Phase II Environmental Site Assessment (ESA)

147,149, 159, 161 West Tupper Street and 42, 44 Trinity Place, Buffalo, New York

February 7, 2022 (Date of Site Inspection) T0099-022-001

Prepared For: 147 W Tupper LLC, C/O Ms. Sandra A. Nasca, Esq., The Knoer Group

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PHASE II ENVIRONMENTAL INVESTIGATION REPORT

147, 149, 159, 161 WEST TUPPER STREET AND 42, 44 TRINITY PLACE,

BUFFALO, NEW YORK

May 2022 T0099-022-001

Prepared for:

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PHASE II ENVIRONMENTAL INVESTIGATION REPORT

147, 149, 159, 161 West Tupper Street and 42, 44 Trinity Place, Buffalo, New York

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1.0 INTRODUCTION

1.1 Background and Site Description

TurnKey Environmental Restoration, LLC (TurnKey) performed a Phase II Environmental Investigation on behalf of 147 W Tupper LLC C/O Ms. Sandra A. Nasca, Esq., The Knoer Group, PLLC at 147, 149, 159, 161 West Tupper Street and 42 and 44 Trinity Place, City of Buffalo, New York. (Site; see Figures 1 and 2). TurnKey understands that this investigation was performed for due diligence purposes prior to potential purchase and/or redevelopment of the Site.

The Site is located in a highly developed commercial and residential area of the City of Buffalo (see Figure 1). As shown on Figure 2, five structures are present on the Site. Building 1 is a vacant former automotive repair structure, and Buildings 2 and 3 are currently vacant last used as residences. Building 4 is a vacant former mixed-use building and Building 5 is a vacant former residence. The Site is supplied with municipal sanitary sewer, electric, natural-gas, and public water and consists of six parcels totaling approximately 0.73-acres. Information relative to the Site parcels, as provided by the City of Buffalo municipal offices, is provided below:

Parcel No.	Number	Street	Tax ID No.	Current Owner	Current Use
Parcel 1	149	West Tupper Street	111.29-4-21.1	Salvatore Buscarino	Vacant former auto repair (Building 1)
Parcel 2	161	West Tupper Street	111.29-4-28	Salvatore Buscarino C/o Sams General Auto Repair	Vacant land
Parcel 3	42	Trinity Place	111.29-4-22	Salvatore Buscarino	Vacant residence (Building 2)
Parcel 4	44	Trinity Place	111.29-4-22./A	Salvatore Buscarino	Vacant residence (Building 3)
Parcel 5	147	West Tupper Street	111.29-4-23	147 West Tupper LLC	Vacant commercial/residential (Building 4)
Parcel 6	159	West Tupper Street	111.29-4-27	147 West Tupper LLC	Vacant residence (Building 5)

The scope of work for the Phase II investigation was devised based on recognized environmental conditions (RECs) identified for the Site by TurnKey through completion of a Phase I Environmental Site Assessment, dated January 2022; see Section 1.2 below for additional information. We note that the Phase I was completed on parcels to be purchased (149 and 161 West Tupper Street and 42 and 44 Trinity Place) and did not include parcels addressed at 147 and 159 West Tupper Street.

1.2 Previous Study

As detailed in TurnKey's Phase I, historic uses specific to each Site parcel were identified as:

Parcel No.	Address	Reported or Suspected Use (approximate years)
Parcel 1	149 West Tupper Street	Residential (1889-1981), automotive repair (1925-2008), warehouse (1925-1951), manufacturing/cutting dies (1955-1960)
Parcel 2	161 West Tupper Street	Residential (1889-2008)
Parcel 3	42 Trinity Place	Residential (1889- prior to 1951), dental instrument service/manufacturing (at least 1951 – 1986), factory (at least 1951 – 1986)
Parcel 4	44 Trinity Place	Storefront (1889 - prior to 1951), factory (at least 1951 – 1986), residential (1925-1985)

The following potential environmental concerns were identified by TurnKey at the time of the Site reconnaissance:

- Building 1 was formerly used as an automotive repair operation.
- Three 55-gallon drums that were apparently empty were noted on the western side of Building 1.
- Evidence indicative of four suspect former in-ground lifts was noted within the southern portion of Building 1; the pistons have apparently been removed and three of the four lifts appear to have at least been covered with concrete. Two aboveground hydraulic oil tanks, apparently for the lifts, were noted within the building.
- Two floor drains were noted in former repair areas of Building 1. The current property owner indicated that the floor drain discharge into the public sewer systems; however, the integrity of the floor drain system is unknown.
- TurnKey is aware of former buildings at the Site thus it is possible that fill materials from unknown origins were brought to the Site to bring former building areas to grade.

TurnKey's investigation revealed the following RECs in connection with the Site:

- Historic operations (automotive repair, dental equipment service/manufacturing, factory, etc.) along with the reasonably anticipated use of petroleum and/or solvents.
- Floor drains and the four inactive inground lifts noted within historic automotive repair areas of Building 1.
- The potential for miscellaneous urban fill materials exists due to the location of the Site and former buildings.

Due to the RECs identified above, TurnKey recommended completion of a Phase II Environmental Investigation to assess subsurface conditions. Additional information relative to the Phase II scope of work and findings is provided below.

The history of the 147 and 159 West Tupper Street parcels was identified through review of historical sources, as follows:

- 147 West Tupper Street - Commercial since at least 1951 with operations including storefronts, a restaurant, a union hall. In addition, operations included Sunset Laundry from at least 1994 through at least 1998, and a beauty salon from at least 1994 through at least 2009.

- 159 West Tupper Street - Residential since at least 1889.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 Soil Boring Investigation

On February 7, 2021, TurnKey's subcontractor, Trec Environmental Inc. (Trec), completed drilling activities using a hydraulically driven track-mounted Geoprobe drill rig (Model 54LT) equipped with a 1.5-inch diameter, 48-inch long macro-core sampler. As shown on Figure 2, 10 soil borings designated as SB-1 through SB-10 were completed at the Site. The soil borings were advanced until a depth of 12 feet below ground surface (fbgs) was reached. As further detailed below in Section 2.2, four soil borings were converted into temporary one-inch diameter monitoring wells.

The sample cores were retrieved from the boring locations in clear PVC sleeves to allow for field characterization of the subsurface lithology and collection of soil samples by TurnKey's Environmental Scientist. The physical characteristics of all soil borings were classified using the ASTM D2488 Visual-Manual Procedure Description. Soils from each boring were screened via headspace screening using a MiniRae 3000 Photoionization Detector (PID). Visual and/or olfactory observations were noted. All field observations, including lithology, depths, PID scan results, etc., at each investigation location are summarized in the Soil Boring Log sheets provided in Appendix A. Photographs taken during the work are included in Appendix B.

Ten soil/fill samples selected for laboratory analysis were transported under chain-of custody command to Eurofins Environment Testing America (Eurofins) in Amherst, New York for analysis of Target Compound List (TCL) plus New York State Department of Environmental Conservation (NYSDEC) Commissioners Policy (CP) 51 List volatile organic compounds (VOCs), polyaromatic hydrocarbons (PAHs), Resource Conservation and Recovery Act (RCRA) metals, and/or polychlorinated biphenyls (PCBs). All samples were collected in laboratory provided sample bottles and were cooled to 4^0 C prior to transport.

2.2 Hand Auger Soil/Fill Sampling

On April 11, 2022, TurnKey collected a total of six soil/fill samples from the 147 and 159 West Tupper Street parcels and the 42 Trinity Place parcel using hand tools (i.e., hand auger) from the upper 3 fbgs in gravel/vegetation covered areas west of the 44 Trinity Place building, from gravel/vegetation areas in the northern portion of the 159 West Tupper parcel,

and from beneath the building slab of the 147 West Tupper building. A concrete corer was used to remove concrete from investigation locations within the 147 West Tupper parcel building footprint to allow for access to soil/fill material beneath the building. Similar to procedures during the soil boring drilling investigation, these soil samples were screened via headspace screening using a MiniRae 3000 PID.

Five soil/fill samples selected for laboratory analysis were transported under chain-of custody command to Eurofins Environment Testing America (Eurofins) in Amherst, New York for analysis of PAHs and/or RCRA metals. All samples were collected in laboratory provided sample bottles and were cooled to 4^0 C prior to transport.

2.3 Groundwater Sampling

Four soil borings, SB-1/1W, SB-3/3W, SB-6/6W, and SB-7/7W, were converted into temporary one-inch diameter monitoring wells. Each temporary well was installed using one-inch diameter Schedule 40 PVC well screen and riser. Groundwater samples were collected from the temporary wells using a dedicated and disposable 0.5-inch polyethylene bailer. The temporary wells were removed from the ground following groundwater sampling activities. The boreholes were backfilled with soils retrieved from the soil borings.

Four groundwater samples, designated SB-1/1W, SB-3/3W, SB-6/6W and SB-7/7W, were placed in laboratory provided sample bottles, cooled to 4 °C in the field, and transported under chain-of-custody to Eurofins for analysis of TCL+CP-51 VOCs.

3.0 INVESTIGATION FINDINGS

3.1 Site Geology/Hydrogeology

The overburden geology observed during the soil boring investigation is generally described as fill materials consisting of cinders, sand, and gravel with intermingled fragments of brick to depths between 0.5 fbgs and 6 fbgs overlying native fine sand or sandy lean clay to at least 12 fbgs (see Soil Boring Logs in Appendix A). Ash was noted as intermingled with fill material at SB-3/3W, SB-4, and SB-6/6W. Groundwater was encountered at each of the borings at depths ranging between approximately 4 fbgs and 11 fbgs.

Lithology during the hand auger investigation was identified as fill materials consisting of cinders, sand, and gravel with intermingled fragments of brick throughout exterior locations to at least 3 fbgs (HC-1, HC-2, HC-3 and HC-4) and interior locations to approximately one fbgs (HC-5 and HC-6). Fill at interior locations are underlain by sandy lean clay to at least 3 fbgs.

Groundwater flow is likely to the west toward Lake Erie. Local groundwater flow, however, may be influenced by subsurface features, such as excavations, utilities, and localized fill-conditions.

3.2 Field Observations

Soil samples from the soil boring investigation were observed and scanned via headspace screening for volatile organics using a PID. A brief description of the field observations during the boring investigation is presented below:

Investigation Location ID	Environmental Concern Assessed	Highest PID reading (parts per million, ppm) and depth (fbgs)	Other Observations
SB-1/1W	Former buildings, west (down-gradient) of former factory operation.	0.0 ppm throughout boring.	Fill materials to 2 fbgs.
SB-2	West (down-gradient) of former factory operation.	0.0 ppm throughout boring.	Fill materials to 1 fbgs.
SB-3/3W	West (down-gradient) of former factory operation.	0.0 ppm throughout boring.	Fill materials to 3.5 fbgs.
SB-4	West (down-gradient) of automotive repair operation.	0.0 ppm throughout boring.	Fill materials to 2 fbgs.
SB-5	Former buildings	0.0 ppm throughout boring.	Fill/gravel to 1 fbgs.

Investigation Location ID	Environmental Concern Assessed	Highest PID reading (parts per million, ppm) and depth (fbgs)	Other Observations
SB-6/6W	Former buildings	0.0 ppm throughout boring.	Fill materials to 1 fbgs.
SB-7/7W	In-ground lifts within automotive repair building.	7.8 ppm at 5 fbgs.	Elevated PID readings, black staining, and petroleum-like odors noted (5 fbgs to 6 fbgs).
SB-8	In-ground lifts within automotive repair building.	0.0 ppm throughout boring.	None
SB-9	In-ground lifts within automotive repair building.	0.0 ppm throughout boring.	None
SB-10	In-ground lifts within automotive repair building.	0.0 ppm throughout boring.	Fill materials to 6 fbgs.
HC-1	Environmental soil/fill conditions.	0.0 ppm throughout investigation locations.	Fill materials to 3 fbgs.
HC-2			Fill materials to 3 fbgs.
HC-3			Fill materials to 3 fbgs.
HC-4			Fill materials to 3 fbgs.
HC-5			Fill materials to 1 fbgs.
HC-6			Fill materials to 1 fbgs.

3.3 Soil Analytical Results

Table 1 presents a summary of the analytical results from the ten soil/fill samples that were analyzed. For comparative purposes, Table 1 includes the Part 375 Unrestricted Use Soil Cleanup Objectives (USCOs), Restricted Residential SCOs (RRSCOs), Commercial SCOs (CSCOs), and Industrial SCOs (ISCOs). Based on the redevelopment plan for the Site, which includes apartments and storefronts, RRSCOs are the most applicable SCO for the Site. Soil/fill regulatory exceedances are shown on Figure 3. A copy of the laboratory analytical data package is included in Appendix C.

As shown on Table 1 and Figure 3, polycyclic aromatic hydrocarbons (PAHs) were detected at concentrations exceeding RRSCOs in six soil/fill samples collected across the Site with at least one soil/fill sample with a RRSCO exceedances collected from, or proximate to, each parcel at SB-1/1W, SB-3/3W, SB-4, SB-6/6W, SB-10, and HC-1. We note that individual PAH concentrations were also identified at concentrations exceeding their respective ISCOs at three boring locations, at SB-3/3W, SB-4, and SB-10, and at one hand auger location, HC-1.

Metals (arsenic, barium, lead, and/or mercury) were identified at concentrations above RRSCOs in eight soil/fill samples at SB-3/3W, SB-4, SB-6/6W, SB-10, HC-1, HC-3, HC-4, and HC-5. The highest concentrations of barium exceeded its CSCOs at SB-3/3W and SB-6/6W. In addition, lead exceeded its CSCO at SB-3/3W, mercury exceeded its ISCO at HC-1, and arsenic exceeded its ISCO at HC-5.

VOCs and PCBs were either not detected at concentrations above laboratory detection limits or concentrations were below USCOs.

3.4 Groundwater Analytical Results

Groundwater sample results are summarized on Table 2 with comparison to Class GA Groundwater Quality Standards (Class GA GWQS) per NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1). VOC GWQS exceedances are shown on Figure 3. A copy of the complete laboratory analytical data package is included in Appendix C.

As indicated on Table 2 and Figure 3, individual chlorinated VOCs (cis-1,2-dichloroethene, tetrachloroethene, and trichloroethene) were identified at concentrations exceeding their respective Class GA GWQS at SB-7/7W, which is located within the footprint of the vacant automotive repair building. VOCs were either not detected at concentrations above laboratory detection limits or concentrations were below GWQS in the three additional groundwater samples collected from the Site.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the Phase II investigation at the Site, TurnKey offers the following conclusions and recommendations:

- The Site has a history of automotive repair, dental instrument service/manufacturing, and factory operations. TurnKey noted the presence of floor drains and four inactive in-ground lifts within the vacant automotive repair building.
- The drilling and hand auger investigation identified widespread fill materials across the Site with field evidence of impact and/or analytical concerns, which are further detailed below.
- The highest PID reading identified during the work was 7.8 ppm at SB-7 (5-6 fbgs) completed proximate to an inground lift within the vacant automotive repair building. Black staining and petroleum-like odors were also noted at this location.
- Laboratory analytical results revealed the presence of soil/fill across the Site that is impacted by PAHs and/or metals with concentrations exceeding RRSCOs (the applicable SCO for the Site based on the proposed end-use) in at least one soil/fill sample from each parcel associated with this assessment. We note that PAH concentrations exceeding ISCOs and metals exceeding CSCOs and ISCOs were identified in soil/fill across the Site.
- Chlorinated VOCs (cis-1,2-dichloroethene, tetrachloroethene, and trichloroethene) were identified at concentrations exceeding their respective Class GA GWQS at SB-7/7W, which is located within the footprint of the vacant automotive repair building. No groundwater VOC exceedances were identified in the three additional groundwater samples collected from the Site indicating that groundwater VOC impacts are likely localized.
- We understand that this vacant/underutilized Site is being considered for redevelopment. Based on the findings detailed above, the Site is a potential candidate for the New York State Brownfield Cleanup Program (BCP). Regardless of whether the BCP is pursued, PAHs- and metals-impacted soil/fill materials present on-Site will require exposure control, remediation, and/or proper soil management either prior to or during the redevelopment project.

5.0 LIMITATIONS

This report has been prepared for the exclusive use of 147 W Tupper LLC c/o Ms. Sandra A. Nasca, Esq. The Knoer Group, PLLC The contents of this report are limited to information available at the time of the Site investigation activities and to data referenced herein, and assume all referenced historic information sources to be true and accurate. The findings herein may be relied upon only at the discretion of 147 W Tupper LLC c/o Ms. Sandra A. Nasca, Esq. The Knoer Group, PLLC. Use of or reliance on this report or its findings by any other person or entity is prohibited without written permission of TurnKey Environmental Restoration, LLC.

TABLES

TABLE 1

SUMMARY OF SOIL/FILL ANALYTICAL RESULTS

WEST TUPPER & TRINITY SITE
BUFFALO, NEW YORK

PARAMETER [1]	Unrestricted Use SCOs[2]	Restricted Residential Use SCOs[3]	Commercial Use SCOs[2]	Industrial Use SCOs[2]	SB-3/3W (1-3 ft)	SB-5 (0-1 ft)	SB-6/6W (0-1 ft)	SB-1 /1W (0-2 ft)	SB-4 (0.25-2 ft)	SB-7/7W (5-6 ft)	SB-8 (9-11 ft)	SB-9 (8-9 ft)	SB-10 (0-2 ft)	HC-1	SB-2 (0-1 ft)	HC-3	HC-4	HC-5	HC-6
Sample Date					02/07/2022									04/11/2022	02/07/2022	04/11/2022			
Address					42 Trinity Place	161 West Tupper Street		149 West Tupper St						159 West Tupper St	44 Trinity Place			147 West Tupper Street	
Volatile Organic Compounds (VOCs) - mg/kg [4]																			
Chloroform	0.37	49	350	700	--	--	--	--	--	0.00038 J B VS	0.0068 B VS	0.0061 B VS	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	ND	0.00096 J B VS	0.0011 J B VS	--	--	--	--	--	--	--
Trichloroethene	0.47	21	200	400	--	--	--	--	--	0.0039 J VS	ND	ND	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	0.25	100	500	1000	--	--	--	--	--	0.0039 J VS	ND	ND	--	--	--	--	--	--	--
Acetone	0.05	100	500	1000	--	--	--	--	--	0.02 J VS	ND	ND	--	--	--	--	--	--	--
2-Butanone	0.12	100	500	1000	--	--	--	--	--	0.0039 J VS	ND	ND	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	8.4	52	190	380	--	--	--	--	--	0.0005 J VS	ND	ND	--	--	--	--	--	--	--
Polyaromatic Hydrocarbons (PAHs) [3]																			
Acenaphthene	20	100	500	1000	0.34 J	ND	ND	0.21 J	0.51 J	ND	--	--	ND	0.48 J	ND	0.044 J	--	ND	ND
Fluoranthene	100	100	500	1000	6.2	0.73 J	2.1	2.5	6.3	ND	--	--	56	8.8	0.34 J	0.58	--	0.068 J	0.064 J
Naphthalene	12	100	500	1000	ND	ND	ND	ND	0.45 J	ND	--	--	ND	0.38 J	ND	ND	--	0.068 J	ND
Benzo(a)anthracene	1	1	5.6	11	2.6	0.34 J	0.96	1.2	3.1	ND	--	--	30	4.1	0.18 J	0.31	--	ND	ND
Benzo(a)pyrene	1	1	1	1.1	2.5	0.35 J	0.93	1	2.6	ND	--	--	23	4.1	0.18 J	0.3	--	0.056 J	0.037 J
Benzo(b)fluoranthene	1	1	5.6	11	3.1	0.39 J	1.2	1.3	3.5	ND	--	--	27	5.3	0.2 J	0.34	--	0.12 J	0.046 J
Benzo(k)fluoranthene	0.8	3.9	56	110	1.4 J	0.18 J	0.41	0.61 J	1.4 J	ND	--	--	11	2	ND	0.21	--	ND	ND
Chrysene	1	3.9	56	110	2.8	0.37 J	1	1.2	3	ND	--	--	26	4.4	ND	0.31	--	0.3	ND
Acenaphthylene	100	100	500	1000	ND	ND	ND	ND	ND	ND	--	--	4.1	0.47 J	ND	0.025 J	--	ND	ND
Anthracene	100	100	500	1000	0.66 J	ND	0.35	0.53 J	1.1 J	ND	--	--	8.8	1.3 J	ND	0.1 J	--	ND	ND
Benzo(ghi)perylene	100	100	500	1000	2.1 J	ND	0.76	0.7 J	2	ND	--	--	15	2.7	0.13 J	0.19	--	0.056 J	0.026 J
Fluorene	30	100	500	1000	0.35 J	ND	0.15 J	0.26 J	0.52 J	ND	--	--	1.4 J	0.49 J	ND	0.041 J	--	ND	ND
Phenanthrene	100	100	500	1000	3.4	0.42 J	1.6	2.2	4.3	ND	--	--	28	6.4	0.2 J	0.41	--	0.14 J	0.042 J
Dibenzo(a,h)anthracene	0.33	0.33	0.56	1.1	0.67 J	ND	0.22	0.24 J	0.65 J	ND	--	--	5.2	0.82 J	ND	0.06 J	--	ND	ND
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	11	1.8 J	0.27 J	0.68	0.63 J	1.9 J	ND	--	--	15	2.8	0.13 J	0.19	--	ND	0.027 J
Pyrene	100	100	500	1000	5.1	0.65 J	1.7	2.1	5.3	ND	--	--	53	8.3	0.26 J	0.52	--	0.085 J	0.046 J
Metals - mg/Kg																			
Arsenic	13	16	16	16	15.3	5.2	11.4	7	4.2	ND	--	--	9.4	12.9	ND	6.5	3.9	38.4	14.7
Barium	350	400	400	10,000	410	107	484	90.4	225	21.7	--	--	128	337	62.9	203	104	185	63.7
Cadmium	2.5	4.3	9.3	60	2.1	0.26	1.6	ND	1.1	ND	--	--	3	0.84	0.3	1.2	0.93	ND	ND
Chromium	31	180	1500	6800	23.1	16.2	21.1	11.6	11.2	6.9	--	--	17.2	25.7	12.2	21.5	15.4	10	10.6
Lead	64	400	1000	3900	1700	169	902	166	850	12.4	--	--	723	946	104	844	433	32.6	59.8
Mercury	0.18	0.81	2.8	5.7	1.2	0.068	1.6	0.24	0.41	0.036	--	--	0.21	8.8	0.13	0.76	0.35	0.07	0.15
Total PCBs - mg/Kg [3]																			
Total PCBs	0.1	1	1	25	--	--	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Values per 6NYCRR Part 375 Soil Cleanup Objectives (SCOs).
3. Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparisons to SCLs

Definitions:
ND = Parameter not detected above laboratory detection limit.
"--" = No value available for the parameter. Or parameter not analyzed for.
J = Estimated value; result is less than the sample quantitation limit but greater than zero.
VS = Reported analyte concentrations are below 200 ug/kg and may be biased low due to the sample not being collected according to 5035A- L
B = Compound was found in the blank and sample.

