12/16/20 01:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	84		52 - 132	12/15/20 05:16	12/16/20 01:25	1

**Client Sample ID: MW-25**

**Date Collected: 12/10/20 15:05**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-7**

**Matrix: Water**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	2700	*1	110	59	ug/L		12/15/20 05:16	12/16/20 01:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	89		52 - 132	12/15/20 05:16	12/16/20 01:48	1

**Client Sample ID: RW-118S**

**Date Collected: 12/10/20 11:10**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-8**

**Matrix: Water**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	2300	*1	110	57	ug/L		12/15/20 05:16	12/16/20 02:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	92		52 - 132	12/15/20 05:16	12/16/20 02:12	1

**Client Sample ID: RW-116S**

**Date Collected: 12/10/20 11:45**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-9**

**Matrix: Water**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	6800	*1	110	58	ug/L		12/15/20 05:16	12/16/20 02:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	40	S1-	52 - 132	12/15/20 05:16	12/16/20 02:36	1

**Client Sample ID: MW-122**

**Date Collected: 12/10/20 12:35**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-10**

**Matrix: Water**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND	*1	110	59	ug/L		12/15/20 05:16	12/16/20 03:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	96		52 - 132	12/15/20 05:16	12/16/20 03:00	1

# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

## Client Sample ID: RW-1

Date Collected: 12/10/20 15:55

Date Received: 12/11/20 17:12

## Lab Sample ID: 410-23823-11

Matrix: Water

### Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	640	*1	110	59	ug/L		12/15/20 05:16	12/16/20 03:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	114		52 - 132				12/15/20 05:16	12/16/20 03:24	1

## Client Sample ID: MW-16

Date Collected: 12/10/20 14:35

Date Received: 12/11/20 17:12

## Lab Sample ID: 410-23823-12

Matrix: Water

### Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND	*1	110	59	ug/L		12/15/20 05:16	12/16/20 03:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	111		52 - 132				12/15/20 05:16	12/16/20 03:48	1

## Client Sample ID: MW-10S

Date Collected: 12/10/20 09:20

Date Received: 12/11/20 17:12

## Lab Sample ID: 410-23823-13

Matrix: Water

### Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	4300	*1	110	58	ug/L		12/15/20 05:16	12/16/20 04:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	91		52 - 132				12/15/20 05:16	12/16/20 04:12	1

## Client Sample ID: MW-123S

Date Collected: 12/10/20 12:10

Date Received: 12/11/20 17:12

## Lab Sample ID: 410-23823-14

Matrix: Water

### Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	11000	*1	110	59	ug/L		12/15/20 05:16	12/16/20 04:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	115		52 - 132				12/15/20 05:16	12/16/20 04:35	1

## Client Sample ID: MW-72S

Date Collected: 12/11/20 08:50

Date Received: 12/11/20 17:12

## Lab Sample ID: 410-23823-15

Matrix: Water

### Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	1500	*1	110	57	ug/L		12/15/20 05:16	12/16/20 04:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	108		52 - 132				12/15/20 05:16	12/16/20 04:59	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

**Client Sample ID: MW-72**

**Date Collected: 12/11/20 09:15**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-16**

**Matrix: Water**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	380	*1	110	58	ug/L		12/15/20 05:16	12/16/20 05:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	94		52 - 132	12/15/20 05:16	12/16/20 05:23	1

**Client Sample ID: MW-15S**

**Date Collected: 12/11/20 09:45**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-17**

**Matrix: Water**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	400	*1	110	59	ug/L		12/15/20 05:16	12/16/20 05:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	119		52 - 132	12/15/20 05:16	12/16/20 05:47	1

**Client Sample ID: RW-117S**

**Date Collected: 12/11/20 10:25**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-18**

**Matrix: Water**

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	3200	*1	110	57	ug/L		12/15/20 05:16	12/16/20 06:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	54		52 - 132	12/15/20 05:16	12/16/20 06:11	1