Bold: Results exceed Unrestricted Use Soil Cleanup Objectives
Bold: Results exceed Restricted Residential Use Soil Cleanup Objectives
Bold: Results exceed Commercial Use Soil Cleanup Objectives
Bold: Results exceed Industrial Use Soil Cleanup Objectives

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
PHASE II ENVIRONMENTAL INVESTIGATION
WEST TUPPER & TRINITY SITE
BUFFALO, NY

PARAMETER[1]	GWQS[2]	Sample Location			
		SB-1W	SB-3W	SB-6W	SB-7W
		02/07/22			
Volatile Organic Compounds (VOCs) - ug/L					
cis-1,2-Dichloroethene	**5**	ND	ND	ND	**110**
Cyclohexane	**--**	ND	0.93 J	ND	ND
Methylcyclohexane	**--**	ND	1.1 J	ND	ND
Tetrachloroethene	**5**	ND	ND	ND	**6.1 J**
Trichloroethene	**5**	ND	ND	ND	**200**

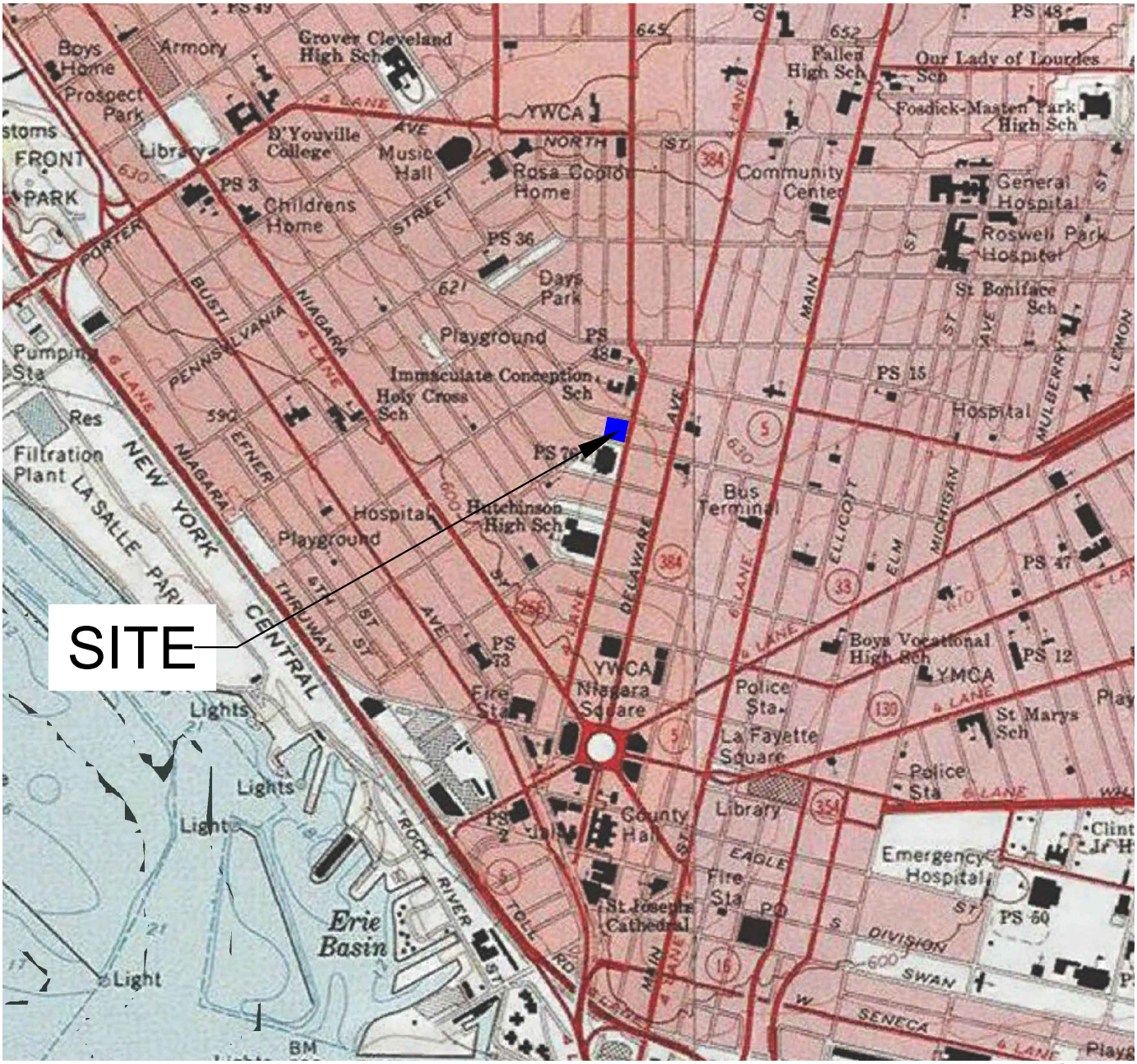
Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Values per NYSDEC Division of Water Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations - Class GA (TOGS 1.1.1)

Definitions:
ND = Parameter not detected above laboratory detection limit.
J=Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
"--" = Sample not analyzed for parameter or no SCO available for the parameter.
BOLD = Result exceeds GWQS.

FIGURES

F:\CAD\TurnKey\Knoer Group\149, 161 West Tupper and 42 Trinity Place\Phase II\Figure 1; Site Location and Vicinity Map.dwg

FIGURE 1



1,500' 0' 1,500' 3,000'

SCALE: 1 INCH = 1,500 FEET
SCALE IN FEET
(approximate)

N

TurnKey Environmental Restoration, LLC

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: T0099-022-001

DATE: MAY 2022

DRAFTED BY: CMS

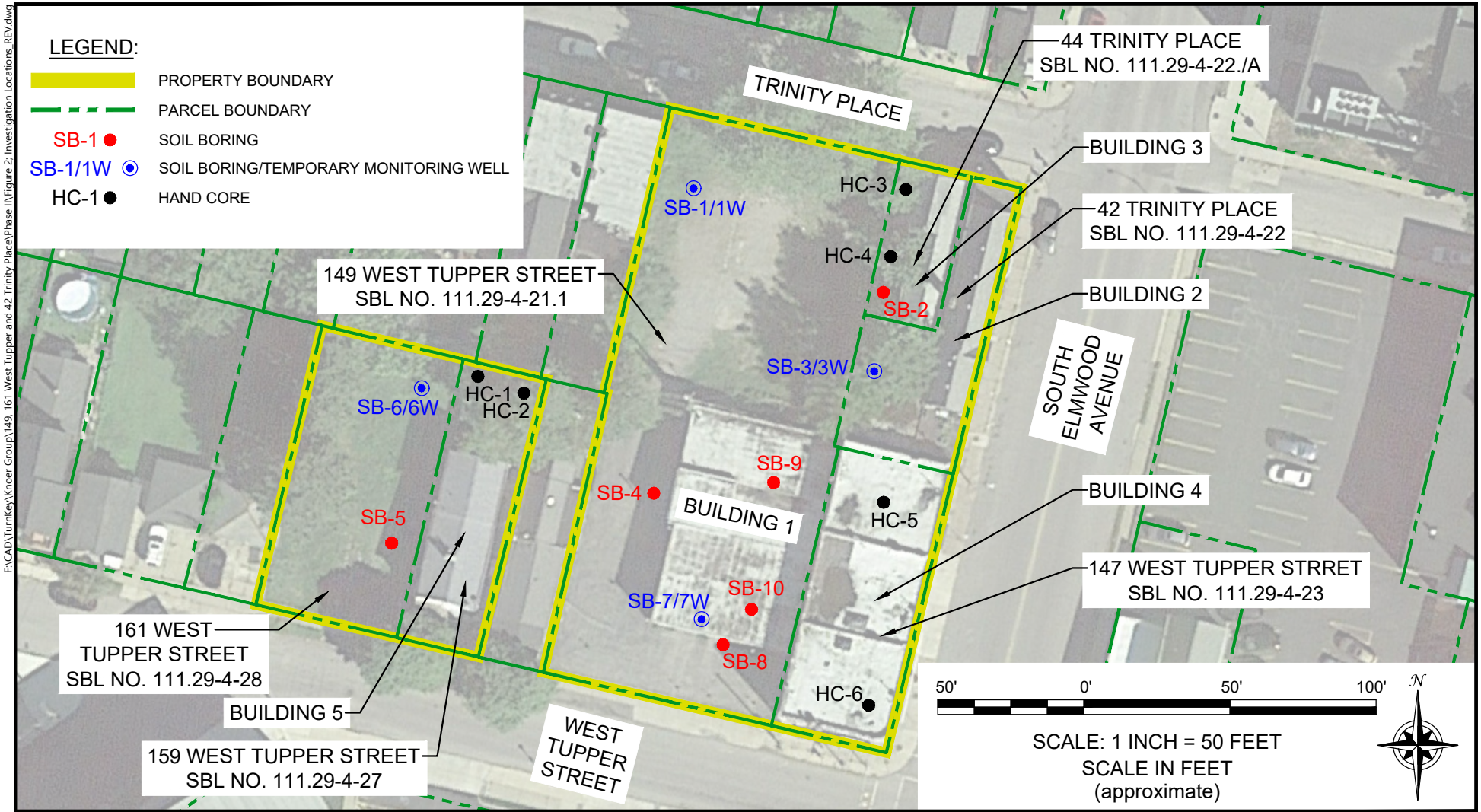
SITE LOCATION AND VICINITY MAP

PHASE II ENVIRONMENTAL INVESTIGATION

147-149 & 159-161 WEST TUPPER STREET AND 42-44 TRINITY PLACE
BUFFALO, NEW YORK

PREPARED FOR

147 W TUPPER LLC



F:\CAD\TurnKey\Knoer Group\149, 161 West Tupper and 42 Trinity Place\Phase II\Figure 2, Investigation Locations REV.dwg

INVESTIGATION LOCATIONS

PHASE II ENVIRONMENTAL INVESTIGATION

147-149 & 159-161 WEST TUPPER STREET AND 42-44 TRINITY PLACE
BUFFALO, NEW YORK

PREPARED FOR
147 W TUPPER LLC

FIGURE 2

TurnKey Environmental Restoration, LLC
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PROJECT NO.: T0099-022-001
DATE: MAY 2022
DRAFTED BY: CMS

F:\CAD\TurnKey\Knoer Group\149, 161 West Tupper and 42 Trinity Place\Phase II\Figure 3, Soil-Fill and Groundwater Exceedances.dwg

LEGEND:

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SB-1 ● SOIL BORING
- SB-1/1W ◉ SOIL BORING/TEMPORARY MONITORING WELL
- HC-1 ● HAND CORE
- EXCEEDS UNRESTRICTED USE SCOs
- EXCEEDS RESTRICTED-RESIDENTIAL USE SCOs
- EXCEEDS COMMERCIAL USE SCOs
- EXCEEDS INDUSTRIAL USE SCOs
- EXCEEDS GWQS/GV

NOTES:
1. IMAGE TAKEN FROM GOOGLE EARTH 2018.
2. SOIL/FILL RESULTS COMPARED TO 6 NYCRR PART 375 SOIL CLEANUP OBJECTIVES (SCOs)
3. GROUNDWATER RESULTS COMPARED TO TOGS 1.1.1 GROUNDWATER QUALITY STANDARDS/GUIDANCE VALUES (GWQS/GV)

SB-1/1W (0-2 FT)	2/7/2022
PARAMETER	MG/KG
BENZO(A)ANTHRACENE	1.2
CHRYSENE	1.2
INDENO(1,2,3-CD)PYRENE	0.63
LEAD	166
MERCURY	0.24

HC-3	4/11/2022
PARAMETER	MG/KG
LEAD	844
MERCURY	0.76

HC-4	4/11/2022
PARAMETER	MG/KG
LEAD	433
MERCURY	0.35

HC-1	4/11/2022
PARAMETER	MG/KG
BENZO(A)ANTHRACENE	4.1
BENZO(A)PYRENE	4.1
BENZO(B)FLUORANTHENE	5.3
BENZO(K)FLUORANTHENE	2
CHRYSENE	4.4
DIBENZO(A,H)ANTHRACENE	0.82
INDENO(1,2,3-CD)PYRENE	2.8
LEAD	946
MERCURY	8.8

SB-2 (0-1 FT)	2/7/2022
PARAMETER	MG/KG
LEAD	104

SB-3/3W (1-3 FT)	2/7/2022
PARAMETER	MG/KG
BENZO(A)ANTHRACENE	2.6
BENZO(A)PYRENE	2.5
BENZO(B)FLUORANTHENE	3.1
BENZO(K)FLUORANTHENE	1.4
CHRYSENE	2.8
DIBENZO(A,H)ANTHRACENE	0.67
INDENO(1,2,3-CD)PYRENE	1.8
ARSENIC	15.3
BARIUM	410
LEAD	1700
MERCURY	1.2

SB-6/6W (0-1 FT)	2/7/2022
PARAMETER	MG/KG
BENZO(B)FLUORANTHENE	1.2
BARIUM	484
LEAD	902
MERCURY	1.6

HC-5	4/11/2022
PARAMETER	MG/KG
ARSENIC	38.4

SB-5 (0-1 FT)	2/7/2022
PARAMETER	MG/KG
LEAD	169

SB-10 (0-2 FT)	2/7/2022
PARAMETER	MG/KG
BENZO(A)ANTHRACENE	30
BENZO(A)PYRENE	23
BENZO(B)FLUORANTHENE	27
BENZO(K)FLUORANTHENE	11
CHRYSENE	26
DIBENZO(A,H)ANTHRACENE	5.2
INDENO(1,2,3-CD)PYRENE	15
CADMIUM	3
LEAD	723
MERCURY	0.21

SB-4 (0.25-2 FT)	2/7/2022
PARAMETER	MG/KG
BENZO(A)ANTHRACENE	3.1
BENZO(A)PYRENE	2.6
BENZO(B)FLUORANTHENE	3.5
BENZO(K)FLUORANTHENE	1.4
CHRYSENE	3
DIBENZO(A,H)ANTHRACENE	0.65
INDENO(1,2,3-CD)PYRENE	1.9
LEAD	850
MERCURY	0.41

SB-7W	2/7/2022
PARAMETER	UG/L
CIS-1,2-DICHLOROETHENE	110
TETRACHLOROETHENE	6.1
TRICHLOROETHENE	200

HC-6	4/11/2022
PARAMETER	MG/KG
ARSENIC	14.7

TRINITY PLACE
WEST TUPPER STREET
CAROLINA STREET
SOUTH ELMWOOD AVENUE
SB-1/1W
HC-3
HC-4
SB-2
SB-3/3W
SB-6/6W
HC-1
HC-2
SB-9
SB-4
HC-5
SB-5
SB-7/7W
SB-10
SB-8
HC-6

N

40' 0' 40' 80'

SCALE: 1 INCH = 40 FEET
SCALE IN FEET
(approximate)

DATE: MAY 2022
DRAFTED BY: CMS

TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218.
(716) 856-0599
JOB NO.: T0099-022-001

SOIL/FILL AND GROUNDWATER EXCEEDANCES

PHASE II ENVIRONMENTAL INVESTIGATION

147-149 & 159-161 WEST TUPPER STREET AND 42-44 TRINITY PLACE
BUFFALO, NEW YORK

PREPARED FOR
147 W TUPPER LLC

FIGURE 3

APPENDIX A

SOIL BORING LOGS

Project No: T0099-022-001

Borehole Number: SB-1/1W

Project: 149, 161 West Tupper Street And 42, 44 Trinity Place

A.K.A.:

Client: 147 W Tupper LLC

Logged By: NAS

Site Location: Buffalo New York

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Fill*** Brown/black/grey, moist, mostly fill (concrete, brick, cinders, wood, subanglar gravel) some fine sand, no odors					0.0	Sampled (0-2 ft)	
	-2.0 / 2.0	***Sandy Lean Clay*** Reddish brown, moist to wet (6'), mostly medium plasticity fines, some fine sand, stiff, no odors	1		3		0.0		
							0.0		
							0.0		
5.0			2		4		0.0		
							0.0		
							0.0		
							0.0		
10.0			3		4		0.0		
	-11.0 / 11.0	***Fine Sand*** Reddish brown, wet, mostly fine to medium sand, medium dense, no odors					0.0		
	-12.0 / 12.0	End of Borehole							
15.0									

Water level

Drilled By: Trec Environmental Inc.
Drill Rig Type: Track Mountred Geoprobe 6620DT
Drill Method: Direct Push
Comments:
Drill Date(s): 2/7/2022

Hole Size: 2"
Stick-up: 2'
Datum: NAVD 88

Sheet: 1 of 1

Project No: T0099-022-001

Borehole Number: SB-2

Project: 149, 161 West Tupper Street And 42, 44 Trinity Place

A.K.A.:

Client: 147 W Tupper LLC

Logged By: NAS

Site Location: Buffalo New York

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 / 12.5 / 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Subangular Gravel*** Black/grey, moist, mostly subangular gravel, loose when disturbed, no odors					0.0	Sampled (0-1ft)	
	-1.0 / 1.0	***Fill*** Grey/red/black, moist, mostly fill (brick, coal, concrete, cinders), few fine sand, loose when distubed, no odors	1		3		0.0		
		Fine sand Brown, moist ,mostly fine sand, little lean clay, stiff, no odors					0.0		
	-3.0 / 3.0	***Sandy Lean Clay*** Reddish brown, moist to wet (6'), mostly medium plasticity fines, some fine sand, stiff, no odors					0.0		
5.0			2		4		0.0		
							0.0		
							0.0		
							0.0		
10.0			3		4		0.0		
							0.0		
	-11.0 / 11.0	***Fine Sand*** Reddish brown, wet, mostly fine to medium sand, medium dense, no odors					0.0		
	-12.0 / 12.0	End of Borehole							
15.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Track Mountred Geoprobe 6620DT
Drill Method: Direct Push
Comments:
Drill Date(s): 2/7/2022

Hole Size: 2"
Stick-up: 2'
Datum: NAVD 88

Sheet: 1 of 1

Project No: T0099-022-001

Borehole Number: SB-3/3W

Project: 149, 161 West Tupper Street And 42, 44 Trinity Place

A.K.A.:

Client: 147 W Tupper LLC

Logged By: NAS

Site Location: Buffalo New York

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Subangular Gravel*** Grey, moist, mostly subangular gravel, some fine sand, loose when disturbed, no odors							
	-1.0 / 1.0	***Fill*** White/black, moist, mostly fill (ash and cinders), some fine sand, medium dense, no odors	1		3		0.0 / 0.0 / 0.0	Sampled (1-3 ft)	
	-3.5 / 3.5	***Sandy Lean Clay*** Reddish brown, moist to wet (6'), mostly medium plasticity fines, some fine sand, stiff, no odors					0.0		
5.0			2		4		0.0 / 0.0 / 0.0 / 0.0		
10.0			3		4		0.0 / 0.0 / 0.0 / 0.0		Water level
	-11.0 / 11.0	***Fine Sand*** Reddish brown, wet, mostly fine to medium sand, medium dense, no odors							
	-12.0 / 12.0	End of Borehole							
15.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Track Mountred Geoprobe 6620DT
Drill Method: Direct Push
Comments:
Drill Date(s): 2/7/2022

Hole Size: 2"
Stick-up: 2'
Datum: NAVD 88

Sheet: 1 of 1

Project No: T0099-022-001

Borehole Number: SB-4

Project: 149, 161 West Tupper Street And 42, 44 Trinity Place

A.K.A.:

Client: 147 W Tupper LLC

Logged By: NAS

Site Location: Buffalo New York

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Asphalt***							
		Fill Grey//black, moist, mostly fill (ciders, ash, brick, subangualr gravel), few fine sand, loose when distubed, no odors					0.0	Sampled (0-2 ft)	
	-2.0 2.0	***Sandy Lean Clay*** Reddish brown, moist to wet (7'), mostly medium plasticity fines, some fine sand, stiff, no odors	1		4		0.0		
							0.0		
							0.0		
5.0			2		4		0.0		
							0.0		
							0.0		
							0.0		
10.0			3		4		0.0		
							0.0		
	-12.0 12.0	End of Borehole					0.0		
15.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Track Mountred Geoprobe 6620DT
Drill Method: Direct Push
Comments:
Drill Date(s): 2/7/2022

Hole Size: 2"
Stick-up: 2'
Datum: NAVD 88

Sheet: 1 of 1

Project No: T0099-022-001

Borehole Number: SB-5

Project: 149, 161 West Tupper Street And 42, 44 Trinity Place

A.K.A.:

Client: 147 W Tupper LLC

Logged By: NAS

Site Location: Buffalo New York

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0 / 0.0	Ground Surface							
		Subangular Gravel Grey, moist, mostly subangular gravel, loose when distubed, no odors							
	-1.0 / 1.0	***Sandy Lean Clay*** Reddish brown, moist to wet (4'), mostly medium plasticity fines, some fine sand, stiff, no odors	1		4		0.0		
5.0			2		4		0.0		
10.0			3		4		0.0		
	-12.0 / 12.0	End of Borehole							
15.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Track Mountred Geoprobe 6620DT
Drill Method: Direct Push
Comments:
Drill Date(s): 2/7/2022

Hole Size: 2"
Stick-up: 2'
Datum: NAVD 88

Sheet: 1 of 1

Project No: T0099-022-001

Borehole Number: SB-6/6W

Project: 149, 161 West Tupper Street And 42, 44 Trinity Place

A.K.A.:

Client: 147 W Tupper LLC

Logged By: NAS

Site Location: Buffalo New York

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0 / -0.8 / 0.8	***Fill*** Brown/black, moist, mostly silty sand, some fill (cinders, brick, limestone, ash), loose when disturbed, no odors					0.0	Sampled (0-1 ft)	
		Sandy Lean Clay Reddish brown, moist to wet (7.5'), mostly medium plasticity fines, some fine sand, stiff, no odors	1		4		0.0		
							0.0		
							0.0		
5.0			2		4		0.0		
							0.0		
							0.0		
	7.5	***Fine Sand*** Reddish brown, wet, mostly fine to medium sand, medium dense, no odors					0.0		
							0.0		
10.0			3		2		0.0		
							0.0		
	12.0	End of Borehole					0.0		
15.0									

Water level

Drilled By: Trec Environmental Inc.
Drill Rig Type: Track Mountred Geoprobe 6620DT
Drill Method: Direct Push
Comments:
Drill Date(s): 2/7/2022

Hole Size: 2"
Stick-up: 2'
Datum: NAVD 88

Sheet: 1 of 1

Project No: T0099-022-001

Borehole Number: SB-7/7W

Project: 149, 161 West Tupper Street And 42, 44 Trinity Place

A.K.A.:

Client: 147 W Tupper LLC

Logged By: NAS

Site Location: Buffalo New York

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 / 12.5 / 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Well sorted gravel*** Grey, moist, mostly well sorted gravel, loose when disturbed, no odors	1		0		0.0		
5.0	-5.0 / 5.0	***Fine Sand*** Tan/grey/black,wet, mostly fine sand, trace lean clay, black staining, petroleum-like odors	2		2		7.8	Sampled (5-6 ft)	Water level
	-6.0 / 6.0	***Sandy Lean Clay*** Reddish brown, moist to wet (7.5'), mostly medium plasticity fines, some fine sand, stiff, no odors	3		2		7.8		
10.0							0.0		
	-12.0 / 12.0	End of Borehole							
15.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Track Mountred Geoprobe 6620DT
Drill Method: Direct Push
Comments:
Drill Date(s): 2/7/2022

Hole Size: 2"
Stick-up: 2'
Datum: NAVD 88

Sheet: 1 of 1

Project No: T0099-022-001

Borehole Number: SB-8

Project: 149, 161 West Tupper Street And 42, 44 Trinity Place

A.K.A.:

Client: 147 W Tupper LLC

Logged By: NAS

Site Location: Buffalo New York

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 / 12.5 / 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete***							
	-0.5 / 0.5	***Fine Sand*** Brown, moist, mostly fine sand, little subrounded gravel, medium dense, no odors					0.0		
	-2.0 / 2.0	***Sandy Lean Clay*** Reddish brown, moist to wet (4'), mostly medium plasticity fines, some fine sand, stiff, no odors	1		4		0.0		
							0.0		
							0.0		
5.0			2		4		0.0		
							0.0		
							0.0		
							0.0		
			3		4		0.0		
10.0	-10.0 / 10.0	***Fine Sand*** Tan/brown, wet, mostly fine sand, medium dense, slight odor					0.0		
	-12.0 / 12.0	End of Borehole					0.0		
15.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Track Mountred Geoprobe 6620DT
Drill Method: Direct Push
Comments:
Drill Date(s): 2/7/2022

Hole Size: 2"
Stick-up: 2'
Datum: NAVD 88

Sheet: 1 of 1

Project No: T0099-022-001

Borehole Number: SB-9

Project: 149, 161 West Tupper Street And 42, 44 Trinity Place

A.K.A.:

Client: 147 W Tupper LLC

Logged By: NAS

Site Location: Buffalo New York

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0 -0.4 0.4	***Concrete***							
		Sandy Lean Clay Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, no odors	1		4		0.0 0.0 0.0 0.0		
5.0			2		4		0.0 0.0 0.0 0.0		
	-8.0 8.0	***Fine Sand*** Tan/brown, wet, mostly fine sand, medium dense, slight odor					0.0		
	-9.0 9.0	***Sandy Lean Clay*** Reddish brown, moist, mostly lean clay, some fine sand, stiff, no odors	3		4		0.0 0.0 0.0		
10.0	-12.0 12.0	End of Borehole					0.0		
15.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Track Mountred Geoprobe 6620DT
Drill Method: Direct Push
Comments:
Drill Date(s): 2/7/2022

Hole Size: 2"
Stick-up: 2'
Datum: NAVD 88

Sheet: 1 of 1

Project No: T0099-022-001

Borehole Number: SB-10

Project: 149, 161 West Tupper Street And 42, 44 Trinity Place

A.K.A.:

Client: 147 W Tupper LLC

Logged By: NAS

Site Location: Buffalo New York

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 / 12.5 / 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete***							
	-0.5 / 0.5	***Fill*** Tan/brown/red, moist, mostly fill (cinders,brick), some fine sand, loose when disturbed, no odors	1		2		0.0		
5.0	-6.0 / 6.0	***Fine Sand*** Tan/brown, wet, mostly fine sand, medium dense, slight odor	2		1.5		0.0		
10.0	-10.0 / 10.0	***Sandy Lean Clay*** Reddish brown, moist, mostly lean clay, some fine sand, stiff, no odors	3		4		0.0		
	-12.0 / 12.0	End of Borehole					0.0		
15.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Track Mountred Geoprobe 6620DT
Drill Method: Direct Push
Comments:
Drill Date(s): 2/7/2022

Hole Size: 2"
Stick-up: 2'
Datum: NAVD 88

Sheet: 1 of 1

APPENDIX B

PHOTO LOG

SITE PHOTOGRAPHS

Photo 1:

Photo 2:

Photo 3:

Photo 4:

Photo 1: View of the drilling of SB-1.

Photo 2: View of the drilling of SB-2.

Photo 3: View of the drilling of SB-3.

Photo 4: View of the soils encountered at the Site.

West Tupper and Trinity Photo Date: February 7, 2022	TURNKEY

SITE PHOTOGRAPHS

Photo 5:

Photo 6:

Photo 7:

Photo 8:

Photo 5: View of the drilling of SB-7.

Photo 6: View of the soils encountered at SB-7.

Photo 7: View of the drilling of SB-5.

Photo 8: View of the drilling of SB-10.

APPENDIX C

LABORATORY ANALYTICAL DATA SUMMARY PACKAGE

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-194853-1
Client Project/Site: Benchmark - WestTupper & Trinity

For:
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Lackawanna, New York 14218

Attn: Bryan Mayback

Authorized for release by:
2/16/2022 7:07:23 PM
Rebecca Jones, Project Management Assistant I
Rebecca.Jones@Eurofinset.com

Designee for

Brian Fischer, Manager of Project Management
(716)504-9835
Brian.Fischer@Eurofinset.com

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
vs	Reported analyte concentrations are below 200 ug/kg and may be biased low due to the sample not being collected according to 5035A- L low-level specifications.

GC/MS Semi 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.
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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

Job ID: 480-194853-1

Laboratory: Eurofins Buffalo

Narrative

Job Narrative
480-194853-1

Comments
No additional comments.

Receipt
The samples were received on 2/9/2022 12:15 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8º C.

Receipt Exceptions

A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC).

GC/MS VOA
Method 8260C: The continuing calibration verification (CCVIS) associated with batch 480-614483 recovered above the upper control limit for Carbon tetrachloride, Cyclohexane, Vinyl chloride, 1,1,1-Trichloroethane, Methylcyclohexane and Trichlorofluoromethane. The sample(s) associated with this CCVIS were non-detect for the affected analytes; therefore, the data have been reported. The associated samples are impacted: SB-8 9-11FT (480-194853-8) and SB-9 8-9FT (480-194853-9).

Method 8260C: The method blank for preparation batch 480-614488 and analytical batch 480-614483 contained Chloroform above the reporting limit (RL). This compound is considered a common laboratory contaminant. The associated sample(s) were not re-analyzed because the concentration of the common lab contaminant in the method blank was less than 5 times the RL. The associated samples are impacted: SB-8 9-11FT (480-194853-8) and SB-9 8-9FT (480-194853-9).

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: SB-7W (480-194853-14). Elevated reporting limits (RLs) are provided.

Method 8260C: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: SB-1W (480-194853-11), SB-3W (480-194853-12) and SB-6W (480-194853-13). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample(s) was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The samples were analyzed within the 7-day holding time specified for unpreserved samples: SB-1W (480-194853-11) and SB-6W (480-194853-13).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-614798 recovered above the upper control limit for 1,1,1-Trichloroethane, Cyclohexane, Methylcyclohexane, Trichlorofluoromethane and Vinyl chloride. The samples associated with this CCV were non-detects above the reporting limits for the affected analytes; therefore, the data have been reported. The associated sample is impacted: SB-7 5-6FT (480-194853-7).

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

GC/MS Semi VOA
Method 8270D: The following samples were diluted due to color, appearance, and viscosity: SB-1 0-2FT (480-194853-1), SB-2 0-1FT (480-194853-2), SB-3 1-3FT (480-194853-3), SB-4 3-2FT (480-194853-4), SB-5 0-1FT (480-194853-5), SB-6 0-1FT (480-194853-6) and SB-10 0-2FT (480-194853-10). Elevated reporting limits (RL) are provided.

Method 8270D: The following sample required a dilution due to the nature of the sample matrix: SB-10 0-2FT (480-194853-10). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: SB-1 0-2FT (480-194853-1). These results have been reported and qualified.

Job ID: 480-194853-1 (Continued)

Laboratory: Eurofins Buffalo (Continued)

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

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

Metals
No analytical or quality issues were noted, other than those described 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: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-1 0-2FT — Lab Sample ID: 480-194853-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	210	J	950	140	ug/Kg	5	☼	8270D	Total/NA
Anthracene	530	J	950	230	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]anthracene	1200		950	95	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	1000		950	140	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	1300		950	150	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	700	J	950	100	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	610	J	950	120	ug/Kg	5	☼	8270D	Total/NA
Chrysene	1200		950	210	ug/Kg	5	☼	8270D	Total/NA
Dibenz(a,h)anthracene	240	J	950	170	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	2500		950	100	ug/Kg	5	☼	8270D	Total/NA
Fluorene	260	J	950	110	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	630	J	950	120	ug/Kg	5	☼	8270D	Total/NA
Pyrene	2100		950	110	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	2200		950	140	ug/Kg	5	☼	8270D	Total/NA
Arsenic	7.0		2.2		mg/Kg	1	☼	6010C	Total/NA
Barium	90.4		0.56		mg/Kg	1	☼	6010C	Total/NA
Chromium	11.6		0.56		mg/Kg	1	☼	6010C	Total/NA
Lead	166		1.1		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.24		0.022		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-2 0-1FT — Lab Sample ID: 480-194853-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	180	J	1000	100	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	180	J	1000	150	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	200	J	1000	160	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	130	J	1000	110	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	340	J	1000	110	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	130	J	1000	120	ug/Kg	5	☼	8270D	Total/NA
Pyrene	260	J	1000	120	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	200	J	1000	150	ug/Kg	5	☼	8270D	Total/NA
Barium	62.9		0.58		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.30		0.23		mg/Kg	1	☼	6010C	Total/NA
Chromium	12.2		0.58		mg/Kg	1	☼	6010C	Total/NA
Lead	104		1.2		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.13		0.024		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-3 1-3FT — Lab Sample ID: 480-194853-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	340	J	2200	330	ug/Kg	10	☼	8270D	Total/NA
Anthracene	660	J	2200	550	ug/Kg	10	☼	8270D	Total/NA
Benzo[a]anthracene	2600		2200	220	ug/Kg	10	☼	8270D	Total/NA
Benzo[a]pyrene	2500		2200	330	ug/Kg	10	☼	8270D	Total/NA
Benzo[b]fluoranthene	3100		2200	350	ug/Kg	10	☼	8270D	Total/NA
Benzo[g,h,i]perylene	2100	J	2200	230	ug/Kg	10	☼	8270D	Total/NA
Benzo[k]fluoranthene	1400	J	2200	290	ug/Kg	10	☼	8270D	Total/NA
Chrysene	2800		2200	500	ug/Kg	10	☼	8270D	Total/NA
Dibenz(a,h)anthracene	670	J	2200	390	ug/Kg	10	☼	8270D	Total/NA
Fluoranthene	6200		2200	230	ug/Kg	10	☼	8270D	Total/NA
Fluorene	350	J	2200	260	ug/Kg	10	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	1800	J	2200	270	ug/Kg	10	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-3 1-3FT (Continued)

Lab Sample ID: 480-194853-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Pyrene	5100		2200	260	ug/Kg	10	☼	8270D	Total/NA
Phenanthrene	3400		2200	330	ug/Kg	10	☼	8270D	Total/NA
Arsenic	15.3		2.6		mg/Kg	1	☼	6010C	Total/NA
Barium	410		0.66		mg/Kg	1	☼	6010C	Total/NA
Cadmium	2.1		0.26		mg/Kg	1	☼	6010C	Total/NA
Chromium	23.1		0.66		mg/Kg	1	☼	6010C	Total/NA
Lead	1700		1.3		mg/Kg	1	☼	6010C	Total/NA
Mercury	1.2		0.026		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-4 3-2FT

Lab Sample ID: 480-194853-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	510	J	2000	290	ug/Kg	10	☼	8270D	Total/NA
Anthracene	1100	J	2000	490	ug/Kg	10	☼	8270D	Total/NA
Benzo[a]anthracene	3100		2000	200	ug/Kg	10	☼	8270D	Total/NA
Benzo[a]pyrene	2600		2000	290	ug/Kg	10	☼	8270D	Total/NA
Benzo[b]fluoranthene	3500		2000	320	ug/Kg	10	☼	8270D	Total/NA
Benzo[g,h,i]perylene	2000		2000	210	ug/Kg	10	☼	8270D	Total/NA
Benzo[k]fluoranthene	1400	J	2000	260	ug/Kg	10	☼	8270D	Total/NA
Chrysene	3000		2000	450	ug/Kg	10	☼	8270D	Total/NA
Dibenz(a,h)anthracene	650	J	2000	350	ug/Kg	10	☼	8270D	Total/NA
Fluoranthene	6300		2000	210	ug/Kg	10	☼	8270D	Total/NA
Fluorene	520	J	2000	240	ug/Kg	10	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	1900	J	2000	250	ug/Kg	10	☼	8270D	Total/NA
Naphthalene	450	J	2000	260	ug/Kg	10	☼	8270D	Total/NA
Pyrene	5300		2000	240	ug/Kg	10	☼	8270D	Total/NA
Phenanthrene	4300		2000	290	ug/Kg	10	☼	8270D	Total/NA
Arsenic	4.2		2.3		mg/Kg	1	☼	6010C	Total/NA
Barium	225		0.58		mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.1		0.23		mg/Kg	1	☼	6010C	Total/NA
Chromium	11.2		0.58		mg/Kg	1	☼	6010C	Total/NA
Lead	850		1.2		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.41		0.024		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-5 0-1FT

Lab Sample ID: 480-194853-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	340	J	970	97	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	350	J	970	140	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	390	J	970	150	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	300	J	970	100	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	180	J	970	130	ug/Kg	5	☼	8270D	Total/NA
Chrysene	370	J	970	220	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	730	J	970	100	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	270	J	970	120	ug/Kg	5	☼	8270D	Total/NA
Pyrene	650	J	970	110	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	420	J	970	140	ug/Kg	5	☼	8270D	Total/NA
Arsenic	5.2		2.3		mg/Kg	1	☼	6010C	Total/NA
Barium	107		0.58		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.26		0.23		mg/Kg	1	☼	6010C	Total/NA
Chromium	16.2		0.58		mg/Kg	1	☼	6010C	Total/NA
Lead	169		1.2		mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-5 0-1FT (Continued)

Lab Sample ID: 480-194853-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.068		0.023		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-6 0-1FT

Lab Sample ID: 480-194853-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	350	J	1000	260	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]anthracene	960	J	1000	100	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	930	J	1000	150	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	1200		1000	170	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	760	J	1000	110	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	410	J	1000	130	ug/Kg	5	☼	8270D	Total/NA
Chrysene	1000		1000	230	ug/Kg	5	☼	8270D	Total/NA
Dibenz(a,h)anthracene	220	J	1000	180	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	2100		1000	110	ug/Kg	5	☼	8270D	Total/NA
Fluorene	150	J	1000	120	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	680	J	1000	130	ug/Kg	5	☼	8270D	Total/NA
Pyrene	1700		1000	120	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	1600		1000	150	ug/Kg	5	☼	8270D	Total/NA
Arsenic	11.4		2.5		mg/Kg	1	☼	6010C	Total/NA
Barium	484		0.62		mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.6		0.25		mg/Kg	1	☼	6010C	Total/NA
Chromium	21.1		0.62		mg/Kg	1	☼	6010C	Total/NA
Lead	902		1.2		mg/Kg	1	☼	6010C	Total/NA
Mercury	1.6		0.026		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-7 5-6FT

Lab Sample ID: 480-194853-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trimethylbenzene	0.50	J vs	6.0	0.39	ug/Kg	1	☼	8260C	Total/NA
Acetone	20	J vs	30	5.0	ug/Kg	1	☼	8260C	Total/NA
Chloroform	0.38	J B vs	6.0	0.37	ug/Kg	1	☼	8260C	Total/NA
cis-1,2-Dichloroethene	3.9	J vs	6.0	0.77	ug/Kg	1	☼	8260C	Total/NA
2-Butanone (MEK)	3.9	J vs	30	2.2	ug/Kg	1	☼	8260C	Total/NA
Trichloroethene	3.9	J vs	6.0	1.3	ug/Kg	1	☼	8260C	Total/NA
Barium	21.7		0.62		mg/Kg	1	☼	6010C	Total/NA
Chromium	6.9		0.62		mg/Kg	1	☼	6010C	Total/NA
Lead	12.4		1.2		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.036		0.023		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-8 9-11FT

Lab Sample ID: 480-194853-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	6.8	B vs	6.4	0.39	ug/Kg	1	☼	8260C	Total/NA
Bromodichloromethane	0.96	J B vs	6.4	0.85	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: SB-9 8-9FT

Lab Sample ID: 480-194853-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	6.1	B vs	5.7	0.35	ug/Kg	1	☼	8260C	Total/NA
Bromodichloromethane	1.1	J B vs	5.7	0.77	ug/Kg	1	☼	8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-194853-1
Project/Site: Benchmark - WestTupper & Trinity

Client Sample ID: SB-10 0-2FT — Lab Sample ID: 480-194853-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	4100		4100	530	ug/Kg	20	☼	8270D	Total/NA
Anthracene	8800		4100	1000	ug/Kg	20	☼	8270D	Total/NA
Benzo[a]anthracene	30000		4100	410	ug/Kg	20	☼	8270D	Total/NA
Benzo[a]pyrene	23000		4100	600	ug/Kg	20	☼	8270D	Total/NA
Benzo[b]fluoranthene	27000		4100	650	ug/Kg	20	☼	8270D	Total/NA
Benzo[g,h,i]perylene	15000		4100	430	ug/Kg	20	☼	8270D	Total/NA
Benzo[k]fluoranthene	11000		4100	530	ug/Kg	20	☼	8270D	Total/NA
Chrysene	26000		4100	920	ug/Kg	20	☼	8270D	Total/NA
Dibenz(a,h)anthracene	5200		4100	720	ug/Kg	20	☼	8270D	Total/NA
Fluoranthene	56000		4100	430	ug/Kg	20	☼	8270D	Total/NA
Fluorene	1400	J	4100	480	ug/Kg	20	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	15000		4100	510	ug/Kg	20	☼	8270D	Total/NA
Pyrene	53000		4100	480	ug/Kg	20	☼	8270D	Total/NA
Phenanthrene	28000		4100	600	ug/Kg	20	☼	8270D	Total/NA
Arsenic	9.4		2.5		mg/Kg	1	☼	6010C	Total/NA
Barium	128		0.62		mg/Kg	1	☼	6010C	Total/NA
Cadmium	3.0		0.25		mg/Kg	1	☼	6010C	Total/NA
Chromium	17.2		0.62		mg/Kg	1	☼	6010C	Total/NA
Lead	723		1.2		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.21		0.025		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-1W — Lab Sample ID: 480-194853-11

No Detections.

Client Sample ID: SB-3W — Lab Sample ID: 480-194853-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyclohexane	0.93	J	4.0	0.72	ug/L	4		8260C	Total/NA
Methylcyclohexane	1.1	J	4.0	0.64	ug/L	4		8260C	Total/NA

Client Sample ID: SB-6W — Lab Sample ID: 480-194853-13

No Detections.

Client Sample ID: SB-7W — Lab Sample ID: 480-194853-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	110		8.0	6.5	ug/L	8		8260C	Total/NA
Tetrachloroethene	6.1	J	8.0	2.9	ug/L	8		8260C	Total/NA
Trichloroethene	200		8.0	3.7	ug/L	8		8260C	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-194853-15

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-1 0-2FT
Date Collected: 02/07/22 09:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-1
Matrix: Solid
Percent Solids: 88.8

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	210	J	950	140	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Acenaphthylene	ND		950	120	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Anthracene	530	J	950	230	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Benzo[a]anthracene	1200		950	95	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Benzo[a]pyrene	1000		950	140	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Benzo[b]fluoranthene	1300		950	150	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Benzo[g,h,i]perylene	700	J	950	100	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Benzo[k]fluoranthene	610	J	950	120	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Chrysene	1200		950	210	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Dibenz(a,h)anthracene	240	J	950	170	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Fluoranthene	2500		950	100	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Fluorene	260	J	950	110	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Indeno[1,2,3-cd]pyrene	630	J	950	120	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Naphthalene	ND		950	120	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Pyrene	2100		950	110	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5
Phenanthrene	2200		950	140	ug/Kg	☼	02/11/22 12:24	02/14/22 17:34	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*41*	*S1-*	*54 - 120*	*02/11/22 12:24*	*02/14/22 17:34*	*5*
2-Fluorobiphenyl	*102*		*60 - 120*	*02/11/22 12:24*	*02/14/22 17:34*	*5*
2-Fluorophenol (Surr)	*79*		*52 - 120*	*02/11/22 12:24*	*02/14/22 17:34*	*5*
Phenol-d5 (Surr)	*87*		*54 - 120*	*02/11/22 12:24*	*02/14/22 17:34*	*5*
p-Terphenyl-d14 (Surr)	*105*		*79 - 130*	*02/11/22 12:24*	*02/14/22 17:34*	*5*
Nitrobenzene-d5 (Surr)	*95*		*53 - 120*	*02/11/22 12:24*	*02/14/22 17:34*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.0		2.2		mg/Kg	☼	02/10/22 15:18	02/12/22 02:21	1
Barium	90.4		0.56		mg/Kg	☼	02/10/22 15:18	02/12/22 02:21	1
Cadmium	ND		0.22		mg/Kg	☼	02/10/22 15:18	02/12/22 02:21	1
Chromium	11.6		0.56		mg/Kg	☼	02/10/22 15:18	02/12/22 02:21	1
Lead	166		1.1		mg/Kg	☼	02/10/22 15:18	02/12/22 02:21	1
Selenium	ND		4.5		mg/Kg	☼	02/10/22 15:18	02/12/22 02:21	1
Silver	ND		0.67		mg/Kg	☼	02/10/22 15:18	02/12/22 02:21	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.24		0.022		mg/Kg	☼	02/11/22 11:14	02/11/22 13:35	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-2 0-1FT
Date Collected: 02/07/22 10:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-2
Matrix: Solid
Percent Solids: 83.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1000	150	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Acenaphthylene	ND		1000	130	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Anthracene	ND		1000	250	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Benzo[a]anthracene	**180**	**J**	1000	100	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Benzo[a]pyrene	**180**	**J**	1000	150	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Benzo[b]fluoranthene	**200**	**J**	1000	160	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Benzo[g,h,i]perylene	**130**	**J**	1000	110	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Benzo[k]fluoranthene	ND		1000	130	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Chrysene	ND		1000	220	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Dibenz(a,h)anthracene	ND		1000	180	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Fluoranthene	**340**	**J**	1000	110	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Fluorene	ND		1000	120	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Indeno[1,2,3-cd]pyrene	**130**	**J**	1000	120	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Naphthalene	ND		1000	130	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Pyrene	**260**	**J**	1000	120	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5
Phenanthrene	**200**	**J**	1000	150	ug/Kg	☼	02/11/22 12:24	02/14/22 17:58	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*88*		*54 - 120*	*02/11/22 12:24*	*02/14/22 17:58*	*5*
2-Fluorobiphenyl	*91*		*60 - 120*	*02/11/22 12:24*	*02/14/22 17:58*	*5*
2-Fluorophenol (Surr)	*80*		*52 - 120*	*02/11/22 12:24*	*02/14/22 17:58*	*5*
Phenol-d5 (Surr)	*83*		*54 - 120*	*02/11/22 12:24*	*02/14/22 17:58*	*5*
p-Terphenyl-d14 (Surr)	*102*		*79 - 130*	*02/11/22 12:24*	*02/14/22 17:58*	*5*
Nitrobenzene-d5 (Surr)	*86*		*53 - 120*	*02/11/22 12:24*	*02/14/22 17:58*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.3		mg/Kg	☼	02/10/22 15:18	02/12/22 02:36	1
Barium	**62.9**		0.58		mg/Kg	☼	02/10/22 15:18	02/12/22 02:36	1
Cadmium	**0.30**		0.23		mg/Kg	☼	02/10/22 15:18	02/12/22 02:36	1
Chromium	**12.2**		0.58		mg/Kg	☼	02/10/22 15:18	02/12/22 02:36	1
Lead	**104**		1.2		mg/Kg	☼	02/10/22 15:18	02/12/22 02:36	1
Selenium	ND		4.7		mg/Kg	☼	02/10/22 15:18	02/12/22 02:36	1
Silver	ND		0.70		mg/Kg	☼	02/10/22 15:18	02/12/22 02:36	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.13**		0.024		mg/Kg	☼	02/11/22 11:14	02/11/22 13:36	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-3 1-3FT
Date Collected: 02/07/22 10:30
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-3
Matrix: Solid
Percent Solids: 76.2

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	340	J	2200	330	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Acenaphthylene	ND		2200	290	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Anthracene	660	J	2200	550	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Benzo[a]anthracene	2600		2200	220	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Benzo[a]pyrene	2500		2200	330	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Benzo[b]fluoranthene	3100		2200	350	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Benzo[g,h,i]perylene	2100	J	2200	230	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Benzo[k]fluoranthene	1400	J	2200	290	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Chrysene	2800		2200	500	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Dibenz(a,h)anthracene	670	J	2200	390	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Fluoranthene	6200		2200	230	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Fluorene	350	J	2200	260	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Indeno[1,2,3-cd]pyrene	1800	J	2200	270	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Naphthalene	ND		2200	290	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Pyrene	5100		2200	260	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10
Phenanthrene	3400		2200	330	ug/Kg	☼	02/11/22 12:24	02/14/22 18:21	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*82*		*54 - 120*	*02/11/22 12:24*	*02/14/22 18:21*	*10*
2-Fluorobiphenyl	*101*		*60 - 120*	*02/11/22 12:24*	*02/14/22 18:21*	*10*
2-Fluorophenol (Surr)	*85*		*52 - 120*	*02/11/22 12:24*	*02/14/22 18:21*	*10*
Phenol-d5 (Surr)	*81*		*54 - 120*	*02/11/22 12:24*	*02/14/22 18:21*	*10*
p-Terphenyl-d14 (Surr)	*96*		*79 - 130*	*02/11/22 12:24*	*02/14/22 18:21*	*10*
Nitrobenzene-d5 (Surr)	*102*		*53 - 120*	*02/11/22 12:24*	*02/14/22 18:21*	*10*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15.3		2.6		mg/Kg	☼	02/10/22 15:18	02/12/22 02:40	1
Barium	410		0.66		mg/Kg	☼	02/10/22 15:18	02/12/22 02:40	1
Cadmium	2.1		0.26		mg/Kg	☼	02/10/22 15:18	02/12/22 02:40	1
Chromium	23.1		0.66		mg/Kg	☼	02/10/22 15:18	02/12/22 02:40	1
Lead	1700		1.3		mg/Kg	☼	02/10/22 15:18	02/12/22 02:40	1
Selenium	ND		5.2		mg/Kg	☼	02/10/22 15:18	02/12/22 02:40	1
Silver	ND		0.79		mg/Kg	☼	02/10/22 15:18	02/12/22 02:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.2		0.026		mg/Kg	☼	02/11/22 11:14	02/11/22 13:38	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-4 3-2FT
Date Collected: 02/07/22 11:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-4
Matrix: Solid
Percent Solids: 83.2

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	510	J	2000	290	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Acenaphthylene	ND		2000	260	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Anthracene	1100	J	2000	490	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Benzo[a]anthracene	3100		2000	200	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Benzo[a]pyrene	2600		2000	290	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Benzo[b]fluoranthene	3500		2000	320	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Benzo[g,h,i]perylene	2000		2000	210	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Benzo[k]fluoranthene	1400	J	2000	260	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Chrysene	3000		2000	450	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Dibenz(a,h)anthracene	650	J	2000	350	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Fluoranthene	6300		2000	210	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Fluorene	520	J	2000	240	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Indeno[1,2,3-cd]pyrene	1900	J	2000	250	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Naphthalene	450	J	2000	260	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Pyrene	5300		2000	240	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10
Phenanthrene	4300		2000	290	ug/Kg	☼	02/11/22 12:24	02/14/22 18:45	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*94*		*54 - 120*	*02/11/22 12:24*	*02/14/22 18:45*	*10*
2-Fluorobiphenyl	*91*		*60 - 120*	*02/11/22 12:24*	*02/14/22 18:45*	*10*
2-Fluorophenol (Surr)	*79*		*52 - 120*	*02/11/22 12:24*	*02/14/22 18:45*	*10*
Phenol-d5 (Surr)	*86*		*54 - 120*	*02/11/22 12:24*	*02/14/22 18:45*	*10*
p-Terphenyl-d14 (Surr)	*94*		*79 - 130*	*02/11/22 12:24*	*02/14/22 18:45*	*10*
Nitrobenzene-d5 (Surr)	*94*		*53 - 120*	*02/11/22 12:24*	*02/14/22 18:45*	*10*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.2		2.3		mg/Kg	☼	02/10/22 15:18	02/12/22 02:43	1
Barium	225		0.58		mg/Kg	☼	02/10/22 15:18	02/12/22 02:43	1
Cadmium	1.1		0.23		mg/Kg	☼	02/10/22 15:18	02/12/22 02:43	1
Chromium	11.2		0.58		mg/Kg	☼	02/10/22 15:18	02/12/22 02:43	1
Lead	850		1.2		mg/Kg	☼	02/10/22 15:18	02/12/22 02:43	1
Selenium	ND		4.7		mg/Kg	☼	02/10/22 15:18	02/12/22 02:43	1
Silver	ND		0.70		mg/Kg	☼	02/10/22 15:18	02/12/22 02:43	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.41		0.024		mg/Kg	☼	02/11/22 11:14	02/11/22 13:39	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-5 0-1FT
Date Collected: 02/07/22 11:15
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-5
Matrix: Solid
Percent Solids: 86.8

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		970	140	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Acenaphthylene	ND		970	130	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Anthracene	ND		970	240	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Benzo[a]anthracene	**340**	**J**	970	97	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Benzo[a]pyrene	**350**	**J**	970	140	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Benzo[b]fluoranthene	**390**	**J**	970	150	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Benzo[g,h,i]perylene	**300**	**J**	970	100	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Benzo[k]fluoranthene	**180**	**J**	970	130	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Chrysene	**370**	**J**	970	220	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Dibenz(a,h)anthracene	ND		970	170	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Fluoranthene	**730**	**J**	970	100	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Fluorene	ND		970	110	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Indeno[1,2,3-cd]pyrene	**270**	**J**	970	120	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Naphthalene	ND		970	130	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Pyrene	**650**	**J**	970	110	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5
Phenanthrene	**420**	**J**	970	140	ug/Kg	☼	02/11/22 12:24	02/14/22 19:09	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*79*		*54 - 120*	*02/11/22 12:24*	*02/14/22 19:09*	*5*
2-Fluorobiphenyl	*94*		*60 - 120*	*02/11/22 12:24*	*02/14/22 19:09*	*5*
2-Fluorophenol (Surr)	*77*		*52 - 120*	*02/11/22 12:24*	*02/14/22 19:09*	*5*
Phenol-d5 (Surr)	*78*		*54 - 120*	*02/11/22 12:24*	*02/14/22 19:09*	*5*
p-Terphenyl-d14 (Surr)	*100*		*79 - 130*	*02/11/22 12:24*	*02/14/22 19:09*	*5*
Nitrobenzene-d5 (Surr)	*92*		*53 - 120*	*02/11/22 12:24*	*02/14/22 19:09*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**5.2**		2.3		mg/Kg	☼	02/10/22 15:18	02/12/22 02:47	1
Barium	**107**		0.58		mg/Kg	☼	02/10/22 15:18	02/12/22 02:47	1
Cadmium	**0.26**		0.23		mg/Kg	☼	02/10/22 15:18	02/12/22 02:47	1
Chromium	**16.2**		0.58		mg/Kg	☼	02/10/22 15:18	02/12/22 02:47	1
Lead	**169**		1.2		mg/Kg	☼	02/10/22 15:18	02/12/22 02:47	1
Selenium	ND		4.7		mg/Kg	☼	02/10/22 15:18	02/12/22 02:47	1
Silver	ND		0.70		mg/Kg	☼	02/10/22 15:18	02/12/22 02:47	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.068**		0.023		mg/Kg	☼	02/11/22 11:14	02/11/22 13:40	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-6 0-1FT
Date Collected: 02/07/22 11:30
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-6
Matrix: Solid
Percent Solids: 79.7

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1000	150	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Acenaphthylene	ND		1000	130	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Anthracene	**350**	**J**	1000	260	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Benzo[a]anthracene	**960**	**J**	1000	100	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Benzo[a]pyrene	**930**	**J**	1000	150	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Benzo[b]fluoranthene	**1200**		1000	170	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Benzo[g,h,i]perylene	**760**	**J**	1000	110	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Benzo[k]fluoranthene	**410**	**J**	1000	130	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Chrysene	**1000**		1000	230	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Dibenz(a,h)anthracene	**220**	**J**	1000	180	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Fluoranthene	**2100**		1000	110	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Fluorene	**150**	**J**	1000	120	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Indeno[1,2,3-cd]pyrene	**680**	**J**	1000	130	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Naphthalene	ND		1000	130	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Pyrene	**1700**		1000	120	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5
Phenanthrene	**1600**		1000	150	ug/Kg	☼	02/11/22 12:24	02/14/22 19:32	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*84*		*54 - 120*	*02/11/22 12:24*	*02/14/22 19:32*	*5*
2-Fluorobiphenyl	*92*		*60 - 120*	*02/11/22 12:24*	*02/14/22 19:32*	*5*
2-Fluorophenol (Surr)	*80*		*52 - 120*	*02/11/22 12:24*	*02/14/22 19:32*	*5*
Phenol-d5 (Surr)	*81*		*54 - 120*	*02/11/22 12:24*	*02/14/22 19:32*	*5*
p-Terphenyl-d14 (Surr)	*95*		*79 - 130*	*02/11/22 12:24*	*02/14/22 19:32*	*5*
Nitrobenzene-d5 (Surr)	*88*		*53 - 120*	*02/11/22 12:24*	*02/14/22 19:32*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**11.4**		2.5		mg/Kg	☼	02/10/22 15:18	02/12/22 02:51	1
Barium	**484**		0.62		mg/Kg	☼	02/10/22 15:18	02/12/22 02:51	1
Cadmium	**1.6**		0.25		mg/Kg	☼	02/10/22 15:18	02/12/22 02:51	1
Chromium	**21.1**		0.62		mg/Kg	☼	02/10/22 15:18	02/12/22 02:51	1
Lead	**902**		1.2		mg/Kg	☼	02/10/22 15:18	02/12/22 02:51	1
Selenium	ND		5.0		mg/Kg	☼	02/10/22 15:18	02/12/22 02:51	1
Silver	ND		0.74		mg/Kg	☼	02/10/22 15:18	02/12/22 02:51	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**1.6**		0.026		mg/Kg	☼	02/11/22 11:14	02/11/22 13:42	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-7 5-6FT
Date Collected: 02/07/22 12:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-7
Matrix: Solid
Percent Solids: 83.4

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	6.0	0.43	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,1,2,2-Tetrachloroethane	ND	vs	6.0	0.97	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.0	1.4	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,1,2-Trichloroethane	ND	vs	6.0	0.78	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,1-Dichloroethane	ND	vs	6.0	0.73	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,1-Dichloroethene	ND	vs	6.0	0.73	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,2,4-Trichlorobenzene	ND	vs	6.0	0.36	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,2,4-Trimethylbenzene	ND	vs	6.0	1.1	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,2-Dibromo-3-Chloropropane	ND	vs	6.0	3.0	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,2-Dichlorobenzene	ND	vs	6.0	0.47	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,2-Dichloroethane	ND	vs	6.0	0.30	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,2-Dichloropropane	ND	vs	6.0	3.0	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,3,5-Trimethylbenzene	**0.50**	**J vs**	6.0	0.39	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,3-Dichlorobenzene	ND	vs	6.0	0.31	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,4-Dichlorobenzene	ND	vs	6.0	0.84	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
2-Hexanone	ND	vs	30	3.0	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
4-Isopropyltoluene	ND	vs	6.0	0.48	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Acetone	**20**	**J vs**	30	5.0	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Benzene	ND	vs	6.0	0.29	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Bromoform	ND	vs	6.0	3.0	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Bromomethane	ND	vs	6.0	0.54	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Carbon disulfide	ND	vs	6.0	3.0	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Carbon tetrachloride	ND	vs	6.0	0.58	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Chlorobenzene	ND	vs	6.0	0.79	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Dibromochloromethane	ND	vs	6.0	0.77	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Chloroethane	ND	vs	6.0	1.4	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Chloroform	**0.38**	**J B vs**	6.0	0.37	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Chloromethane	ND	vs	6.0	0.36	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
cis-1,2-Dichloroethene	**3.9**	**J vs**	6.0	0.77	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
cis-1,3-Dichloropropene	ND	vs	6.0	0.86	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Cyclohexane	ND	vs	6.0	0.84	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Bromodichloromethane	ND	vs	6.0	0.80	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Dichlorodifluoromethane	ND	vs	6.0	0.49	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Ethylbenzene	ND	vs	6.0	0.41	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
1,2-Dibromoethane	ND	vs	6.0	0.77	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Isopropylbenzene	ND	vs	6.0	0.90	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Methyl acetate	ND	vs	30	3.6	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
2-Butanone (MEK)	**3.9**	**J vs**	30	2.2	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
4-Methyl-2-pentanone (MIBK)	ND	vs	30	2.0	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Methyl tert-butyl ether	ND	vs	6.0	0.59	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Methylcyclohexane	ND	vs	6.0	0.91	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Methylene Chloride	ND	vs	6.0	2.8	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
m,p-Xylene	ND	vs	12	1.0	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
n-Butylbenzene	ND	vs	6.0	0.52	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
N-Propylbenzene	ND	vs	6.0	0.48	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
o-Xylene	ND	vs	6.0	0.78	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
sec-Butylbenzene	ND	vs	6.0	0.52	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Styrene	ND	vs	6.0	0.30	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
tert-Butylbenzene	ND	vs	6.0	0.62	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1

Client Sample ID: SB-7 5-6FT
Date Collected: 02/07/22 12:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-7
Matrix: Solid
Percent Solids: 83.4

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND	vs	6.0	0.80	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Toluene	ND	vs	6.0	0.45	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
trans-1,2-Dichloroethene	ND	vs	6.0	0.62	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
trans-1,3-Dichloropropene	ND	vs	6.0	2.6	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Trichloroethene	**3.9**	**J vs**	6.0	1.3	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Trichlorofluoromethane	ND	vs	6.0	0.57	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Vinyl chloride	ND	vs	6.0	0.73	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1
Xylenes, Total	ND	vs	12	1.0	ug/Kg	☼	02/14/22 18:17	02/14/22 23:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*64 - 126*	*02/14/22 18:17*	*02/14/22 23:16*	*1*
Toluene-d8 (Surr)	*92*		*71 - 125*	*02/14/22 18:17*	*02/14/22 23:16*	*1*
4-Bromofluorobenzene (Surr)	*101*		*72 - 126*	*02/14/22 18:17*	*02/14/22 23:16*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		200	29	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Acenaphthylene	ND		200	26	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Anthracene	ND		200	49	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Benzo[a]anthracene	ND		200	20	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Benzo[a]pyrene	ND		200	29	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Benzo[b]fluoranthene	ND		200	32	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Benzo[g,h,i]perylene	ND		200	21	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Benzo[k]fluoranthene	ND		200	26	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Chrysene	ND		200	44	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Dibenz(a,h)anthracene	ND		200	35	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Fluoranthene	ND		200	21	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Fluorene	ND		200	23	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Indeno[1,2,3-cd]pyrene	ND		200	25	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Naphthalene	ND		200	26	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Pyrene	ND		200	23	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1
Phenanthrene	ND		200	29	ug/Kg	☼	02/11/22 12:24	02/14/22 19:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*105*		*54 - 120*	*02/11/22 12:24*	*02/14/22 19:56*	*1*
2-Fluorobiphenyl	*94*		*60 - 120*	*02/11/22 12:24*	*02/14/22 19:56*	*1*
2-Fluorophenol (Surr)	*80*		*52 - 120*	*02/11/22 12:24*	*02/14/22 19:56*	*1*
Phenol-d5 (Surr)	*82*		*54 - 120*	*02/11/22 12:24*	*02/14/22 19:56*	*1*
p-Terphenyl-d14 (Surr)	*94*		*79 - 130*	*02/11/22 12:24*	*02/14/22 19:56*	*1*
Nitrobenzene-d5 (Surr)	*81*		*53 - 120*	*02/11/22 12:24*	*02/14/22 19:56*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.27	0.052	mg/Kg	☼	02/11/22 08:24	02/13/22 15:28	1
PCB-1221	ND		0.27	0.052	mg/Kg	☼	02/11/22 08:24	02/13/22 15:28	1
PCB-1232	ND		0.27	0.052	mg/Kg	☼	02/11/22 08:24	02/13/22 15:28	1
PCB-1242	ND		0.27	0.052	mg/Kg	☼	02/11/22 08:24	02/13/22 15:28	1
PCB-1248	ND		0.27	0.052	mg/Kg	☼	02/11/22 08:24	02/13/22 15:28	1
PCB-1254	ND		0.27	0.13	mg/Kg	☼	02/11/22 08:24	02/13/22 15:28	1
PCB-1260	ND		0.27	0.13	mg/Kg	☼	02/11/22 08:24	02/13/22 15:28	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-7 5-6FT
Date Collected: 02/07/22 12:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-7
Matrix: Solid
Percent Solids: 83.4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*		*60 - 154*	*02/11/22 08:24*	*02/13/22 15:28*	*1*
DCB Decachlorobiphenyl	*87*		*65 - 174*	*02/11/22 08:24*	*02/13/22 15:28*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.5		mg/Kg	☼	02/10/22 15:18	02/12/22 02:55	1
Barium	**21.7**		0.62		mg/Kg	☼	02/10/22 15:18	02/12/22 02:55	1
Cadmium	ND		0.25		mg/Kg	☼	02/10/22 15:18	02/12/22 02:55	1
Chromium	**6.9**		0.62		mg/Kg	☼	02/10/22 15:18	02/12/22 02:55	1
Lead	**12.4**		1.2		mg/Kg	☼	02/10/22 15:18	02/12/22 02:55	1
Selenium	ND		5.0		mg/Kg	☼	02/10/22 15:18	02/12/22 02:55	1
Silver	ND		0.75		mg/Kg	☼	02/10/22 15:18	02/12/22 02:55	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.036**		0.023		mg/Kg	☼	02/11/22 11:14	02/11/22 13:43	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-8 9-11FT
Date Collected: 02/07/22 13:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-8
Matrix: Solid
Percent Solids: 77.1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	6.4	0.46	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,1,2,2-Tetrachloroethane	ND	vs	6.4	1.0	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.4	1.4	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,1,2-Trichloroethane	ND	vs	6.4	0.83	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,1-Dichloroethane	ND	vs	6.4	0.78	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,1-Dichloroethene	ND	vs	6.4	0.78	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,2,4-Trichlorobenzene	ND	vs	6.4	0.39	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,2,4-Trimethylbenzene	ND	vs	6.4	1.2	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,2-Dibromo-3-Chloropropane	ND	vs	6.4	3.2	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,2-Dichlorobenzene	ND	vs	6.4	0.50	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,2-Dichloroethane	ND	vs	6.4	0.32	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,2-Dichloropropane	ND	vs	6.4	3.2	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,3,5-Trimethylbenzene	ND	vs	6.4	0.41	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,3-Dichlorobenzene	ND	vs	6.4	0.33	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,4-Dichlorobenzene	ND	vs	6.4	0.89	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
2-Hexanone	ND	vs	32	3.2	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
4-Isopropyltoluene	ND	vs	6.4	0.51	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Acetone	ND	vs	32	5.4	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Benzene	ND	vs	6.4	0.31	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Bromoform	ND	vs	6.4	3.2	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Bromomethane	ND	vs	6.4	0.57	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Carbon disulfide	ND	vs	6.4	3.2	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Carbon tetrachloride	ND	vs	6.4	0.62	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Chlorobenzene	ND	vs	6.4	0.84	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Dibromochloromethane	ND	vs	6.4	0.81	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Chloroethane	ND	vs	6.4	1.4	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Chloroform	**6.8**	**B vs**	6.4	0.39	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Chloromethane	ND	vs	6.4	0.38	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
cis-1,2-Dichloroethene	ND	vs	6.4	0.81	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
cis-1,3-Dichloropropene	ND	vs	6.4	0.92	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Cyclohexane	ND	vs	6.4	0.89	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Bromodichloromethane	**0.96**	**J B vs**	6.4	0.85	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Dichlorodifluoromethane	ND	vs	6.4	0.52	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Ethylbenzene	ND	vs	6.4	0.44	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
1,2-Dibromoethane	ND	vs	6.4	0.82	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Isopropylbenzene	ND	vs	6.4	0.96	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Methyl acetate	ND	vs	32	3.8	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
2-Butanone (MEK)	ND	vs	32	2.3	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
4-Methyl-2-pentanone (MIBK)	ND	vs	32	2.1	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Methyl tert-butyl ether	ND	vs	6.4	0.62	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Methylcyclohexane	ND	vs	6.4	0.97	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Methylene Chloride	ND	vs	6.4	2.9	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
m,p-Xylene	ND	vs	13	1.1	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
n-Butylbenzene	ND	vs	6.4	0.55	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
N-Propylbenzene	ND	vs	6.4	0.51	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
o-Xylene	ND	vs	6.4	0.83	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
sec-Butylbenzene	ND	vs	6.4	0.55	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Styrene	ND	vs	6.4	0.32	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
tert-Butylbenzene	ND	vs	6.4	0.66	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-8 9-11FT
Date Collected: 02/07/22 13:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-8
Matrix: Solid
Percent Solids: 77.1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND	vs	6.4	0.85	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Toluene	ND	vs	6.4	0.48	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
trans-1,2-Dichloroethene	ND	vs	6.4	0.66	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
trans-1,3-Dichloropropene	ND	vs	6.4	2.8	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Trichloroethene	ND	vs	6.4	1.4	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Trichlorofluoromethane	ND	vs	6.4	0.60	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Vinyl chloride	ND	vs	6.4	0.78	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1
Xylenes, Total	ND	vs	13	1.1	ug/Kg	☼	02/10/22 16:52	02/10/22 21:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*	*02/10/22 16:52*	*02/10/22 21:06*	*1*
Toluene-d8 (Surr)	*95*		*71 - 125*	*02/10/22 16:52*	*02/10/22 21:06*	*1*
4-Bromofluorobenzene (Surr)	*106*		*72 - 126*	*02/10/22 16:52*	*02/10/22 21:06*	*1*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-9 8-9FT
Date Collected: 02/07/22 13:30
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-9
Matrix: Solid
Percent Solids: 86.1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	5.7	0.41	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,1,2,2-Tetrachloroethane	ND	vs	5.7	0.93	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.7	1.3	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,1,2-Trichloroethane	ND	vs	5.7	0.74	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,1-Dichloroethane	ND	vs	5.7	0.70	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,1-Dichloroethene	ND	vs	5.7	0.70	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,2,4-Trichlorobenzene	ND	vs	5.7	0.35	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,2,4-Trimethylbenzene	ND	vs	5.7	1.1	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,2-Dibromo-3-Chloropropane	ND	vs	5.7	2.9	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,2-Dichlorobenzene	ND	vs	5.7	0.45	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,2-Dichloroethane	ND	vs	5.7	0.29	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,2-Dichloropropane	ND	vs	5.7	2.9	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,3,5-Trimethylbenzene	ND	vs	5.7	0.37	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,3-Dichlorobenzene	ND	vs	5.7	0.29	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,4-Dichlorobenzene	ND	vs	5.7	0.80	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
2-Hexanone	ND	vs	29	2.9	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
4-Isopropyltoluene	ND	vs	5.7	0.46	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Acetone	ND	vs	29	4.8	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Benzene	ND	vs	5.7	0.28	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Bromoform	ND	vs	5.7	2.9	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Bromomethane	ND	vs	5.7	0.51	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Carbon disulfide	ND	vs	5.7	2.9	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Carbon tetrachloride	ND	vs	5.7	0.55	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Chlorobenzene	ND	vs	5.7	0.75	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Dibromochloromethane	ND	vs	5.7	0.73	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Chloroethane	ND	vs	5.7	1.3	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Chloroform	**6.1**	**B vs**	5.7	0.35	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Chloromethane	ND	vs	5.7	0.35	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
cis-1,2-Dichloroethene	ND	vs	5.7	0.73	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
cis-1,3-Dichloropropene	ND	vs	5.7	0.82	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Cyclohexane	ND	vs	5.7	0.80	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Bromodichloromethane	**1.1**	**J B vs**	5.7	0.77	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Dichlorodifluoromethane	ND	vs	5.7	0.47	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Ethylbenzene	ND	vs	5.7	0.39	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
1,2-Dibromoethane	ND	vs	5.7	0.73	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Isopropylbenzene	ND	vs	5.7	0.86	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Methyl acetate	ND	vs	29	3.5	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
2-Butanone (MEK)	ND	vs	29	2.1	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
4-Methyl-2-pentanone (MIBK)	ND	vs	29	1.9	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Methyl tert-butyl ether	ND	vs	5.7	0.56	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Methylcyclohexane	ND	vs	5.7	0.87	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Methylene Chloride	ND	vs	5.7	2.6	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
m,p-Xylene	ND	vs	11	0.96	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
n-Butylbenzene	ND	vs	5.7	0.50	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
N-Propylbenzene	ND	vs	5.7	0.46	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
o-Xylene	ND	vs	5.7	0.75	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
sec-Butylbenzene	ND	vs	5.7	0.50	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Styrene	ND	vs	5.7	0.29	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
tert-Butylbenzene	ND	vs	5.7	0.59	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1