# Surrogate Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

**Method: 8015B - Diesel Range Organics (DRO) (GC)**

**Matrix: Water**

**Prep Type: Total/NA**

Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	OTP1 (52-132)
410-23823-1	TB20336	119
410-23823-2	RW-25S	75
410-23823-3	MW-25S	79
410-23823-4	RW-05S	57
410-23823-5	RW-05	70
410-23823-6	MW-14	84
410-23823-7	MW-25	89
410-23823-8	RW-118S	92
410-23823-9	RW-116S	40 S1-
410-23823-10	MW-122	96
410-23823-11	RW-1	114
410-23823-12	MW-16	111
410-23823-13	MW-10S	91
410-23823-14	MW-123S	115
410-23823-15	MW-72S	108
410-23823-16	MW-72	94
410-23823-17	MW-15S	119
410-23823-18	RW-117S	54
LCS 410-76712/2-A	Lab Control Sample	117
LCS 410-77271/2-A	Lab Control Sample	125
LCS 410-77906/2-A	Lab Control Sample	119
LCSD 410-76712/3-A	Lab Control Sample Dup	115
MB 410-76712/1-A	Method Blank	114
MB 410-77271/1-A	Method Blank	126
MB 410-77906/1-A	Method Blank	115

## Surrogate Legend

OTP = o- terphenyl (Surr)

# QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 410-76712/1-A

Matrix: Water

Analysis Batch: 77169

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 76712

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	57	ug/L		12/15/20 05:16	12/15/20 22:38	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	114		52 - 132				12/15/20 05:16	12/15/20 22:38	1

Lab Sample ID: LCS 410-76712/2-A

Matrix: Water

Analysis Batch: 77169

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 76712

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
DRO (C10-C28) (1C)	2760	2650		ug/L		96	47 - 116
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
o- terphenyl (Surr) (1C)	117		52 - 132				

Lab Sample ID: LCSD 410-76712/3-A

Matrix: Water

Analysis Batch: 77169

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 76712

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
DRO (C10-C28) (1C)	2730	1980	*1	ug/L		73	47 - 116	29	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
o- terphenyl (Surr) (1C)	115		52 - 132						

Lab Sample ID: MB 410-77271/1-A

Matrix: Water

Analysis Batch: 77560

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 77271

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	58	ug/L		12/16/20 04:19	12/16/20 14:47	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	126		52 - 132				12/16/20 04:19	12/16/20 14:47	1

Lab Sample ID: LCS 410-77271/2-A

Matrix: Water

Analysis Batch: 77560

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 77271

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
DRO (C10-C28) (1C)	2750	2810		ug/L		102	47 - 116
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
o- terphenyl (Surr) (1C)	125		52 - 132				



# QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 410-77906/1-A

Matrix: Water

Analysis Batch: 78134

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 77906

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28) (1C)	ND		110	58	ug/L		12/18/20 05:35	12/19/20 00:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr) (1C)	115		52 - 132	12/18/20 05:35	12/19/20 00:11	1

Lab Sample ID: LCS 410-77906/2-A

Matrix: Water

Analysis Batch: 78134

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 77906

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
DRO (C10-C28) (1C)	2730	2920		ug/L		107	47 - 116

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o- terphenyl (Surr) (1C)	119		52 - 132

# QC Association Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

## GC Semi VOA

### Prep Batch: 76712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-23823-2	RW-25S	Total/NA	Water	3511	
410-23823-3	MW-25S	Total/NA	Water	3511	
410-23823-4	RW-05S	Total/NA	Water	3511	
410-23823-5	RW-05	Total/NA	Water	3511	
410-23823-6	MW-14	Total/NA	Water	3511	
410-23823-7	MW-25	Total/NA	Water	3511	
410-23823-8	RW-118S	Total/NA	Water	3511	
410-23823-9	RW-116S	Total/NA	Water	3511	
410-23823-10	MW-122	Total/NA	Water	3511	
410-23823-11	RW-1	Total/NA	Water	3511	
410-23823-12	MW-16	Total/NA	Water	3511	
410-23823-13	MW-10S	Total/NA	Water	3511	
410-23823-14	MW-123S	Total/NA	Water	3511	
410-23823-15	MW-72S	Total/NA	Water	3511	
410-23823-16	MW-72	Total/NA	Water	3511	
410-23823-17	MW-15S	Total/NA	Water	3511	
410-23823-18	RW-117S	Total/NA	Water	3511	
MB 410-76712/1-A	Method Blank	Total/NA	Water	3511	
LCS 410-76712/2-A	Lab Control Sample	Total/NA	Water	3511	
LCSD 410-76712/3-A	Lab Control Sample Dup	Total/NA	Water	3511	