Client Sample ID: SB-9 8-9FT
Lab Sample ID: 480-194853-9
Date Collected: 02/07/22 13:30
Matrix: Solid
Date Received: 02/09/22 12:15
Percent Solids: 86.1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND	vs	5.7	0.77	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Toluene	ND	vs	5.7	0.43	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
trans-1,2-Dichloroethene	ND	vs	5.7	0.59	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
trans-1,3-Dichloropropene	ND	vs	5.7	2.5	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Trichloroethene	ND	vs	5.7	1.3	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Trichlorofluoromethane	ND	vs	5.7	0.54	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Vinyl chloride	ND	vs	5.7	0.70	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1
Xylenes, Total	ND	vs	11	0.96	ug/Kg	☼	02/10/22 16:52	02/10/22 21:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 126*	*02/10/22 16:52*	*02/10/22 21:30*	*1*
Toluene-d8 (Surr)	*94*		*71 - 125*	*02/10/22 16:52*	*02/10/22 21:30*	*1*
4-Bromofluorobenzene (Surr)	*106*		*72 - 126*	*02/10/22 16:52*	*02/10/22 21:30*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.26	0.050	mg/Kg	☼	02/11/22 08:24	02/13/22 15:41	1
PCB-1221	ND		0.26	0.050	mg/Kg	☼	02/11/22 08:24	02/13/22 15:41	1
PCB-1232	ND		0.26	0.050	mg/Kg	☼	02/11/22 08:24	02/13/22 15:41	1
PCB-1242	ND		0.26	0.050	mg/Kg	☼	02/11/22 08:24	02/13/22 15:41	1
PCB-1248	ND		0.26	0.050	mg/Kg	☼	02/11/22 08:24	02/13/22 15:41	1
PCB-1254	ND		0.26	0.12	mg/Kg	☼	02/11/22 08:24	02/13/22 15:41	1
PCB-1260	ND		0.26	0.12	mg/Kg	☼	02/11/22 08:24	02/13/22 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*93*		*60 - 154*	*02/11/22 08:24*	*02/13/22 15:41*	*1*
DCB Decachlorobiphenyl	*85*		*65 - 174*	*02/11/22 08:24*	*02/13/22 15:41*	*1*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-10 0-2FT
Date Collected: 02/07/22 14:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-10
Matrix: Solid
Percent Solids: 81.8

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		4100	600	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Acenaphthylene	**4100**		4100	530	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Anthracene	**8800**		4100	1000	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Benzo[a]anthracene	**30000**		4100	410	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Benzo[a]pyrene	**23000**		4100	600	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Benzo[b]fluoranthene	**27000**		4100	650	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Benzo[g,h,i]perylene	**15000**		4100	430	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Benzo[k]fluoranthene	**11000**		4100	530	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Chrysene	**26000**		4100	920	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Dibenz(a,h)anthracene	**5200**		4100	720	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Fluoranthene	**56000**		4100	430	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Fluorene	**1400**	**J**	4100	480	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Indeno[1,2,3-cd]pyrene	**15000**		4100	510	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Naphthalene	ND		4100	530	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Pyrene	**53000**		4100	480	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20
Phenanthrene	**28000**		4100	600	ug/Kg	☼	02/11/22 12:24	02/14/22 20:20	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*90*		*54 - 120*	*02/11/22 12:24*	*02/14/22 20:20*	*20*
2-Fluorobiphenyl	*95*		*60 - 120*	*02/11/22 12:24*	*02/14/22 20:20*	*20*
2-Fluorophenol (Surr)	*76*		*52 - 120*	*02/11/22 12:24*	*02/14/22 20:20*	*20*
Phenol-d5 (Surr)	*83*		*54 - 120*	*02/11/22 12:24*	*02/14/22 20:20*	*20*
p-Terphenyl-d14 (Surr)	*100*		*79 - 130*	*02/11/22 12:24*	*02/14/22 20:20*	*20*
Nitrobenzene-d5 (Surr)	*105*		*53 - 120*	*02/11/22 12:24*	*02/14/22 20:20*	*20*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.24	0.046	mg/Kg	☼	02/11/22 08:24	02/13/22 15:54	1
PCB-1221	ND		0.24	0.046	mg/Kg	☼	02/11/22 08:24	02/13/22 15:54	1
PCB-1232	ND		0.24	0.046	mg/Kg	☼	02/11/22 08:24	02/13/22 15:54	1
PCB-1242	ND		0.24	0.046	mg/Kg	☼	02/11/22 08:24	02/13/22 15:54	1
PCB-1248	ND		0.24	0.046	mg/Kg	☼	02/11/22 08:24	02/13/22 15:54	1
PCB-1254	ND		0.24	0.11	mg/Kg	☼	02/11/22 08:24	02/13/22 15:54	1
PCB-1260	ND		0.24	0.11	mg/Kg	☼	02/11/22 08:24	02/13/22 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*91*		*60 - 154*	*02/11/22 08:24*	*02/13/22 15:54*	*1*
DCB Decachlorobiphenyl	*79*		*65 - 174*	*02/11/22 08:24*	*02/13/22 15:54*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**9.4**		2.5		mg/Kg	☼	02/10/22 15:18	02/12/22 02:58	1
Barium	**128**		0.62		mg/Kg	☼	02/10/22 15:18	02/12/22 02:58	1
Cadmium	**3.0**		0.25		mg/Kg	☼	02/10/22 15:18	02/12/22 02:58	1
Chromium	**17.2**		0.62		mg/Kg	☼	02/10/22 15:18	02/12/22 02:58	1
Lead	**723**		1.2		mg/Kg	☼	02/10/22 15:18	02/12/22 02:58	1
Selenium	ND		5.0		mg/Kg	☼	02/10/22 15:18	02/12/22 02:58	1
Silver	ND		0.75		mg/Kg	☼	02/10/22 15:18	02/12/22 02:58	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-10 0-2FT
Date Collected: 02/07/22 14:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-10
Matrix: Solid
Percent Solids: 81.8

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.21		0.025		mg/Kg	☼	02/11/22 11:14	02/11/22 13:48	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-1W
Date Collected: 02/07/22 14:30
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-11
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.0	3.3	ug/L			02/10/22 21:38	4
1,1,2,2-Tetrachloroethane	ND		4.0	0.84	ug/L			02/10/22 21:38	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0	1.2	ug/L			02/10/22 21:38	4
1,1,2-Trichloroethane	ND		4.0	0.92	ug/L			02/10/22 21:38	4
1,1-Dichloroethane	ND		4.0	1.5	ug/L			02/10/22 21:38	4
1,1-Dichloroethene	ND		4.0	1.2	ug/L			02/10/22 21:38	4
1,2,4-Trichlorobenzene	ND		4.0	1.6	ug/L			02/10/22 21:38	4
1,2,4-Trimethylbenzene	ND		4.0	3.0	ug/L			02/10/22 21:38	4
1,2-Dibromo-3-Chloropropane	ND		4.0	1.6	ug/L			02/10/22 21:38	4
1,2-Dichlorobenzene	ND		4.0	3.2	ug/L			02/10/22 21:38	4
1,2-Dichloroethane	ND		4.0	0.84	ug/L			02/10/22 21:38	4
1,2-Dichloropropane	ND		4.0	2.9	ug/L			02/10/22 21:38	4
1,3,5-Trimethylbenzene	ND		4.0	3.1	ug/L			02/10/22 21:38	4
1,3-Dichlorobenzene	ND		4.0	3.1	ug/L			02/10/22 21:38	4
1,4-Dichlorobenzene	ND		4.0	3.4	ug/L			02/10/22 21:38	4
2-Butanone (MEK)	ND		40	5.3	ug/L			02/10/22 21:38	4
2-Hexanone	ND		20	5.0	ug/L			02/10/22 21:38	4
4-Isopropyltoluene	ND		4.0	1.2	ug/L			02/10/22 21:38	4
4-Methyl-2-pentanone (MIBK)	ND		20	8.4	ug/L			02/10/22 21:38	4
Acetone	ND		40	12	ug/L			02/10/22 21:38	4
Benzene	ND		4.0	1.6	ug/L			02/10/22 21:38	4
Bromoform	ND		4.0	1.0	ug/L			02/10/22 21:38	4
Bromomethane	ND		4.0	2.8	ug/L			02/10/22 21:38	4
Carbon disulfide	ND		4.0	0.76	ug/L			02/10/22 21:38	4
Carbon tetrachloride	ND		4.0	1.1	ug/L			02/10/22 21:38	4
Chlorobenzene	ND		4.0	3.0	ug/L			02/10/22 21:38	4
Dibromochloromethane	ND		4.0	1.3	ug/L			02/10/22 21:38	4
Chloroethane	ND		4.0	1.3	ug/L			02/10/22 21:38	4
Chloroform	ND		4.0	1.4	ug/L			02/10/22 21:38	4
Chloromethane	ND		4.0	1.4	ug/L			02/10/22 21:38	4
cis-1,2-Dichloroethene	ND		4.0	3.2	ug/L			02/10/22 21:38	4
Cyclohexane	ND		4.0	0.72	ug/L			02/10/22 21:38	4
Bromodichloromethane	ND		4.0	1.6	ug/L			02/10/22 21:38	4
Dichlorodifluoromethane	ND		4.0	2.7	ug/L			02/10/22 21:38	4
Ethylbenzene	ND		4.0	3.0	ug/L			02/10/22 21:38	4
1,2-Dibromoethane	ND		4.0	2.9	ug/L			02/10/22 21:38	4
Isopropylbenzene	ND		4.0	3.2	ug/L			02/10/22 21:38	4
Methyl acetate	ND		10	5.2	ug/L			02/10/22 21:38	4
Methyl tert-butyl ether	ND		4.0	0.64	ug/L			02/10/22 21:38	4
Methylcyclohexane	ND		4.0	0.64	ug/L			02/10/22 21:38	4
Methylene Chloride	ND		4.0	1.8	ug/L			02/10/22 21:38	4
m,p-Xylene	ND		8.0	2.6	ug/L			02/10/22 21:38	4
n-Butylbenzene	ND		4.0	2.6	ug/L			02/10/22 21:38	4
N-Propylbenzene	ND		4.0	2.8	ug/L			02/10/22 21:38	4
o-Xylene	ND		4.0	3.0	ug/L			02/10/22 21:38	4
sec-Butylbenzene	ND		4.0	3.0	ug/L			02/10/22 21:38	4
Tetrachloroethene	ND		4.0	1.4	ug/L			02/10/22 21:38	4
Toluene	ND		4.0	2.0	ug/L			02/10/22 21:38	4
trans-1,2-Dichloroethene	ND		4.0	3.6	ug/L			02/10/22 21:38	4

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-1W
Date Collected: 02/07/22 14:30
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-11
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		4.0	1.5	ug/L			02/10/22 21:38	4
Trichloroethene	ND		4.0	1.8	ug/L			02/10/22 21:38	4
Trichlorofluoromethane	ND		4.0	3.5	ug/L			02/10/22 21:38	4
Vinyl chloride	ND		4.0	3.6	ug/L			02/10/22 21:38	4
Xylenes, Total	ND		8.0	2.6	ug/L			02/10/22 21:38	4
cis-1,3-Dichloropropene	ND		4.0	1.4	ug/L			02/10/22 21:38	4
Styrene	ND		4.0	2.9	ug/L			02/10/22 21:38	4
tert-Butylbenzene	ND		4.0	3.2	ug/L			02/10/22 21:38	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*02/10/22 21:38*	*4*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*02/10/22 21:38*	*4*
Toluene-d8 (Surr)	*100*		*80 - 120*		*02/10/22 21:38*	*4*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-3W
Date Collected: 02/07/22 14:15
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-12
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.0	3.3	ug/L			02/10/22 22:01	4
1,1,2,2-Tetrachloroethane	ND		4.0	0.84	ug/L			02/10/22 22:01	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0	1.2	ug/L			02/10/22 22:01	4
1,1,2-Trichloroethane	ND		4.0	0.92	ug/L			02/10/22 22:01	4
1,1-Dichloroethane	ND		4.0	1.5	ug/L			02/10/22 22:01	4
1,1-Dichloroethene	ND		4.0	1.2	ug/L			02/10/22 22:01	4
1,2,4-Trichlorobenzene	ND		4.0	1.6	ug/L			02/10/22 22:01	4
1,2,4-Trimethylbenzene	ND		4.0	3.0	ug/L			02/10/22 22:01	4
1,2-Dibromo-3-Chloropropane	ND		4.0	1.6	ug/L			02/10/22 22:01	4
1,2-Dichlorobenzene	ND		4.0	3.2	ug/L			02/10/22 22:01	4
1,2-Dichloroethane	ND		4.0	0.84	ug/L			02/10/22 22:01	4
1,2-Dichloropropane	ND		4.0	2.9	ug/L			02/10/22 22:01	4
1,3,5-Trimethylbenzene	ND		4.0	3.1	ug/L			02/10/22 22:01	4
1,3-Dichlorobenzene	ND		4.0	3.1	ug/L			02/10/22 22:01	4
1,4-Dichlorobenzene	ND		4.0	3.4	ug/L			02/10/22 22:01	4
2-Butanone (MEK)	ND		40	5.3	ug/L			02/10/22 22:01	4
2-Hexanone	ND		20	5.0	ug/L			02/10/22 22:01	4
4-Isopropyltoluene	ND		4.0	1.2	ug/L			02/10/22 22:01	4
4-Methyl-2-pentanone (MIBK)	ND		20	8.4	ug/L			02/10/22 22:01	4
Acetone	ND		40	12	ug/L			02/10/22 22:01	4
Benzene	ND		4.0	1.6	ug/L			02/10/22 22:01	4
Bromoform	ND		4.0	1.0	ug/L			02/10/22 22:01	4
Bromomethane	ND		4.0	2.8	ug/L			02/10/22 22:01	4
Carbon disulfide	ND		4.0	0.76	ug/L			02/10/22 22:01	4
Carbon tetrachloride	ND		4.0	1.1	ug/L			02/10/22 22:01	4
Chlorobenzene	ND		4.0	3.0	ug/L			02/10/22 22:01	4
Dibromochloromethane	ND		4.0	1.3	ug/L			02/10/22 22:01	4
Chloroethane	ND		4.0	1.3	ug/L			02/10/22 22:01	4
Chloroform	ND		4.0	1.4	ug/L			02/10/22 22:01	4
Chloromethane	ND		4.0	1.4	ug/L			02/10/22 22:01	4
cis-1,2-Dichloroethene	ND		4.0	3.2	ug/L			02/10/22 22:01	4
Cyclohexane	**0.93**	**J**	4.0	0.72	ug/L			02/10/22 22:01	4
Bromodichloromethane	ND		4.0	1.6	ug/L			02/10/22 22:01	4
Dichlorodifluoromethane	ND		4.0	2.7	ug/L			02/10/22 22:01	4
Ethylbenzene	ND		4.0	3.0	ug/L			02/10/22 22:01	4
1,2-Dibromoethane	ND		4.0	2.9	ug/L			02/10/22 22:01	4
Isopropylbenzene	ND		4.0	3.2	ug/L			02/10/22 22:01	4
Methyl acetate	ND		10	5.2	ug/L			02/10/22 22:01	4
Methyl tert-butyl ether	ND		4.0	0.64	ug/L			02/10/22 22:01	4
Methylcyclohexane	**1.1**	**J**	4.0	0.64	ug/L			02/10/22 22:01	4
Methylene Chloride	ND		4.0	1.8	ug/L			02/10/22 22:01	4
m,p-Xylene	ND		8.0	2.6	ug/L			02/10/22 22:01	4
n-Butylbenzene	ND		4.0	2.6	ug/L			02/10/22 22:01	4
N-Propylbenzene	ND		4.0	2.8	ug/L			02/10/22 22:01	4
o-Xylene	ND		4.0	3.0	ug/L			02/10/22 22:01	4
sec-Butylbenzene	ND		4.0	3.0	ug/L			02/10/22 22:01	4
Tetrachloroethene	ND		4.0	1.4	ug/L			02/10/22 22:01	4
Toluene	ND		4.0	2.0	ug/L			02/10/22 22:01	4
trans-1,2-Dichloroethene	ND		4.0	3.6	ug/L			02/10/22 22:01	4

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-3W
Date Collected: 02/07/22 14:15
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-12
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		4.0	1.5	ug/L			02/10/22 22:01	4
Trichloroethene	ND		4.0	1.8	ug/L			02/10/22 22:01	4
Trichlorofluoromethane	ND		4.0	3.5	ug/L			02/10/22 22:01	4
Vinyl chloride	ND		4.0	3.6	ug/L			02/10/22 22:01	4
Xylenes, Total	ND		8.0	2.6	ug/L			02/10/22 22:01	4
cis-1,3-Dichloropropene	ND		4.0	1.4	ug/L			02/10/22 22:01	4
Styrene	ND		4.0	2.9	ug/L			02/10/22 22:01	4
tert-Butylbenzene	ND		4.0	3.2	ug/L			02/10/22 22:01	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*02/10/22 22:01*	*4*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*02/10/22 22:01*	*4*
Toluene-d8 (Surr)	*97*		*80 - 120*		*02/10/22 22:01*	*4*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-6W
Date Collected: 02/07/22 14:05
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-13
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.0	3.3	ug/L			02/10/22 22:24	4
1,1,2,2-Tetrachloroethane	ND		4.0	0.84	ug/L			02/10/22 22:24	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0	1.2	ug/L			02/10/22 22:24	4
1,1,2-Trichloroethane	ND		4.0	0.92	ug/L			02/10/22 22:24	4
1,1-Dichloroethane	ND		4.0	1.5	ug/L			02/10/22 22:24	4
1,1-Dichloroethene	ND		4.0	1.2	ug/L			02/10/22 22:24	4
1,2,4-Trichlorobenzene	ND		4.0	1.6	ug/L			02/10/22 22:24	4
1,2,4-Trimethylbenzene	ND		4.0	3.0	ug/L			02/10/22 22:24	4
1,2-Dibromo-3-Chloropropane	ND		4.0	1.6	ug/L			02/10/22 22:24	4
1,2-Dichlorobenzene	ND		4.0	3.2	ug/L			02/10/22 22:24	4
1,2-Dichloroethane	ND		4.0	0.84	ug/L			02/10/22 22:24	4
1,2-Dichloropropane	ND		4.0	2.9	ug/L			02/10/22 22:24	4
1,3,5-Trimethylbenzene	ND		4.0	3.1	ug/L			02/10/22 22:24	4
1,3-Dichlorobenzene	ND		4.0	3.1	ug/L			02/10/22 22:24	4
1,4-Dichlorobenzene	ND		4.0	3.4	ug/L			02/10/22 22:24	4
2-Butanone (MEK)	ND		40	5.3	ug/L			02/10/22 22:24	4
2-Hexanone	ND		20	5.0	ug/L			02/10/22 22:24	4
4-Isopropyltoluene	ND		4.0	1.2	ug/L			02/10/22 22:24	4
4-Methyl-2-pentanone (MIBK)	ND		20	8.4	ug/L			02/10/22 22:24	4
Acetone	ND		40	12	ug/L			02/10/22 22:24	4
Benzene	ND		4.0	1.6	ug/L			02/10/22 22:24	4
Bromoform	ND		4.0	1.0	ug/L			02/10/22 22:24	4
Bromomethane	ND		4.0	2.8	ug/L			02/10/22 22:24	4
Carbon disulfide	ND		4.0	0.76	ug/L			02/10/22 22:24	4
Carbon tetrachloride	ND		4.0	1.1	ug/L			02/10/22 22:24	4
Chlorobenzene	ND		4.0	3.0	ug/L			02/10/22 22:24	4
Dibromochloromethane	ND		4.0	1.3	ug/L			02/10/22 22:24	4
Chloroethane	ND		4.0	1.3	ug/L			02/10/22 22:24	4
Chloroform	ND		4.0	1.4	ug/L			02/10/22 22:24	4
Chloromethane	ND		4.0	1.4	ug/L			02/10/22 22:24	4
cis-1,2-Dichloroethene	ND		4.0	3.2	ug/L			02/10/22 22:24	4
Cyclohexane	ND		4.0	0.72	ug/L			02/10/22 22:24	4
Bromodichloromethane	ND		4.0	1.6	ug/L			02/10/22 22:24	4
Dichlorodifluoromethane	ND		4.0	2.7	ug/L			02/10/22 22:24	4
Ethylbenzene	ND		4.0	3.0	ug/L			02/10/22 22:24	4
1,2-Dibromoethane	ND		4.0	2.9	ug/L			02/10/22 22:24	4
Isopropylbenzene	ND		4.0	3.2	ug/L			02/10/22 22:24	4
Methyl acetate	ND		10	5.2	ug/L			02/10/22 22:24	4
Methyl tert-butyl ether	ND		4.0	0.64	ug/L			02/10/22 22:24	4
Methylcyclohexane	ND		4.0	0.64	ug/L			02/10/22 22:24	4
Methylene Chloride	ND		4.0	1.8	ug/L			02/10/22 22:24	4
m,p-Xylene	ND		8.0	2.6	ug/L			02/10/22 22:24	4
n-Butylbenzene	ND		4.0	2.6	ug/L			02/10/22 22:24	4
N-Propylbenzene	ND		4.0	2.8	ug/L			02/10/22 22:24	4
o-Xylene	ND		4.0	3.0	ug/L			02/10/22 22:24	4
sec-Butylbenzene	ND		4.0	3.0	ug/L			02/10/22 22:24	4
Tetrachloroethene	ND		4.0	1.4	ug/L			02/10/22 22:24	4
Toluene	ND		4.0	2.0	ug/L			02/10/22 22:24	4
trans-1,2-Dichloroethene	ND		4.0	3.6	ug/L			02/10/22 22:24	4