### Analysis Batch: 77169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-23823-2	RW-25S	Total/NA	Water	8015B	76712
410-23823-3	MW-25S	Total/NA	Water	8015B	76712
410-23823-4	RW-05S	Total/NA	Water	8015B	76712
410-23823-5	RW-05	Total/NA	Water	8015B	76712
410-23823-6	MW-14	Total/NA	Water	8015B	76712
410-23823-7	MW-25	Total/NA	Water	8015B	76712
410-23823-8	RW-118S	Total/NA	Water	8015B	76712
410-23823-9	RW-116S	Total/NA	Water	8015B	76712
410-23823-10	MW-122	Total/NA	Water	8015B	76712
410-23823-11	RW-1	Total/NA	Water	8015B	76712
410-23823-12	MW-16	Total/NA	Water	8015B	76712
410-23823-13	MW-10S	Total/NA	Water	8015B	76712
410-23823-14	MW-123S	Total/NA	Water	8015B	76712
410-23823-15	MW-72S	Total/NA	Water	8015B	76712
410-23823-16	MW-72	Total/NA	Water	8015B	76712
410-23823-17	MW-15S	Total/NA	Water	8015B	76712
410-23823-18	RW-117S	Total/NA	Water	8015B	76712
MB 410-76712/1-A	Method Blank	Total/NA	Water	8015B	76712
LCS 410-76712/2-A	Lab Control Sample	Total/NA	Water	8015B	76712
LCSD 410-76712/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	76712

### Prep Batch: 77271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-23823-1	TB20336	Total/NA	Water	3511	
MB 410-77271/1-A	Method Blank	Total/NA	Water	3511	
LCS 410-77271/2-A	Lab Control Sample	Total/NA	Water	3511	

## QC Association Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

### GC Semi VOA

#### Analysis Batch: 77560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-23823-1	TB20336	Total/NA	Water	8015B	77271
MB 410-77271/1-A	Method Blank	Total/NA	Water	8015B	77271
LCS 410-77271/2-A	Lab Control Sample	Total/NA	Water	8015B	77271

#### Prep Batch: 77906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-77906/1-A	Method Blank	Total/NA	Water	3511	
LCS 410-77906/2-A	Lab Control Sample	Total/NA	Water	3511	

#### Analysis Batch: 78134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-77906/1-A	Method Blank	Total/NA	Water	8015B	77906
LCS 410-77906/2-A	Lab Control Sample	Total/NA	Water	8015B	77906



# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

**Client Sample ID: TB20336**

**Lab Sample ID: 410-23823-1**

**Date Collected: 12/10/20 00:00**

**Matrix: Water**

**Date Received: 12/11/20 17:12**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			77271	12/16/20 04:19	UMAD	ELLE
Total/NA	Analysis	8015B		1	77560	12/16/20 22:21	KP5X	ELLE

**Client Sample ID: RW-25S**

**Lab Sample ID: 410-23823-2**

**Date Collected: 12/11/20 08:45**

**Matrix: Water**

**Date Received: 12/11/20 17:12**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/15/20 23:49	UHEW	ELLE

**Client Sample ID: MW-25S**

**Lab Sample ID: 410-23823-3**

**Date Collected: 12/10/20 13:45**

**Matrix: Water**

**Date Received: 12/11/20 17:12**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 00:13	UHEW	ELLE

**Client Sample ID: RW-05S**

**Lab Sample ID: 410-23823-4**

**Date Collected: 12/10/20 13:10**

**Matrix: Water**

**Date Received: 12/11/20 17:12**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 00:37	UHEW	ELLE

**Client Sample ID: RW-05**

**Lab Sample ID: 410-23823-5**

**Date Collected: 12/10/20 14:35**

**Matrix: Water**

**Date Received: 12/11/20 17:12**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 01:01	UHEW	ELLE

**Client Sample ID: MW-14**

**Lab Sample ID: 410-23823-6**

**Date Collected: 12/10/20 10:10**

**Matrix: Water**

**Date Received: 12/11/20 17:12**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 01:25	UHEW	ELLE

# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

**Client Sample ID: MW-25**

**Date Collected: 12/10/20 15:05**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-7**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 01:48	UHEW	ELLE

**Client Sample ID: RW-118S**

**Date Collected: 12/10/20 11:10**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-8**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 02:12	UHEW	ELLE

**Client Sample ID: RW-116S**

**Date Collected: 12/10/20 11:45**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-9**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 02:36	UHEW	ELLE

**Client Sample ID: MW-122**

**Date Collected: 12/10/20 12:35**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-10**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 03:00	UHEW	ELLE

**Client Sample ID: RW-1**

**Date Collected: 12/10/20 15:55**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-11**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 03:24	UHEW	ELLE

**Client Sample ID: MW-16**

**Date Collected: 12/10/20 14:35**

**Date Received: 12/11/20 17:12**

**Lab Sample ID: 410-23823-12**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 03:48	UHEW	ELLE

# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

## Client Sample ID: MW-10S

Date Collected: 12/10/20 09:20

Date Received: 12/11/20 17:12

## Lab Sample ID: 410-23823-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 04:12	UHEW	ELLE

## Client Sample ID: MW-123S

Date Collected: 12/10/20 12:10

Date Received: 12/11/20 17:12

## Lab Sample ID: 410-23823-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 04:35	UHEW	ELLE

## Client Sample ID: MW-72S

Date Collected: 12/11/20 08:50

Date Received: 12/11/20 17:12

## Lab Sample ID: 410-23823-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 04:59	UHEW	ELLE

## Client Sample ID: MW-72

Date Collected: 12/11/20 09:15

Date Received: 12/11/20 17:12

## Lab Sample ID: 410-23823-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 05:23	UHEW	ELLE

## Client Sample ID: MW-15S

Date Collected: 12/11/20 09:45

Date Received: 12/11/20 17:12

## Lab Sample ID: 410-23823-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 05:47	UHEW	ELLE

## Client Sample ID: RW-117S

Date Collected: 12/11/20 10:25

Date Received: 12/11/20 17:12

## Lab Sample ID: 410-23823-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3511			76712	12/15/20 05:16	UMAD	ELLE
Total/NA	Analysis	8015B		1	77169	12/16/20 06:11	UHEW	ELLE

### Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC



## Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

### Laboratory: Eurofins Lancaster Laboratories Env, LLC

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

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	10561	06-14-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B	3511	Water	DRO (C10-C28) (1C)

## Method Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

Method	Method Description	Protocol	Laboratory
8015B	Diesel Range Organics (DRO) (GC)	SW846	ELLE
3511	Microextraction of Organic Compounds	SW846	ELLE