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-6W
Date Collected: 02/07/22 14:05
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-13
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		4.0	1.5	ug/L			02/10/22 22:24	4
Trichloroethene	ND		4.0	1.8	ug/L			02/10/22 22:24	4
Trichlorofluoromethane	ND		4.0	3.5	ug/L			02/10/22 22:24	4
Vinyl chloride	ND		4.0	3.6	ug/L			02/10/22 22:24	4
Xylenes, Total	ND		8.0	2.6	ug/L			02/10/22 22:24	4
cis-1,3-Dichloropropene	ND		4.0	1.4	ug/L			02/10/22 22:24	4
Styrene	ND		4.0	2.9	ug/L			02/10/22 22:24	4
tert-Butylbenzene	ND		4.0	3.2	ug/L			02/10/22 22:24	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*02/10/22 22:24*	*4*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*02/10/22 22:24*	*4*
Toluene-d8 (Surr)	*98*		*80 - 120*		*02/10/22 22:24*	*4*

Client Sample ID: SB-7W
Lab Sample ID: 480-194853-14
Date Collected: 02/07/22 14:35
Matrix: Water
Date Received: 02/09/22 12:15

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		8.0	6.6	ug/L			02/10/22 22:47	8
1,1,2,2-Tetrachloroethane	ND		8.0	1.7	ug/L			02/10/22 22:47	8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		8.0	2.5	ug/L			02/10/22 22:47	8
1,1,2-Trichloroethane	ND		8.0	1.8	ug/L			02/10/22 22:47	8
1,1-Dichloroethane	ND		8.0	3.0	ug/L			02/10/22 22:47	8
1,1-Dichloroethene	ND		8.0	2.3	ug/L			02/10/22 22:47	8
1,2,4-Trichlorobenzene	ND		8.0	3.3	ug/L			02/10/22 22:47	8
1,2,4-Trimethylbenzene	ND		8.0	6.0	ug/L			02/10/22 22:47	8
1,2-Dibromo-3-Chloropropane	ND		8.0	3.1	ug/L			02/10/22 22:47	8
1,2-Dichlorobenzene	ND		8.0	6.3	ug/L			02/10/22 22:47	8
1,2-Dichloroethane	ND		8.0	1.7	ug/L			02/10/22 22:47	8
1,2-Dichloropropane	ND		8.0	5.8	ug/L			02/10/22 22:47	8
1,3,5-Trimethylbenzene	ND		8.0	6.2	ug/L			02/10/22 22:47	8
1,3-Dichlorobenzene	ND		8.0	6.2	ug/L			02/10/22 22:47	8
1,4-Dichlorobenzene	ND		8.0	6.7	ug/L			02/10/22 22:47	8
2-Butanone (MEK)	ND		80	11	ug/L			02/10/22 22:47	8
2-Hexanone	ND		40	9.9	ug/L			02/10/22 22:47	8
4-Isopropyltoluene	ND		8.0	2.5	ug/L			02/10/22 22:47	8
4-Methyl-2-pentanone (MIBK)	ND		40	17	ug/L			02/10/22 22:47	8
Acetone	ND		80	24	ug/L			02/10/22 22:47	8
Benzene	ND		8.0	3.3	ug/L			02/10/22 22:47	8
Bromoform	ND		8.0	2.1	ug/L			02/10/22 22:47	8
Bromomethane	ND		8.0	5.5	ug/L			02/10/22 22:47	8
Carbon disulfide	ND		8.0	1.5	ug/L			02/10/22 22:47	8
Carbon tetrachloride	ND		8.0	2.2	ug/L			02/10/22 22:47	8
Chlorobenzene	ND		8.0	6.0	ug/L			02/10/22 22:47	8
Dibromochloromethane	ND		8.0	2.6	ug/L			02/10/22 22:47	8
Chloroethane	ND		8.0	2.6	ug/L			02/10/22 22:47	8
Chloroform	ND		8.0	2.7	ug/L			02/10/22 22:47	8
Chloromethane	ND		8.0	2.8	ug/L			02/10/22 22:47	8
cis-1,2-Dichloroethene	**110**		8.0	6.5	ug/L			02/10/22 22:47	8
Cyclohexane	ND		8.0	1.4	ug/L			02/10/22 22:47	8
Bromodichloromethane	ND		8.0	3.1	ug/L			02/10/22 22:47	8
Dichlorodifluoromethane	ND		8.0	5.4	ug/L			02/10/22 22:47	8
Ethylbenzene	ND		8.0	5.9	ug/L			02/10/22 22:47	8
1,2-Dibromoethane	ND		8.0	5.8	ug/L			02/10/22 22:47	8
Isopropylbenzene	ND		8.0	6.3	ug/L			02/10/22 22:47	8
Methyl acetate	ND		20	10	ug/L			02/10/22 22:47	8
Methyl tert-butyl ether	ND		8.0	1.3	ug/L			02/10/22 22:47	8
Methylcyclohexane	ND		8.0	1.3	ug/L			02/10/22 22:47	8
Methylene Chloride	ND		8.0	3.5	ug/L			02/10/22 22:47	8
m,p-Xylene	ND		16	5.3	ug/L			02/10/22 22:47	8
n-Butylbenzene	ND		8.0	5.1	ug/L			02/10/22 22:47	8
N-Propylbenzene	ND		8.0	5.5	ug/L			02/10/22 22:47	8
o-Xylene	ND		8.0	6.1	ug/L			02/10/22 22:47	8
sec-Butylbenzene	ND		8.0	6.0	ug/L			02/10/22 22:47	8
Tetrachloroethene	**6.1**	**J**	8.0	2.9	ug/L			02/10/22 22:47	8
Toluene	ND		8.0	4.1	ug/L			02/10/22 22:47	8
trans-1,2-Dichloroethene	ND		8.0	7.2	ug/L			02/10/22 22:47	8

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-7W
Date Collected: 02/07/22 14:35
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-14
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		8.0	3.0	ug/L			02/10/22 22:47	8
Trichloroethene	**200**		8.0	3.7	ug/L			02/10/22 22:47	8
Trichlorofluoromethane	ND		8.0	7.0	ug/L			02/10/22 22:47	8
Vinyl chloride	ND		8.0	7.2	ug/L			02/10/22 22:47	8
Xylenes, Total	ND		16	5.3	ug/L			02/10/22 22:47	8
cis-1,3-Dichloropropene	ND		8.0	2.9	ug/L			02/10/22 22:47	8
Styrene	ND		8.0	5.8	ug/L			02/10/22 22:47	8
tert-Butylbenzene	ND		8.0	6.5	ug/L			02/10/22 22:47	8

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*02/10/22 22:47*	*8*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*02/10/22 22:47*	*8*
Toluene-d8 (Surr)	*98*		*80 - 120*		*02/10/22 22:47*	*8*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: TRIP BLANK
Date Collected: 02/07/22 00:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-15
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			02/10/22 23:11	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			02/10/22 23:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			02/10/22 23:11	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			02/10/22 23:11	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			02/10/22 23:11	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			02/10/22 23:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			02/10/22 23:11	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			02/10/22 23:11	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			02/10/22 23:11	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			02/10/22 23:11	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			02/10/22 23:11	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			02/10/22 23:11	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			02/10/22 23:11	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			02/10/22 23:11	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			02/10/22 23:11	1
2-Butanone (MEK)	ND		10	1.3	ug/L			02/10/22 23:11	1
2-Hexanone	ND		5.0	1.2	ug/L			02/10/22 23:11	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			02/10/22 23:11	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			02/10/22 23:11	1
Acetone	ND		10	3.0	ug/L			02/10/22 23:11	1
Benzene	ND		1.0	0.41	ug/L			02/10/22 23:11	1
Bromoform	ND		1.0	0.26	ug/L			02/10/22 23:11	1
Bromomethane	ND		1.0	0.69	ug/L			02/10/22 23:11	1
Carbon disulfide	ND		1.0	0.19	ug/L			02/10/22 23:11	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			02/10/22 23:11	1
Chlorobenzene	ND		1.0	0.75	ug/L			02/10/22 23:11	1
Dibromochloromethane	ND		1.0	0.32	ug/L			02/10/22 23:11	1
Chloroethane	ND		1.0	0.32	ug/L			02/10/22 23:11	1
Chloroform	ND		1.0	0.34	ug/L			02/10/22 23:11	1
Chloromethane	ND		1.0	0.35	ug/L			02/10/22 23:11	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			02/10/22 23:11	1
Cyclohexane	ND		1.0	0.18	ug/L			02/10/22 23:11	1
Bromodichloromethane	ND		1.0	0.39	ug/L			02/10/22 23:11	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			02/10/22 23:11	1
Ethylbenzene	ND		1.0	0.74	ug/L			02/10/22 23:11	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			02/10/22 23:11	1
Isopropylbenzene	ND		1.0	0.79	ug/L			02/10/22 23:11	1
Methyl acetate	ND		2.5	1.3	ug/L			02/10/22 23:11	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			02/10/22 23:11	1
Methylcyclohexane	ND		1.0	0.16	ug/L			02/10/22 23:11	1
Methylene Chloride	ND		1.0	0.44	ug/L			02/10/22 23:11	1
m,p-Xylene	ND		2.0	0.66	ug/L			02/10/22 23:11	1
n-Butylbenzene	ND		1.0	0.64	ug/L			02/10/22 23:11	1
N-Propylbenzene	ND		1.0	0.69	ug/L			02/10/22 23:11	1
o-Xylene	ND		1.0	0.76	ug/L			02/10/22 23:11	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			02/10/22 23:11	1
Tetrachloroethene	ND		1.0	0.36	ug/L			02/10/22 23:11	1
Toluene	ND		1.0	0.51	ug/L			02/10/22 23:11	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			02/10/22 23:11	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: TRIP BLANK
Date Collected: 02/07/22 00:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-15
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			02/10/22 23:11	1
Trichloroethene	ND		1.0	0.46	ug/L			02/10/22 23:11	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			02/10/22 23:11	1
Vinyl chloride	ND		1.0	0.90	ug/L			02/10/22 23:11	1
Xylenes, Total	ND		2.0	0.66	ug/L			02/10/22 23:11	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			02/10/22 23:11	1
Styrene	ND		1.0	0.73	ug/L			02/10/22 23:11	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			02/10/22 23:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*02/10/22 23:11*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*02/10/22 23:11*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*02/10/22 23:11*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DCA	TOL	BFB
Lab Sample ID	Client Sample ID	(64-126)	(71-125)	(72-126)
480-194853-7	SB-7 5-6FT	104	92	101
480-194853-8	SB-8 9-11FT	99	95	106
480-194853-9	SB-9 8-9FT	103	94	106
LCS 480-614488/1-A	Lab Control Sample	98	93	105
LCS 480-614807/1-A	Lab Control Sample	96	95	101
MB 480-614488/2-A	Method Blank	95	92	104
MB 480-614807/2-A	Method Blank	99	83	96

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DCA	BFB	TOL
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(80-120)
480-194853-11	SB-1W	101	100	100
480-194853-12	SB-3W	101	96	97
480-194853-13	SB-6W	104	97	98
480-194853-14	SB-7W	100	98	98
480-194853-15	TRIP BLANK	103	99	99
LCS 480-614492/5	Lab Control Sample	103	99	99
MB 480-614492/7	Method Blank	104	104	101

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	PHL	TPHd14	NBZ
Lab Sample ID	Client Sample ID	(54-120)	(60-120)	(52-120)	(54-120)	(79-130)	(53-120)
480-194853-1	SB-1 0-2FT	41 S1-	102	79	87	105	95
480-194853-2	SB-2 0-1FT	88	91	80	83	102	86
480-194853-3	SB-3 1-3FT	82	101	85	81	96	102
480-194853-4	SB-4 3-2FT	94	91	79	86	94	94
480-194853-5	SB-5 0-1FT	79	94	77	78	100	92
480-194853-6	SB-6 0-1FT	84	92	80	81	95	88
480-194853-7	SB-7 5-6FT	105	94	80	82	94	81
480-194853-10	SB-10 0-2FT	90	95	76	83	100	105
LCS 480-614600/2-A	Lab Control Sample	116	99	86	88	103	96
MB 480-614600/1-A	Method Blank	98	94	85	87	101	85

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-194853-1
Project/Site: Benchmark - WestTupper & Trinity

2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
NBZ = Nitrobenzene-d5 (Surr)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		TCX1	DCBP1										
Lab Sample ID	Client Sample ID	(60-154)	(65-174)										
480-194853-7	SB-7 5-6FT	89	87										
480-194853-9	SB-9 8-9FT	93	85										
480-194853-10	SB-10 0-2FT	91	79										
LCS 480-614537/2-A	Lab Control Sample	119	117										
MB 480-614537/1-A	Method Blank	100	123										

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-614488/2-A
Matrix: Solid
Analysis Batch: 614483

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614488

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.36	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.81	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,1,2-Trichloroethane	ND		5.0	0.65	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,1-Dichloroethane	ND		5.0	0.61	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,1-Dichloroethene	ND		5.0	0.61	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,2,4-Trichlorobenzene	ND		5.0	0.30	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,2,4-Trimethylbenzene	ND		5.0	0.96	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.5	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,2-Dichlorobenzene	ND		5.0	0.39	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,2-Dichloroethane	ND		5.0	0.25	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,2-Dichloropropane	ND		5.0	2.5	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,3,5-Trimethylbenzene	ND		5.0	0.32	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,3-Dichlorobenzene	ND		5.0	0.26	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,4-Dichlorobenzene	ND		5.0	0.70	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
2-Hexanone	ND		25	2.5	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
4-Isopropyltoluene	ND		5.0	0.40	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Acetone	ND		25	4.2	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Benzene	ND		5.0	0.25	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Bromoform	ND		5.0	2.5	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Bromomethane	ND		5.0	0.45	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Carbon disulfide	ND		5.0	2.5	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Carbon tetrachloride	ND		5.0	0.48	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Chlorobenzene	ND		5.0	0.66	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Dibromochloromethane	ND		5.0	0.64	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Chloroethane	ND		5.0	1.1	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Chloroform	5.29		5.0	0.31	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Chloromethane	ND		5.0	0.30	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
cis-1,2-Dichloroethene	ND		5.0	0.64	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Cyclohexane	ND		5.0	0.70	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Bromodichloromethane	0.849	J	5.0	0.67	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Dichlorodifluoromethane	ND		5.0	0.41	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Ethylbenzene	ND		5.0	0.35	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
1,2-Dibromoethane	ND		5.0	0.64	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
2-Butanone (MEK)	ND		25	1.8	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.6	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Methyl acetate	ND		25	3.0	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Methylcyclohexane	ND		5.0	0.76	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Methylene Chloride	ND		5.0	2.3	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
m,p-Xylene	ND		10	0.84	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
n-Butylbenzene	ND		5.0	0.44	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
N-Propylbenzene	ND		5.0	0.40	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
o-Xylene	ND		5.0	0.65	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
sec-Butylbenzene	ND		5.0	0.44	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Tetrachloroethene	ND		5.0	0.67	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Toluene	ND		5.0	0.38	ug/Kg		02/10/22 16:52	02/10/22 19:53	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-614488/2-A
Matrix: Solid
Analysis Batch: 614483

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614488

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		5.0	0.52	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
trans-1,3-Dichloropropene	ND		5.0	2.2	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Trichloroethene	ND		5.0	1.1	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Trichlorofluoromethane	ND		5.0	0.47	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Vinyl chloride	ND		5.0	0.61	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Xylenes, Total	ND		10	0.84	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
cis-1,3-Dichloropropene	ND		5.0	0.72	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
Styrene	ND		5.0	0.25	ug/Kg		02/10/22 16:52	02/10/22 19:53	1
tert-Butylbenzene	ND		5.0	0.52	ug/Kg		02/10/22 16:52	02/10/22 19:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*64 - 126*	*02/10/22 16:52*	*02/10/22 19:53*	*1*
Toluene-d8 (Surr)	*92*		*71 - 125*	*02/10/22 16:52*	*02/10/22 19:53*	*1*
4-Bromofluorobenzene (Surr)	*104*		*72 - 126*	*02/10/22 16:52*	*02/10/22 19:53*	*1*

Lab Sample ID: LCS 480-614488/1-A
Matrix: Solid
Analysis Batch: 614483

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614488

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	54.1		ug/Kg		108	77 - 121
1,1,2,2-Tetrachloroethane	50.0	44.2		ug/Kg		88	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroetha ne	50.0	53.3		ug/Kg		107	60 - 140
1,1,2-Trichloroethane	50.0	47.8		ug/Kg		96	78 - 122
1,1-Dichloroethane	50.0	51.9		ug/Kg		104	73 - 126
1,1-Dichloroethene	50.0	50.8		ug/Kg		102	59 - 125
1,2,4-Trichlorobenzene	50.0	45.4		ug/Kg		91	64 - 120
1,2,4-Trimethylbenzene	50.0	45.2		ug/Kg		90	74 - 120
1,2-Dibromo-3-Chloropropane	50.0	43.8		ug/Kg		88	63 - 124
1,2-Dichlorobenzene	50.0	44.1		ug/Kg		88	75 - 120
1,2-Dichloroethane	50.0	50.4		ug/Kg		101	77 - 122
1,2-Dichloropropane	50.0	54.4		ug/Kg		109	75 - 124
1,3,5-Trimethylbenzene	50.0	45.8		ug/Kg		92	74 - 120
1,3-Dichlorobenzene	50.0	44.9		ug/Kg		90	74 - 120
1,4-Dichlorobenzene	50.0	44.3		ug/Kg		89	73 - 120
2-Hexanone	250	238		ug/Kg		95	59 - 130
4-Isopropyltoluene	50.0	47.3		ug/Kg		95	74 - 120
Acetone	250	274		ug/Kg		109	61 - 137
Benzene	50.0	53.0		ug/Kg		106	79 - 127
Bromoform	50.0	48.3		ug/Kg		97	68 - 126
Bromomethane	50.0	55.8		ug/Kg		112	37 - 149
Carbon disulfide	50.0	47.5		ug/Kg		95	64 - 131
Carbon tetrachloride	50.0	54.1		ug/Kg		108	75 - 135
Chlorobenzene	50.0	47.0		ug/Kg		94	76 - 124
Dibromochloromethane	50.0	49.8		ug/Kg		100	76 - 125
Chloroethane	50.0	62.1		ug/Kg		124	69 - 135
Chloroform	50.0	56.1		ug/Kg		112	80 - 120
Chloromethane	50.0	51.2		ug/Kg		102	63 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-614488/1-A
Matrix: Solid
Analysis Batch: 614483

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614488

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	51.8		ug/Kg		104	81 - 120
Cyclohexane	50.0	53.0		ug/Kg		106	65 - 120
Bromodichloromethane	50.0	54.5		ug/Kg		109	80 - 122
Dichlorodifluoromethane	50.0	46.6		ug/Kg		93	57 - 142
Ethylbenzene	50.0	48.6		ug/Kg		97	80 - 120
1,2-Dibromoethane	50.0	48.3		ug/Kg		97	78 - 120
2-Butanone (MEK)	250	266		ug/Kg		106	70 - 134
4-Methyl-2-pentanone (MIBK)	250	227		ug/Kg		91	65 - 133
Isopropylbenzene	50.0	46.4		ug/Kg		93	72 - 120
Methyl acetate	100	98.8		ug/Kg		99	55 - 136
Methyl tert-butyl ether	50.0	50.0		ug/Kg		100	63 - 125
Methylcyclohexane	50.0	55.0		ug/Kg		110	60 - 140
Methylene Chloride	50.0	42.7		ug/Kg		85	61 - 127
m,p-Xylene	50.0	47.9		ug/Kg		96	70 - 130
n-Butylbenzene	50.0	46.3		ug/Kg		93	70 - 120
N-Propylbenzene	50.0	47.2		ug/Kg		94	70 - 130
o-Xylene	50.0	47.5		ug/Kg		95	70 - 130
sec-Butylbenzene	50.0	47.2		ug/Kg		94	74 - 120
Tetrachloroethene	50.0	50.0		ug/Kg		100	74 - 122
Toluene	50.0	46.3		ug/Kg		93	74 - 128
trans-1,2-Dichloroethene	50.0	51.7		ug/Kg		103	78 - 126
trans-1,3-Dichloropropene	50.0	49.2		ug/Kg		98	73 - 123
Trichloroethene	50.0	52.9		ug/Kg		106	77 - 129
Trichlorofluoromethane	50.0	56.5		ug/Kg		113	65 - 146
Vinyl chloride	50.0	59.1		ug/Kg		118	61 - 133
cis-1,3-Dichloropropene	50.0	55.1		ug/Kg		110	80 - 120
Styrene	50.0	48.6		ug/Kg		97	80 - 120
tert-Butylbenzene	50.0	47.1		ug/Kg		94	73 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*64 - 126*
Toluene-d8 (Surr)	*93*		*71 - 125*
4-Bromofluorobenzene (Surr)	*105*		*72 - 126*