### Protocol References:

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

### Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

# Sample Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PRGS Monitoring

Job ID: 410-23823-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-23823-1	TB20336	Water	12/10/20 00:00	12/11/20 17:12	
410-23823-2	RW-25S	Water	12/11/20 08:45	12/11/20 17:12	
410-23823-3	MW-25S	Water	12/10/20 13:45	12/11/20 17:12	
410-23823-4	RW-05S	Water	12/10/20 13:10	12/11/20 17:12	
410-23823-5	RW-05	Water	12/10/20 14:35	12/11/20 17:12	
410-23823-6	MW-14	Water	12/10/20 10:10	12/11/20 17:12	
410-23823-7	MW-25	Water	12/10/20 15:05	12/11/20 17:12	
410-23823-8	RW-118S	Water	12/10/20 11:10	12/11/20 17:12	
410-23823-9	RW-116S	Water	12/10/20 11:45	12/11/20 17:12	
410-23823-10	MW-122	Water	12/10/20 12:35	12/11/20 17:12	
410-23823-11	RW-1	Water	12/10/20 15:55	12/11/20 17:12	
410-23823-12	MW-16	Water	12/10/20 14:35	12/11/20 17:12	
410-23823-13	MW-10S	Water	12/10/20 09:20	12/11/20 17:12	
410-23823-14	MW-123S	Water	12/10/20 12:10	12/11/20 17:12	
410-23823-15	MW-72S	Water	12/11/20 08:50	12/11/20 17:12	
410-23823-16	MW-72	Water	12/11/20 09:15	12/11/20 17:12	
410-23823-17	MW-15S	Water	12/11/20 09:45	12/11/20 17:12	
410-23823-18	RW-117S	Water	12/11/20 10:25	12/11/20 17:12	



## Chain of Custody Record



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Environmental Testing  
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4

<b>Client Information</b>		Sampler <i>A. Ambrosio, P. Silverman, E. Ezell</i>		Lab PM Zanar, Elizabeth M		410-23823 Chain of Custody		JOC No 110-12268-3974 2	
Client Contact Mr Mark Bauer		Phone <i>7575376443</i>		E-Mail Elizabeth.Zanar@eurofinset.com		<i>VA</i>		Page Page 2 of 5	
Company Geosyntec Consultants, Inc.		PWSID		Analysis Requested					
Address 10211 Wincopin Circle 4th Floor		Due Date Requested:		<div style="display: flex; justify-content: space-between;"> <div> <p>8015B_DRO - Diesel Range Organics (C10-C28)</p> <p>Sample (Yes or No)</p> </div> <div> <p>Total Number of Containers</p> </div> </div>					
City Columbia		TAT Requested (days): <i>Standard</i>							
State, Zip MD, 21044		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Phone 410-381-4333(Tel)		PO # MEM1974							
Email mbauer@geosyntec.com		WO #							
Project Name PRGS Monitoring		Project # 41001123		<div style="display: flex;"> <div> <p>Preservation Codes:</p> <p>A - HCL      M - Hexane</p> <p>B - NaOH      N - None</p> <p>C - Zn Acetate      O - AsNaO2</p> <p>D - Nitric Acid      P - Na2O4S</p> <p>E - NaHSO4      Q - Na2SO3</p> <p>F - MeOH      R - Na2S2O3</p> <p>G - Amchlor      S - H2SO4</p> <p>H - Ascorbic Acid      T - TSP Dodecahydrate</p> <p>I - Ice      U - Acetone</p> <p>J - DI Water      V - MCAA</p> <p>K - EDTA      W - pH 4-5</p> <p>L - EDA      Z - other (specify)</p> </div> <div>Other:</div> </div>					
Site Virginia		SSOW#							
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=soils, BT=tissue, A=air)	Special Instructions/Note:			
						Preservation Code: <i>XXN</i>			
<i>TB20336</i>		<i>—</i>	<i>—</i>	<i>—</i>	Water	<i>NN</i>	<i>X</i>		
<i>RW-255</i>		<i>12-11-20</i>	<i>0845</i>	<i>G</i>	Water	<i>NN</i>	<i>X</i>		
<i>MW-255</i>		<i>12-10-20</i>	<i>1345</i>	<i>G</i>	Water	<i>NN</i>	<i>X</i>		
<i>RW-055</i>		<i>12-10-20</i>	<i>1310</i>	<i>G</i>	Water	<i>NN</i>	<i>X</i>		
<i>RW-05</i>		<i>12-10-20</i>	<i>1435</i>	<i>G</i>	Water	<i>NN</i>	<i>X</i>		
<i>MW-14</i>		<i>12-10-20</i>	<i>1010</i>	<i>G</i>	Water	<i>NN</i>	<i>X</i>		
<i>MW-25</i>		<i>12-10-20</i>	<i>1505</i>	<i>G</i>	Water	<i>NN</i>	<i>X</i>		
<i>RW-1185</i>		<i>12-10-20</i>	<i>1110</i>	<i>G</i>	Water	<i>NN</i>	<i>X</i>		
					Water				
					Water				
					Water				
<b>Possible Hazard Identification</b>					<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>				
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:				
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by <i>A. Ambrosio</i>		Date/Time <i>12-11-20</i>		Company <i>Geosyntec</i>		Received by <i>Hazwoper</i>		Date/Time <i>12/11/20 14:25</i>	
Relinquished by <i>Hazwoper</i>		Date/Time <i>12/11/20 16:30</i>		Company <i>Hazwoper</i>		Received by		Date/Time	
Relinquished by		Date/Time		Company		Received by		Date/Time	
								12-11-20 1712	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>2.8</i>					