Lab Sample ID: MB 480-614492/7
Matrix: Water
Analysis Batch: 614492

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			02/10/22 19:39	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			02/10/22 19:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			02/10/22 19:39	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			02/10/22 19:39	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			02/10/22 19:39	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			02/10/22 19:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			02/10/22 19:39	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			02/10/22 19:39	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			02/10/22 19:39	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-614492/7
Matrix: Water
Analysis Batch: 614492

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			02/10/22 19:39	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			02/10/22 19:39	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			02/10/22 19:39	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			02/10/22 19:39	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			02/10/22 19:39	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			02/10/22 19:39	1
2-Hexanone	ND		5.0	1.2	ug/L			02/10/22 19:39	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			02/10/22 19:39	1
Acetone	ND		10	3.0	ug/L			02/10/22 19:39	1
Benzene	ND		1.0	0.41	ug/L			02/10/22 19:39	1
Bromoform	ND		1.0	0.26	ug/L			02/10/22 19:39	1
Bromomethane	ND		1.0	0.69	ug/L			02/10/22 19:39	1
Carbon disulfide	ND		1.0	0.19	ug/L			02/10/22 19:39	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			02/10/22 19:39	1
Chlorobenzene	ND		1.0	0.75	ug/L			02/10/22 19:39	1
Dibromochloromethane	ND		1.0	0.32	ug/L			02/10/22 19:39	1
Chloroethane	ND		1.0	0.32	ug/L			02/10/22 19:39	1
Chloroform	ND		1.0	0.34	ug/L			02/10/22 19:39	1
Chloromethane	ND		1.0	0.35	ug/L			02/10/22 19:39	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			02/10/22 19:39	1
Cyclohexane	ND		1.0	0.18	ug/L			02/10/22 19:39	1
Bromodichloromethane	ND		1.0	0.39	ug/L			02/10/22 19:39	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			02/10/22 19:39	1
Ethylbenzene	ND		1.0	0.74	ug/L			02/10/22 19:39	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			02/10/22 19:39	1
2-Butanone (MEK)	ND		10	1.3	ug/L			02/10/22 19:39	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			02/10/22 19:39	1
Isopropylbenzene	ND		1.0	0.79	ug/L			02/10/22 19:39	1
Methyl acetate	ND		2.5	1.3	ug/L			02/10/22 19:39	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			02/10/22 19:39	1
Methylcyclohexane	ND		1.0	0.16	ug/L			02/10/22 19:39	1
Methylene Chloride	ND		1.0	0.44	ug/L			02/10/22 19:39	1
m,p-Xylene	ND		2.0	0.66	ug/L			02/10/22 19:39	1
n-Butylbenzene	ND		1.0	0.64	ug/L			02/10/22 19:39	1
N-Propylbenzene	ND		1.0	0.69	ug/L			02/10/22 19:39	1
o-Xylene	ND		1.0	0.76	ug/L			02/10/22 19:39	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			02/10/22 19:39	1
Tetrachloroethene	ND		1.0	0.36	ug/L			02/10/22 19:39	1
Toluene	ND		1.0	0.51	ug/L			02/10/22 19:39	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			02/10/22 19:39	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			02/10/22 19:39	1
Trichloroethene	ND		1.0	0.46	ug/L			02/10/22 19:39	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			02/10/22 19:39	1
Vinyl chloride	ND		1.0	0.90	ug/L			02/10/22 19:39	1
Xylenes, Total	ND		2.0	0.66	ug/L			02/10/22 19:39	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			02/10/22 19:39	1
Styrene	ND		1.0	0.73	ug/L			02/10/22 19:39	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			02/10/22 19:39	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-614492/7
Matrix: Water
Analysis Batch: 614492

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		77 - 120		02/10/22 19:39	1
Toluene-d8 (Surr)	101		80 - 120		02/10/22 19:39	1
4-Bromofluorobenzene (Surr)	104		73 - 120		02/10/22 19:39	1

Lab Sample ID: LCS 480-614492/5
Matrix: Water
Analysis Batch: 614492

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	23.8		ug/L		95	73 - 126
1,1,2,2-Tetrachloroethane	25.0	25.8		ug/L		103	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.9		ug/L		96	61 - 148
1,1,2-Trichloroethane	25.0	24.3		ug/L		97	76 - 122
1,1-Dichloroethane	25.0	24.0		ug/L		96	77 - 120
1,1-Dichloroethene	25.0	23.1		ug/L		92	66 - 127
1,2,4-Trichlorobenzene	25.0	23.9		ug/L		96	79 - 122
1,2,4-Trimethylbenzene	25.0	24.4		ug/L		98	76 - 121
1,2-Dibromo-3-Chloropropane	25.0	27.0		ug/L		108	56 - 134
1,2-Dichlorobenzene	25.0	24.4		ug/L		98	80 - 124
1,2-Dichloroethane	25.0	24.7		ug/L		99	75 - 120
1,2-Dichloropropane	25.0	24.9		ug/L		100	76 - 120
1,3,5-Trimethylbenzene	25.0	24.3		ug/L		97	77 - 121
1,3-Dichlorobenzene	25.0	24.9		ug/L		99	77 - 120
1,4-Dichlorobenzene	25.0	24.5		ug/L		98	80 - 120
2-Hexanone	125	140		ug/L		112	65 - 127
4-Isopropyltoluene	25.0	24.9		ug/L		100	73 - 120
Acetone	125	172		ug/L		138	56 - 142
Benzene	25.0	24.2		ug/L		97	71 - 124
Bromoform	25.0	26.8		ug/L		107	61 - 132
Bromomethane	25.0	22.0		ug/L		88	55 - 144
Carbon disulfide	25.0	24.0		ug/L		96	59 - 134
Carbon tetrachloride	25.0	24.7		ug/L		99	72 - 134
Chlorobenzene	25.0	23.8		ug/L		95	80 - 120
Dibromochloromethane	25.0	26.4		ug/L		106	75 - 125
Chloroethane	25.0	21.4		ug/L		86	69 - 136
Chloroform	25.0	29.4		ug/L		118	73 - 127
Chloromethane	25.0	21.8		ug/L		87	68 - 124
cis-1,2-Dichloroethene	25.0	24.5		ug/L		98	74 - 124
Cyclohexane	25.0	22.2		ug/L		89	59 - 135
Bromodichloromethane	25.0	27.6		ug/L		110	80 - 122
Dichlorodifluoromethane	25.0	24.8		ug/L		99	59 - 135
Ethylbenzene	25.0	24.0		ug/L		96	77 - 123
1,2-Dibromoethane	25.0	25.3		ug/L		101	77 - 120
2-Butanone (MEK)	125	141		ug/L		113	57 - 140
4-Methyl-2-pentanone (MIBK)	125	133		ug/L		106	71 - 125
Isopropylbenzene	25.0	24.0		ug/L		96	77 - 122
Methyl acetate	50.0	50.1		ug/L		100	74 - 133
Methyl tert-butyl ether	25.0	26.1		ug/L		104	77 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-614492/5
Matrix: Water
Analysis Batch: 614492

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylcyclohexane	25.0	23.4		ug/L		94	68 - 134
Methylene Chloride	25.0	24.3		ug/L		97	75 - 124
m,p-Xylene	25.0	24.5		ug/L		98	76 - 122
n-Butylbenzene	25.0	24.8		ug/L		99	71 - 128
N-Propylbenzene	25.0	24.5		ug/L		98	75 - 127
o-Xylene	25.0	24.1		ug/L		96	76 - 122
sec-Butylbenzene	25.0	23.6		ug/L		95	74 - 127
Tetrachloroethene	25.0	23.7		ug/L		95	74 - 122
Toluene	25.0	23.8		ug/L		95	80 - 122
trans-1,2-Dichloroethene	25.0	23.6		ug/L		95	73 - 127
trans-1,3-Dichloropropene	25.0	26.3		ug/L		105	80 - 120
Trichloroethene	25.0	24.2		ug/L		97	74 - 123
Trichlorofluoromethane	25.0	25.5		ug/L		102	62 - 150
Vinyl chloride	25.0	23.6		ug/L		94	65 - 133
cis-1,3-Dichloropropene	25.0	26.3		ug/L		105	74 - 124
Styrene	25.0	24.7		ug/L		99	80 - 120
tert-Butylbenzene	25.0	23.9		ug/L		96	75 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*

Lab Sample ID: MB 480-614807/2-A
Matrix: Solid
Analysis Batch: 614798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614807

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.36	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.81	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,1,2-Trichloroethane	ND		5.0	0.65	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,1-Dichloroethane	ND		5.0	0.61	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,1-Dichloroethene	ND		5.0	0.61	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,2,4-Trichlorobenzene	ND		5.0	0.30	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,2,4-Trimethylbenzene	ND		5.0	0.96	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.5	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,2-Dichlorobenzene	ND		5.0	0.39	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,2-Dichloroethane	ND		5.0	0.25	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,2-Dichloropropane	ND		5.0	2.5	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,3,5-Trimethylbenzene	ND		5.0	0.32	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,3-Dichlorobenzene	ND		5.0	0.26	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,4-Dichlorobenzene	ND		5.0	0.70	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
2-Hexanone	ND		25	2.5	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
4-Isopropyltoluene	ND		5.0	0.40	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Acetone	ND		25	4.2	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Benzene	ND		5.0	0.25	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Bromoform	ND		5.0	2.5	ug/Kg		02/14/22 18:17	02/14/22 22:05	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-614807/2-A
Matrix: Solid
Analysis Batch: 614798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614807

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		5.0	0.45	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Carbon disulfide	ND		5.0	2.5	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Carbon tetrachloride	ND		5.0	0.48	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Chlorobenzene	ND		5.0	0.66	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Dibromochloromethane	ND		5.0	0.64	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Chloroethane	ND		5.0	1.1	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Chloroform	0.389	J	5.0	0.31	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Chloromethane	ND		5.0	0.30	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
cis-1,2-Dichloroethene	ND		5.0	0.64	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Cyclohexane	ND		5.0	0.70	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Bromodichloromethane	ND		5.0	0.67	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Dichlorodifluoromethane	ND		5.0	0.41	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Ethylbenzene	ND		5.0	0.35	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
1,2-Dibromoethane	ND		5.0	0.64	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
2-Butanone (MEK)	ND		25	1.8	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.6	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Methyl acetate	ND		25	3.0	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Methylcyclohexane	ND		5.0	0.76	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Methylene Chloride	ND		5.0	2.3	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
m,p-Xylene	ND		10	0.84	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
n-Butylbenzene	ND		5.0	0.44	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
N-Propylbenzene	ND		5.0	0.40	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
o-Xylene	ND		5.0	0.65	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
sec-Butylbenzene	ND		5.0	0.44	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Tetrachloroethene	ND		5.0	0.67	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Toluene	ND		5.0	0.38	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
trans-1,2-Dichloroethene	ND		5.0	0.52	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
trans-1,3-Dichloropropene	ND		5.0	2.2	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Trichloroethene	ND		5.0	1.1	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Trichlorofluoromethane	ND		5.0	0.47	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Vinyl chloride	ND		5.0	0.61	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Xylenes, Total	ND		10	0.84	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
cis-1,3-Dichloropropene	ND		5.0	0.72	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
Styrene	ND		5.0	0.25	ug/Kg		02/14/22 18:17	02/14/22 22:05	1
tert-Butylbenzene	ND		5.0	0.52	ug/Kg		02/14/22 18:17	02/14/22 22:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*	*02/14/22 18:17*	*02/14/22 22:05*	*1*
Toluene-d8 (Surr)	*83*		*71 - 125*	*02/14/22 18:17*	*02/14/22 22:05*	*1*
4-Bromofluorobenzene (Surr)	*96*		*72 - 126*	*02/14/22 18:17*	*02/14/22 22:05*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-614807/1-A
Matrix: Solid
Analysis Batch: 614798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614807

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	56.8		ug/Kg		114	77 - 121
1,1,2,2-Tetrachloroethane	50.0	39.9		ug/Kg		80	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	56.6		ug/Kg		113	60 - 140
1,1,2-Trichloroethane	50.0	47.3		ug/Kg		95	78 - 122
1,1-Dichloroethane	50.0	53.9		ug/Kg		108	73 - 126
1,1-Dichloroethene	50.0	54.3		ug/Kg		109	59 - 125
1,2,4-Trichlorobenzene	50.0	44.9		ug/Kg		90	64 - 120
1,2,4-Trimethylbenzene	50.0	45.4		ug/Kg		91	74 - 120
1,2-Dibromo-3-Chloropropane	50.0	40.4		ug/Kg		81	63 - 124
1,2-Dichlorobenzene	50.0	45.4		ug/Kg		91	75 - 120
1,2-Dichloroethane	50.0	48.3		ug/Kg		97	77 - 122
1,2-Dichloropropane	50.0	53.9		ug/Kg		108	75 - 124
1,3,5-Trimethylbenzene	50.0	45.7		ug/Kg		91	74 - 120
1,3-Dichlorobenzene	50.0	44.6		ug/Kg		89	74 - 120
1,4-Dichlorobenzene	50.0	45.1		ug/Kg		90	73 - 120
2-Hexanone	250	234		ug/Kg		93	59 - 130
4-Isopropyltoluene	50.0	49.4		ug/Kg		99	74 - 120
Acetone	250	264		ug/Kg		106	61 - 137
Benzene	50.0	54.5		ug/Kg		109	79 - 127
Bromoform	50.0	43.5		ug/Kg		87	68 - 126
Bromomethane	50.0	52.2		ug/Kg		104	37 - 149
Carbon disulfide	50.0	49.8		ug/Kg		100	64 - 131
Carbon tetrachloride	50.0	55.1		ug/Kg		110	75 - 135
Chlorobenzene	50.0	48.4		ug/Kg		97	76 - 124
Dibromochloromethane	50.0	47.0		ug/Kg		94	76 - 125
Chloroethane	50.0	57.0		ug/Kg		114	69 - 135
Chloroform	50.0	52.7	B	ug/Kg		105	80 - 120
Chloromethane	50.0	49.4		ug/Kg		99	63 - 127
cis-1,2-Dichloroethene	50.0	54.0		ug/Kg		108	81 - 120
Cyclohexane	50.0	59.6		ug/Kg		119	65 - 120
Bromodichloromethane	50.0	56.0		ug/Kg		112	80 - 122
Dichlorodifluoromethane	50.0	45.6		ug/Kg		91	57 - 142
Ethylbenzene	50.0	51.6		ug/Kg		103	80 - 120
1,2-Dibromoethane	50.0	46.1		ug/Kg		92	78 - 120
2-Butanone (MEK)	250	254		ug/Kg		102	70 - 134
4-Methyl-2-pentanone (MIBK)	250	227		ug/Kg		91	65 - 133
Isopropylbenzene	50.0	46.7		ug/Kg		93	72 - 120
Methyl acetate	100	99.4		ug/Kg		99	55 - 136
Methyl tert-butyl ether	50.0	49.0		ug/Kg		98	63 - 125
Methylcyclohexane	50.0	60.0		ug/Kg		120	60 - 140
Methylene Chloride	50.0	40.0		ug/Kg		80	61 - 127
m,p-Xylene	50.0	50.7		ug/Kg		101	70 - 130
n-Butylbenzene	50.0	49.0		ug/Kg		98	70 - 120
N-Propylbenzene	50.0	46.9		ug/Kg		94	70 - 130
o-Xylene	50.0	48.6		ug/Kg		97	70 - 130
sec-Butylbenzene	50.0	49.5		ug/Kg		99	74 - 120
Tetrachloroethene	50.0	52.4		ug/Kg		105	74 - 122
Toluene	50.0	49.6		ug/Kg		99	74 - 128

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-614807/1-A
Matrix: Solid
Analysis Batch: 614798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614807

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	54.4		ug/Kg		109	78 - 126
trans-1,3-Dichloropropene	50.0	48.9		ug/Kg		98	73 - 123
Trichloroethene	50.0	55.6		ug/Kg		111	77 - 129
Trichlorofluoromethane	50.0	58.7		ug/Kg		117	65 - 146
Vinyl chloride	50.0	55.2		ug/Kg		110	61 - 133
cis-1,3-Dichloropropene	50.0	55.6		ug/Kg		111	80 - 120
Styrene	50.0	48.8		ug/Kg		98	80 - 120
tert-Butylbenzene	50.0	46.6		ug/Kg		93	73 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*64 - 126*
Toluene-d8 (Surr)	*95*		*71 - 125*
4-Bromofluorobenzene (Surr)	*101*		*72 - 126*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-614600/1-A
Matrix: Solid
Analysis Batch: 614746

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614600

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		170	25	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Acenaphthylene	ND		170	22	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Anthracene	ND		170	41	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Benzo[a]anthracene	ND		170	17	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Benzo[a]pyrene	ND		170	25	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Benzo[b]fluoranthene	ND		170	26	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Chrysene	ND		170	37	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Dibenz(a,h)anthracene	ND		170	29	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Fluoranthene	ND		170	18	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Fluorene	ND		170	20	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Naphthalene	ND		170	22	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Pyrene	ND		170	20	ug/Kg		02/11/22 12:24	02/14/22 14:23	1
Phenanthrene	ND		170	25	ug/Kg		02/11/22 12:24	02/14/22 14:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*98*		*54 - 120*	*02/11/22 12:24*	*02/14/22 14:23*	*1*
2-Fluorobiphenyl	*94*		*60 - 120*	*02/11/22 12:24*	*02/14/22 14:23*	*1*
2-Fluorophenol (Surr)	*85*		*52 - 120*	*02/11/22 12:24*	*02/14/22 14:23*	*1*
Phenol-d5 (Surr)	*87*		*54 - 120*	*02/11/22 12:24*	*02/14/22 14:23*	*1*
p-Terphenyl-d14 (Surr)	*101*		*79 - 130*	*02/11/22 12:24*	*02/14/22 14:23*	*1*
Nitrobenzene-d5 (Surr)	*85*		*53 - 120*	*02/11/22 12:24*	*02/14/22 14:23*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-614600/2-A
Matrix: Solid
Analysis Batch: 614746

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614600

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acenaphthene			1640	1610		ug/Kg		98	62 - 120		
Acenaphthylene			1640	1530		ug/Kg		93	58 - 121		
Anthracene			1640	1670		ug/Kg		102	62 - 120		
Benzo[a]anthracene			1640	1610		ug/Kg		98	65 - 120		
Benzo[a]pyrene			1640	1510		ug/Kg		92	64 - 120		
Benzo[b]fluoranthene			1640	1710		ug/Kg		104	64 - 120		
Benzo[g,h,i]perylene			1640	1750		ug/Kg		107	45 - 145		
Benzo[k]fluoranthene			1640	1730		ug/Kg		105	65 - 120		
Chrysene			1640	1630		ug/Kg		99	64 - 120		
Dibenz(a,h)anthracene			1640	1760		ug/Kg		107	54 - 132		
Fluoranthene			1640	1720		ug/Kg		104	62 - 120		
Fluorene			1640	1680		ug/Kg		102	63 - 120		
Indeno[1,2,3-cd]pyrene			1640	1730		ug/Kg		105	56 - 134		
Naphthalene			1640	1480		ug/Kg		90	55 - 120		
Pyrene			1640	1670		ug/Kg		102	61 - 133		
Phenanthrene			1640	1650		ug/Kg		101	60 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*116*		*54 - 120*
2-Fluorobiphenyl	*99*		*60 - 120*
2-Fluorophenol (Surr)	*86*		*52 - 120*
Phenol-d5 (Surr)	*88*		*54 - 120*
p-Terphenyl-d14 (Surr)	*103*		*79 - 130*
Nitrobenzene-d5 (Surr)	*96*		*53 - 120*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 480-614537/1-A
Matrix: Solid
Analysis Batch: 614678

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614537

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.19	0.037	mg/Kg		02/11/22 08:24	02/13/22 14:21	1
PCB-1221	ND		0.19	0.037	mg/Kg		02/11/22 08:24	02/13/22 14:21	1
PCB-1232	ND		0.19	0.037	mg/Kg		02/11/22 08:24	02/13/22 14:21	1
PCB-1242	ND		0.19	0.037	mg/Kg		02/11/22 08:24	02/13/22 14:21	1
PCB-1248	ND		0.19	0.037	mg/Kg		02/11/22 08:24	02/13/22 14:21	1
PCB-1254	ND		0.19	0.089	mg/Kg		02/11/22 08:24	02/13/22 14:21	1
PCB-1260	ND		0.19	0.089	mg/Kg		02/11/22 08:24	02/13/22 14:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*100*		*60 - 154*	*02/11/22 08:24*	*02/13/22 14:21*	*1*
DCB Decachlorobiphenyl	*123*		*65 - 174*	*02/11/22 08:24*	*02/13/22 14:21*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 480-614537/2-A
Matrix: Solid
Analysis Batch: 614678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614537

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1.98	2.46		mg/Kg		124	51 - 185		
PCB-1260			1.98	2.52		mg/Kg		128	61 - 184		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*119*		*60 - 154*
DCB Decachlorobiphenyl	*117*		*65 - 174*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-614456/1-A
Matrix: Solid
Analysis Batch: 614654

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614456

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0		mg/Kg		02/10/22 15:18	02/12/22 02:14	1
Barium	ND		0.50		mg/Kg		02/10/22 15:18	02/12/22 02:14	1
Cadmium	ND		0.20		mg/Kg		02/10/22 15:18	02/12/22 02:14	1
Chromium	ND		0.50		mg/Kg		02/10/22 15:18	02/12/22 02:14	1
Lead	ND		0.99		mg/Kg		02/10/22 15:18	02/12/22 02:14	1
Selenium	ND		4.0		mg/Kg		02/10/22 15:18	02/12/22 02:14	1
Silver	ND		0.60		mg/Kg		02/10/22 15:18	02/12/22 02:14	1

Lab Sample ID: LCSSRM 480-614456/2-A
Matrix: Solid
Analysis Batch: 614654

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614456

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			156	145.1		mg/Kg		93.0	69.9 - 130.1		
Barium			239	230.0		mg/Kg		96.3	74.9 - 124.7		
Cadmium			137	126.2		mg/Kg		92.1	75.2 - 124.8		
Chromium			154	143.6		mg/Kg		93.2	70.1 - 129.9		
Lead			130	142.2		mg/Kg		109.4	71.8 - 128.5		
Selenium			167	151.6		mg/Kg		90.8	67.7 - 132.3		
Silver			33.6	29.48		mg/Kg		87.7	68.5 - 131.3		