KAM

## Chain of Custody Record

<b>Client Information</b>		Sampler <i>A. Ambrosino, F. Ezell, P. Silverman</i>		Lab PM Zanar, Elizabeth M		Carrier Tracking No(s)		COC No 410-12268-3974 3	
Client Contact Mr. Mark Bauer		Phone		E-Mail Elizabeth.Zanar@eurofinset.com		State of Origin <i>VA</i>		Page Page 3 of 5	
Company Geosyntec Consultants, Inc.		PWSID		<b>Analysis Requested</b>				Job #	
Address 10211 Wincopin Circle 4th Floor		Due Date Requested:		<div style="writing-mode: vertical-rl; transform: rotate(180deg);">             8015B_DRO - Diesel Range Organics (C10-C22)              Did Filtered Sample (Yes or No)           </div>		<div style="writing-mode: vertical-rl; transform: rotate(180deg);">             Total Number of Containers           </div>		<b>Preservation Codes:</b> A - HCL      M - Hexane B - NaOH      N - None C - Zn Acetate      O - AsNaO2 D - Nitric Acid      P - Na2O4S E - NaHSO4      Q - Na2SO3 F - MeOH      R - Na2S2O3 G - Amchlor      S - H2SO4 H - Ascorbic Acid      T - TSP Dodecahydrate I - Ice      U - Acetone J - DI Water      V - MCAA K - EDTA      W - pH 4-5 L - EDA      Z - other (specify)	
City Columbia		TAT Requested (days): <i>Standard</i>							
State, Zip MD, 21044		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Phone 410-381-4333(Tel)		PO # MEM1974							
Email mbauer@geosyntec.com		WO #							
Project Name PRGS Monitoring		Project # 41001123							
Site Virginia		SSOW#							
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, ST=tissue, A=air)	<b>Special Instructions/Note:</b>			
<i>RW-116S</i>		<i>12-10-20</i>	<i>1145</i>	<i>G</i>	<i>Water</i>	<i>NN</i>	<i>X</i>		
<i>MW-122</i>		<i>12-10-20</i>	<i>1235</i>	<i>G</i>	<i>Water</i>	<i>NN</i>	<i>X</i>		
<i>RW-1</i>		<i>12-10-20</i>	<i>1555</i>	<i>G</i>	<i>Water</i>	<i>NN</i>	<i>X</i>		
<i>MW-16</i>		<i>12-10-20</i>	<i>1435</i>	<i>G</i>	<i>Water</i>	<i>NN</i>	<i>X</i>		
<i>MW-105</i>		<i>12-10-20</i>	<i>0920</i>	<i>G</i>	<i>Water</i>	<i>NN</i>	<i>X</i>		
<i>MW-123S</i>		<i>12-10-20</i>	<i>1210</i>	<i>G</i>	<i>Water</i>	<i>NN</i>	<i>X</i>		
<i>MW-72S</i>		<i>12-11-20</i>	<i>0850</i>	<i>G</i>	<i>Water</i>	<i>NN</i>	<i>X</i>		
<i>MW-72</i>		<i>12-11-20</i>	<i>0915</i>	<i>G</i>	<i>Water</i>	<i>NN</i>	<i>X</i>		
<i>MW-75S</i>		<i>12-11-20</i>	<i>0945</i>	<i>G</i>	<i>Water</i>	<i>NN</i>	<i>X</i>		
<i>RW-117S</i>		<i>12-11-20</i>	<i>1025</i>	<i>G</i>	<i>Water</i>	<i>NN</i>	<i>X</i>		
					<i>Water</i>				
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:				
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by <i>A. Ambrosino</i>		Date/Time <i>12-11-20</i>		Company <i>Geosyntec</i>		Received by <i>Hanger</i>		Date/Time <i>12-11-20 14:35</i>	
Relinquished by <i>Hanger</i>		Date/Time <i>12-11-20 16:50</i>		Company <i>for Lab</i>		Received by		Date/Time	
Relinquished by		Date/Time		Company		Received by		Date/Time	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) *C and Other Remarks: <i>2.8</i>					

## Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 410-23823-1

**Login Number: 23823**

**List Source: Eurofins Lancaster Laboratories Env**

**List Number: 1**

**Creator: Metzger, Katherine A**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ( $\leq 6^{\circ}\text{C}$ , not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ( $\leq 6^{\circ}\text{C}$ , not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	



**ATTACHMENT C**

**Allowable Groundwater Concentration  
Calculation**

## ATTACHMENT C

### ALLOWABLE GROUNDWATER CONCENTRATION CALCULATION

#### Stream Protection: Allowable Groundwater Concentration at Point of Discharge

##### **1.0 Governing Equation**

The allowable groundwater concentration at the point of discharge that is protective of surface water was calculated for each of the chemicals of concern (COCs) detected above the groundwater screening levels. The calculations were performed using the following equation obtained from District Department of Environment's (DDOE) technical guidance document, *District of Columbia Risk-Based Corrective Action Technical Guidance (updated June 2011)*.

$$C_{gw} = \frac{C_{sw}(Q_{gw} + Q_{sw})}{Q_{gw}} - C_{su} \left( \frac{Q_{sw}}{Q_{gw}} \right) \quad (\text{Eq. 1})$$

Where:

- $C_{gw}$  = Calculated allowable concentration in groundwater at the point of discharge into the stream; (mg/L)
- $C_{sw}$  = Allowable concentration at the downstream edge of the stream's mixing zone, (i.e., the applicable surface water quality criteria); (mg/L) (*Stipulated by applicable 21 DCMR Chapter 11 regulatory guidelines*)
- $Q_{gw}$  = Volumetric groundwater discharge flux (ft<sup>3</sup>/day) (*Calculated from Site specific parameters*)
- $Q_{sw}$  = Stream flow upstream of the point of groundwater discharge (ft<sup>3</sup>/day) (*a conservative estimate of 10 cfs or 864,000 ft<sup>3</sup>/day*)<sup>1</sup>
- $C_{su}$  = Specific parameter concentration upstream of the groundwater plume discharge (mg/L) (*Assumed to be 0.0 mg/L*)

With exception to  $Q_{gw}$ , the remaining three variables (i.e.,  $C_{sw}$ ,  $Q_{sw}$ ,  $C_{su}$ ) are defined from existing references to calculate  $C_{gw}$ . Derivation of the groundwater discharge volumetric flux is defined below. An example calculation is provided in Attachment 1; a tabulated summary of results is presented in the attached Table 1.

##### **2.0 Derivation of Volumetric Groundwater Discharge, $Q_{gw}$**

The volumetric groundwater discharge flux is calculated from Site specific parameters determined during Site characterization and assessment efforts. This flux is given by the following equation as per District Department of Environment's (DDOE) technical guidance document, *District of Columbia Risk-Based Corrective Action Technical Guidance (updated June 2011)*.

---

<sup>1</sup> <http://waterdata.usgs.gov/md/nwis/current?type=flow>, Station Number 0653000 Cameron Run at Alexandria, VA

$$Q_{gw} = \left( (Z + \sqrt{\alpha_z X_s}) \times (Y + 2\sqrt{\alpha_y X_s}) \right) \times U_{gw} \quad (\text{Eq. 2a})$$

Where:

- $Y$  = Groundwater source dimension perpendicular to groundwater flow direction (ft) *(a conservative estimate of 112.5 ft)*
- $Z$  = Groundwater source thickness (ft) *(a conservative estimate of 21.5 ft - refer to Figure 1)*
- $\alpha_y$  = Lateral dispersivity (ft) *(a conservative assumption of 0 ft)*
- $\alpha_z$  = Vertical dispersivity (ft) *(a conservative assumption of 0 ft)*
- $X_s$  = Distance from downgradient edge of the groundwater source to the stream (ft) *(not relevant in the conservative scenario)*
- $U_{gw}$  = Darcy velocity (ft/day)

The lateral and vertical dispersions are indirectly captured in the conservative estimates of  $Y$  and  $Z$  respectively. In Equation 2a,  $U_{gw}$  may also be calculated using Site-specific hydrogeologic properties as shown below.

$$U_{gw} = K i \quad (\text{Eq. 2b})$$

Where:

- $K$  = Hydraulic conductivity (ft/day) *(derived from bail down tests performed at the Site; average  $K$  estimated from bail down test data equals 1.22 ft/day<sup>2</sup>, which is in the range for coarse to fine sand<sup>3</sup>).*
- $i$  = Hydraulic gradient (ft/ft) *(a conservative estimate of 0.08 (ft/ft) – refer to Figure 1)*

Combine Equations 2a and 2b into the following and solve for  $Q_{gw}$  :

$$Q_{gw} = K i Y Z \quad (\text{Eq. 2c})$$

To calculate the final allowable groundwater concentration per COC ( $C_{gw}$ ) substitute  $Q_{gw}$  into Equation 1 with the other known variables.

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<sup>2</sup> Geosyntec Consultants and Groundwater & Environmental Services Inc., December 2014, “Corrective Action Plan – Part II.”

<sup>3</sup> Driscoll, F.G., 1986, “Groundwater and Wells” Johnson Filtration Systems, Inc. 2<sup>nd</sup> edition, pp. 75.



**Attachment C**  
**Allowable Groundwater Concentration Calculation**

**Equation 1**

$$C_{gw} = \frac{C_{sw} (Q_{gw} + Q_{sw})}{Q_{gw}} - C_{su} \frac{(Q_{sw})}{(Q_{gw})}$$

Impacted groundwater discharge into the stream (cu.ft/day)	$Q_{gw}$	86
Stream flow upstream of the point of groundwater discharge (stream flow rate) (cu.ft/day)	$Q_{sw}$	864,000
Applicable stream water quality criteria (µg/L)	$C_{sw}$	
COC concentration upstream of the groundwater plume discharge (µg/L)	$C_{su}$	
Allowable concentration in groundwater at POD into the stream (µg/L)	$C_{gw}$	

Analyte	Unit	$C_{sw}$	$C_{su}$	$C_{gw}$ (Max Measured Concentration)	$C_{gw}$ (Calculated as per eq. 1)
Indeno-[1,2,3-cd] pyrene	µg/L	0.018000	0	0.086	181.58280

**Equation 2**

$$Q_{gw} = U_{gw} A = K i Z Y$$

Darcy velocity (ft/d)	$U_{gw}$
Hydraulic gradient (ft/ft)	i
Groudwater source thinckness (ft)	Z
Groundwater source dimension perpendicular to GW flow direction (ft)	Y
Crossectional Area of groundwater flow (sq.ft)	A
Range of hydraulic conductivities estimated from baildown testing at site (ft/d)	K
Calculated groundwater discharge as per eq. 2 (cu.ft/day)	$Q_{gw}$

Z	21.5	Values for Z, Y, i, and A were determined using dimensions presented in <b>Figure E.1</b>				
Y	112.5					
i	0.08					
A	2,419					
K	I	II	III	IV	V	Average
	0.253	0.253	2.16	2.16	1.28	1.2212
$Q_{gw}$	49	49	127	127	76	86