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-614413/1-A
Matrix: Solid
Analysis Batch: 614619

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614413

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020		mg/Kg		02/11/22 11:14	02/11/22 13:16	1

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCSSRM 480-614413/2-A ^10
Matrix: Solid
Analysis Batch: 614619

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614413

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			27.2	19.04		mg/Kg		70.0	59.9 - 140.1		

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Analysis Batch: 614483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-8	SB-8 9-11FT	Total/NA	Solid	8260C	614488
480-194853-9	SB-9 8-9FT	Total/NA	Solid	8260C	614488
MB 480-614488/2-A	Method Blank	Total/NA	Solid	8260C	614488
LCS 480-614488/1-A	Lab Control Sample	Total/NA	Solid	8260C	614488

Prep Batch: 614488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-8	SB-8 9-11FT	Total/NA	Solid	5035A_L	
480-194853-9	SB-9 8-9FT	Total/NA	Solid	5035A_L	
MB 480-614488/2-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-614488/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	

Analysis Batch: 614492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-11	SB-1W	Total/NA	Water	8260C	
480-194853-12	SB-3W	Total/NA	Water	8260C	
480-194853-13	SB-6W	Total/NA	Water	8260C	
480-194853-14	SB-7W	Total/NA	Water	8260C	
480-194853-15	TRIP BLANK	Total/NA	Water	8260C	
MB 480-614492/7	Method Blank	Total/NA	Water	8260C	
LCS 480-614492/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 614798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-7	SB-7 5-6FT	Total/NA	Solid	8260C	614807
MB 480-614807/2-A	Method Blank	Total/NA	Solid	8260C	614807
LCS 480-614807/1-A	Lab Control Sample	Total/NA	Solid	8260C	614807

Prep Batch: 614807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-7	SB-7 5-6FT	Total/NA	Solid	5035A_L	
MB 480-614807/2-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-614807/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	

GC/MS Semi VOA

Prep Batch: 614600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-1	SB-1 0-2FT	Total/NA	Solid	3550C	
480-194853-2	SB-2 0-1FT	Total/NA	Solid	3550C	
480-194853-3	SB-3 1-3FT	Total/NA	Solid	3550C	
480-194853-4	SB-4 3-2FT	Total/NA	Solid	3550C	
480-194853-5	SB-5 0-1FT	Total/NA	Solid	3550C	
480-194853-6	SB-6 0-1FT	Total/NA	Solid	3550C	
480-194853-7	SB-7 5-6FT	Total/NA	Solid	3550C	
480-194853-10	SB-10 0-2FT	Total/NA	Solid	3550C	
MB 480-614600/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-614600/2-A	Lab Control Sample	Total/NA	Solid	3550C	

GC/MS Semi VOA

Analysis Batch: 614746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-1	SB-1 0-2FT	Total/NA	Solid	8270D	614600
480-194853-2	SB-2 0-1FT	Total/NA	Solid	8270D	614600
480-194853-3	SB-3 1-3FT	Total/NA	Solid	8270D	614600
480-194853-4	SB-4 3-2FT	Total/NA	Solid	8270D	614600
480-194853-5	SB-5 0-1FT	Total/NA	Solid	8270D	614600
480-194853-6	SB-6 0-1FT	Total/NA	Solid	8270D	614600
480-194853-7	SB-7 5-6FT	Total/NA	Solid	8270D	614600
480-194853-10	SB-10 0-2FT	Total/NA	Solid	8270D	614600
MB 480-614600/1-A	Method Blank	Total/NA	Solid	8270D	614600
LCS 480-614600/2-A	Lab Control Sample	Total/NA	Solid	8270D	614600

GC Semi VOA

Prep Batch: 614537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-7	SB-7 5-6FT	Total/NA	Solid	3550C	
480-194853-9	SB-9 8-9FT	Total/NA	Solid	3550C	
480-194853-10	SB-10 0-2FT	Total/NA	Solid	3550C	
MB 480-614537/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-614537/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 614678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-7	SB-7 5-6FT	Total/NA	Solid	8082A	614537
480-194853-9	SB-9 8-9FT	Total/NA	Solid	8082A	614537
480-194853-10	SB-10 0-2FT	Total/NA	Solid	8082A	614537
MB 480-614537/1-A	Method Blank	Total/NA	Solid	8082A	614537
LCS 480-614537/2-A	Lab Control Sample	Total/NA	Solid	8082A	614537

Metals

Prep Batch: 614413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-1	SB-1 0-2FT	Total/NA	Solid	7471B	
480-194853-2	SB-2 0-1FT	Total/NA	Solid	7471B	
480-194853-3	SB-3 1-3FT	Total/NA	Solid	7471B	
480-194853-4	SB-4 3-2FT	Total/NA	Solid	7471B	
480-194853-5	SB-5 0-1FT	Total/NA	Solid	7471B	
480-194853-6	SB-6 0-1FT	Total/NA	Solid	7471B	
480-194853-7	SB-7 5-6FT	Total/NA	Solid	7471B	
480-194853-10	SB-10 0-2FT	Total/NA	Solid	7471B	
MB 480-614413/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-614413/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	

Prep Batch: 614456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-1	SB-1 0-2FT	Total/NA	Solid	3050B	
480-194853-2	SB-2 0-1FT	Total/NA	Solid	3050B	
480-194853-3	SB-3 1-3FT	Total/NA	Solid	3050B	
480-194853-4	SB-4 3-2FT	Total/NA	Solid	3050B	
480-194853-5	SB-5 0-1FT	Total/NA	Solid	3050B	
480-194853-6	SB-6 0-1FT	Total/NA	Solid	3050B	

Metals (Continued)

Prep Batch: 614456 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-7	SB-7 5-6FT	Total/NA	Solid	3050B	
480-194853-10	SB-10 0-2FT	Total/NA	Solid	3050B	
MB 480-614456/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-614456/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 614619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-1	SB-1 0-2FT	Total/NA	Solid	7471B	614413
480-194853-2	SB-2 0-1FT	Total/NA	Solid	7471B	614413
480-194853-3	SB-3 1-3FT	Total/NA	Solid	7471B	614413
480-194853-4	SB-4 3-2FT	Total/NA	Solid	7471B	614413
480-194853-5	SB-5 0-1FT	Total/NA	Solid	7471B	614413
480-194853-6	SB-6 0-1FT	Total/NA	Solid	7471B	614413
480-194853-7	SB-7 5-6FT	Total/NA	Solid	7471B	614413
480-194853-10	SB-10 0-2FT	Total/NA	Solid	7471B	614413
MB 480-614413/1-A	Method Blank	Total/NA	Solid	7471B	614413
LCSSRM 480-614413/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	614413

Analysis Batch: 614654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-1	SB-1 0-2FT	Total/NA	Solid	6010C	614456
480-194853-2	SB-2 0-1FT	Total/NA	Solid	6010C	614456
480-194853-3	SB-3 1-3FT	Total/NA	Solid	6010C	614456
480-194853-4	SB-4 3-2FT	Total/NA	Solid	6010C	614456
480-194853-5	SB-5 0-1FT	Total/NA	Solid	6010C	614456
480-194853-6	SB-6 0-1FT	Total/NA	Solid	6010C	614456
480-194853-7	SB-7 5-6FT	Total/NA	Solid	6010C	614456
480-194853-10	SB-10 0-2FT	Total/NA	Solid	6010C	614456
MB 480-614456/1-A	Method Blank	Total/NA	Solid	6010C	614456
LCSSRM 480-614456/2-A	Lab Control Sample	Total/NA	Solid	6010C	614456

General Chemistry

Analysis Batch: 614306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-194853-1	SB-1 0-2FT	Total/NA	Solid	Moisture	
480-194853-2	SB-2 0-1FT	Total/NA	Solid	Moisture	
480-194853-3	SB-3 1-3FT	Total/NA	Solid	Moisture	
480-194853-4	SB-4 3-2FT	Total/NA	Solid	Moisture	
480-194853-5	SB-5 0-1FT	Total/NA	Solid	Moisture	
480-194853-6	SB-6 0-1FT	Total/NA	Solid	Moisture	
480-194853-7	SB-7 5-6FT	Total/NA	Solid	Moisture	
480-194853-8	SB-8 9-11FT	Total/NA	Solid	Moisture	
480-194853-9	SB-9 8-9FT	Total/NA	Solid	Moisture	
480-194853-10	SB-10 0-2FT	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-1 0-2FT
Lab Sample ID: 480-194853-1
Date Collected: 02/07/22 09:00
Matrix: Solid
Date Received: 02/09/22 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	614306	02/09/22 16:01	JMM	TAL BUF

Client Sample ID: SB-1 0-2FT
Lab Sample ID: 480-194853-1
Date Collected: 02/07/22 09:00
Matrix: Solid
Date Received: 02/09/22 12:15
Percent Solids: 88.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			614600	02/11/22 12:24	SJM	TAL BUF
Total/NA	Analysis	8270D		5	614746	02/14/22 17:34	JMM	TAL BUF
Total/NA	Prep	3050B			614456	02/10/22 15:18	NVK	TAL BUF
Total/NA	Analysis	6010C		1	614654	02/12/22 02:21	LMH	TAL BUF
Total/NA	Prep	7471B			614413	02/11/22 11:14	NVK	TAL BUF
Total/NA	Analysis	7471B		1	614619	02/11/22 13:35	BMB	TAL BUF

Client Sample ID: SB-2 0-1FT
Lab Sample ID: 480-194853-2
Date Collected: 02/07/22 10:00
Matrix: Solid
Date Received: 02/09/22 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	614306	02/09/22 16:01	JMM	TAL BUF

Client Sample ID: SB-2 0-1FT
Lab Sample ID: 480-194853-2
Date Collected: 02/07/22 10:00
Matrix: Solid
Date Received: 02/09/22 12:15
Percent Solids: 83.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			614600	02/11/22 12:24	SJM	TAL BUF
Total/NA	Analysis	8270D		5	614746	02/14/22 17:58	JMM	TAL BUF
Total/NA	Prep	3050B			614456	02/10/22 15:18	NVK	TAL BUF
Total/NA	Analysis	6010C		1	614654	02/12/22 02:36	LMH	TAL BUF
Total/NA	Prep	7471B			614413	02/11/22 11:14	NVK	TAL BUF
Total/NA	Analysis	7471B		1	614619	02/11/22 13:36	BMB	TAL BUF

Client Sample ID: SB-3 1-3FT
Lab Sample ID: 480-194853-3
Date Collected: 02/07/22 10:30
Matrix: Solid
Date Received: 02/09/22 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	614306	02/09/22 16:01	JMM	TAL BUF

Client Sample ID: SB-3 1-3FT

Lab Sample ID: 480-194853-3

Date Collected: 02/07/22 10:30

Matrix: Solid

Date Received: 02/09/22 12:15

Percent Solids: 76.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			614600	02/11/22 12:24	SJM	TAL BUF
Total/NA	Analysis	8270D		10	614746	02/14/22 18:21	JMM	TAL BUF
Total/NA	Prep	3050B			614456	02/10/22 15:18	NVK	TAL BUF
Total/NA	Analysis	6010C		1	614654	02/12/22 02:40	LMH	TAL BUF
Total/NA	Prep	7471B			614413	02/11/22 11:14	NVK	TAL BUF
Total/NA	Analysis	7471B		1	614619	02/11/22 13:38	BMB	TAL BUF

Client Sample ID: SB-4 3-2FT

Lab Sample ID: 480-194853-4

Date Collected: 02/07/22 11:00

Matrix: Solid

Date Received: 02/09/22 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	614306	02/09/22 16:01	JMM	TAL BUF

Client Sample ID: SB-4 3-2FT

Lab Sample ID: 480-194853-4

Date Collected: 02/07/22 11:00

Matrix: Solid

Date Received: 02/09/22 12:15

Percent Solids: 83.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			614600	02/11/22 12:24	SJM	TAL BUF
Total/NA	Analysis	8270D		10	614746	02/14/22 18:45	JMM	TAL BUF
Total/NA	Prep	3050B			614456	02/10/22 15:18	NVK	TAL BUF
Total/NA	Analysis	6010C		1	614654	02/12/22 02:43	LMH	TAL BUF
Total/NA	Prep	7471B			614413	02/11/22 11:14	NVK	TAL BUF
Total/NA	Analysis	7471B		1	614619	02/11/22 13:39	BMB	TAL BUF

Client Sample ID: SB-5 0-1FT

Lab Sample ID: 480-194853-5

Date Collected: 02/07/22 11:15

Matrix: Solid

Date Received: 02/09/22 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	614306	02/09/22 16:01	JMM	TAL BUF

Client Sample ID: SB-5 0-1FT

Lab Sample ID: 480-194853-5

Date Collected: 02/07/22 11:15

Matrix: Solid

Date Received: 02/09/22 12:15

Percent Solids: 86.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			614600	02/11/22 12:24	SJM	TAL BUF
Total/NA	Analysis	8270D		5	614746	02/14/22 19:09	JMM	TAL BUF
Total/NA	Prep	3050B			614456	02/10/22 15:18	NVK	TAL BUF
Total/NA	Analysis	6010C		1	614654	02/12/22 02:47	LMH	TAL BUF
Total/NA	Prep	7471B			614413	02/11/22 11:14	NVK	TAL BUF
Total/NA	Analysis	7471B		1	614619	02/11/22 13:40	BMB	TAL BUF

Client Sample ID: SB-6 0-1FT

Lab Sample ID: 480-194853-6

Date Collected: 02/07/22 11:30

Matrix: Solid

Date Received: 02/09/22 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	614306	02/09/22 16:01	JMM	TAL BUF

Client Sample ID: SB-6 0-1FT

Lab Sample ID: 480-194853-6

Date Collected: 02/07/22 11:30

Matrix: Solid

Date Received: 02/09/22 12:15

Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			614600	02/11/22 12:24	SJM	TAL BUF
Total/NA	Analysis	8270D		5	614746	02/14/22 19:32	JMM	TAL BUF
Total/NA	Prep	3050B			614456	02/10/22 15:18	NVK	TAL BUF
Total/NA	Analysis	6010C		1	614654	02/12/22 02:51	LMH	TAL BUF
Total/NA	Prep	7471B			614413	02/11/22 11:14	NVK	TAL BUF
Total/NA	Analysis	7471B		1	614619	02/11/22 13:42	BMB	TAL BUF

Client Sample ID: SB-7 5-6FT

Lab Sample ID: 480-194853-7

Date Collected: 02/07/22 12:00

Matrix: Solid

Date Received: 02/09/22 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	614306	02/09/22 16:01	JMM	TAL BUF

Client Sample ID: SB-7 5-6FT

Lab Sample ID: 480-194853-7

Date Collected: 02/07/22 12:00

Matrix: Solid

Date Received: 02/09/22 12:15

Percent Solids: 83.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			614807	02/14/22 18:17	CDC	TAL BUF
Total/NA	Analysis	8260C		1	614798	02/14/22 23:16	CDC	TAL BUF
Total/NA	Prep	3550C			614600	02/11/22 12:24	SJM	TAL BUF
Total/NA	Analysis	8270D		1	614746	02/14/22 19:56	JMM	TAL BUF
Total/NA	Prep	3550C			614537	02/11/22 08:24	SJM	TAL BUF
Total/NA	Analysis	8082A		1	614678	02/13/22 15:28	NC	TAL BUF
Total/NA	Prep	3050B			614456	02/10/22 15:18	NVK	TAL BUF
Total/NA	Analysis	6010C		1	614654	02/12/22 02:55	LMH	TAL BUF
Total/NA	Prep	7471B			614413	02/11/22 11:14	NVK	TAL BUF
Total/NA	Analysis	7471B		1	614619	02/11/22 13:43	BMB	TAL BUF

Client Sample ID: SB-8 9-11FT

Lab Sample ID: 480-194853-8

Date Collected: 02/07/22 13:00

Matrix: Solid

Date Received: 02/09/22 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	614306	02/09/22 16:01	JMM	TAL BUF

Client Sample ID: SB-8 9-11FT

Lab Sample ID: 480-194853-8

Date Collected: 02/07/22 13:00

Matrix: Solid

Date Received: 02/09/22 12:15

Percent Solids: 77.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			614488	02/10/22 16:52	CDC	TAL BUF
Total/NA	Analysis	8260C		1	614483	02/10/22 21:06	WJD	TAL BUF

Client Sample ID: SB-9 8-9FT

Lab Sample ID: 480-194853-9

Date Collected: 02/07/22 13:30

Matrix: Solid

Date Received: 02/09/22 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	614306	02/09/22 16:01	JMM	TAL BUF

Client Sample ID: SB-9 8-9FT

Lab Sample ID: 480-194853-9

Date Collected: 02/07/22 13:30

Matrix: Solid

Date Received: 02/09/22 12:15

Percent Solids: 86.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			614488	02/10/22 16:52	CDC	TAL BUF
Total/NA	Analysis	8260C		1	614483	02/10/22 21:30	WJD	TAL BUF
Total/NA	Prep	3550C			614537	02/11/22 08:24	SJM	TAL BUF
Total/NA	Analysis	8082A		1	614678	02/13/22 15:41	NC	TAL BUF

Client Sample ID: SB-10 0-2FT

Lab Sample ID: 480-194853-10

Date Collected: 02/07/22 14:00

Matrix: Solid

Date Received: 02/09/22 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	614306	02/09/22 16:01	JMM	TAL BUF

Client Sample ID: SB-10 0-2FT

Lab Sample ID: 480-194853-10

Date Collected: 02/07/22 14:00

Matrix: Solid

Date Received: 02/09/22 12:15

Percent Solids: 81.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			614600	02/11/22 12:24	SJM	TAL BUF
Total/NA	Analysis	8270D		20	614746	02/14/22 20:20	JMM	TAL BUF
Total/NA	Prep	3550C			614537	02/11/22 08:24	SJM	TAL BUF
Total/NA	Analysis	8082A		1	614678	02/13/22 15:54	NC	TAL BUF
Total/NA	Prep	3050B			614456	02/10/22 15:18	NVK	TAL BUF
Total/NA	Analysis	6010C		1	614654	02/12/22 02:58	LMH	TAL BUF
Total/NA	Prep	7471B			614413	02/11/22 11:14	NVK	TAL BUF
Total/NA	Analysis	7471B		1	614619	02/11/22 13:48	BMB	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Client Sample ID: SB-1W
Date Collected: 02/07/22 14:30
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	614492	02/10/22 21:38	WJD	TAL BUF

Client Sample ID: SB-3W
Date Collected: 02/07/22 14:15
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	614492	02/10/22 22:01	WJD	TAL BUF

Client Sample ID: SB-6W
Date Collected: 02/07/22 14:05
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	614492	02/10/22 22:24	WJD	TAL BUF

Client Sample ID: SB-7W
Date Collected: 02/07/22 14:35
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		8	614492	02/10/22 22:47	WJD	TAL BUF

Client Sample ID: TRIP BLANK
Date Collected: 02/07/22 00:00
Date Received: 02/09/22 12:15

Lab Sample ID: 480-194853-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	614492	02/10/22 23:11	WJD	TAL BUF

Laboratory References:

TAL BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-194853-1
Project/Site: Benchmark - WestTupper & Trinity

Laboratory: Eurofins Buffalo

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-22

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
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
7471B	Mercury (CVAA)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF
3050B	Preparation, Metals	SW846	TAL BUF
3550C	Ultrasonic Extraction	SW846	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF
5035A_L	Closed System Purge and Trap	SW846	TAL BUF
7471B	Preparation, Mercury	SW846	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-194853-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-194853-1	SB-1 0-2FT	Solid	02/07/22 09:00	02/09/22 12:15
480-194853-2	SB-2 0-1FT	Solid	02/07/22 10:00	02/09/22 12:15
480-194853-3	SB-3 1-3FT	Solid	02/07/22 10:30	02/09/22 12:15
480-194853-4	SB-4 3-2FT	Solid	02/07/22 11:00	02/09/22 12:15
480-194853-5	SB-5 0-1FT	Solid	02/07/22 11:15	02/09/22 12:15
480-194853-6	SB-6 0-1FT	Solid	02/07/22 11:30	02/09/22 12:15
480-194853-7	SB-7 5-6FT	Solid	02/07/22 12:00	02/09/22 12:15
480-194853-8	SB-8 9-11FT	Solid	02/07/22 13:00	02/09/22 12:15
480-194853-9	SB-9 8-9FT	Solid	02/07/22 13:30	02/09/22 12:15
480-194853-10	SB-10 0-2FT	Solid	02/07/22 14:00	02/09/22 12:15
480-194853-11	SB-1W	Water	02/07/22 14:30	02/09/22 12:15
480-194853-12	SB-3W	Water	02/07/22 14:15	02/09/22 12:15
480-194853-13	SB-6W	Water	02/07/22 14:05	02/09/22 12:15
480-194853-14	SB-7W	Water	02/07/22 14:35	02/09/22 12:15
480-194853-15	TRIP BLANK	Water	02/07/22 00:00	02/09/22 12:15

Chain of Custody Record

545178

eurofins | Environment Testing TestAmerica

Address: West Tupper & Trinity

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact	Project Manager: Brian Mayhew	Site Contact: Nicole Sullivan	Date: 2/9/22	COC No:
Company Name: BenchMark EES	Tel/Email: 716-713-3937	Lab Contact: Brian Fischer	Carrier: DropOff	of COCs
Address: 2558 Hamburg Tpke	Analysis Turnaround Time			Sampler:
City/State/Zip: Buffalo NY 14218	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 716-713-3937	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			Lab Sampling:
Project Name: West Tupper & Trinity				Job / SDG No.:
Site:				
P O #				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TCL+CPSILOC's	PAH's	RCRA Metals	PCB's	Sample Specific Notes:
SB-1 0-2 Ft	2/7/22	9:00	G	Soil	2				X	X		
SB-2 0-1 Ft		10:00			2				X	X		
SB-3 1-3 Ft		10:30			2				X	X		
SB-4 3"-2 Ft		11:00			2				X	X		
SB-5 0-1 Ft		11:15			2				X	X		
SB-6 0-1 Ft		11:30			2				X	X		
SB-7 5-6 Ft		12:00			4			X	X	X	X	
SB-8 9-11 Ft		13:00			1			X				
SB-9 8-9 Ft		13:30			1			X			X	
SB-10 0-2 Ft		14:00			3				X	X	X	
SB-1W		14:30	RO	AQ	3			X				
SB-3W		14:15	G	AQ	3			X				

480-194853 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

1 ICE

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 0.8 Corr'd: _____ Therm ID No.: _____

	Company:	Date/Time:		Company:	Date/Time:
Relinquished by:	BMK	2/9/22 12:11	Received by:	TAB	2-9-22 12:15
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Chain of Custody Record

545179

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Address: West Tupper + Trimble

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact	Project Manager: Brian Mayhan	Site Contact:	Date:	COC No:
Company Name: Benchmark EES	Tel/Email: 716-713-3437	Lab Contact:	Carrier:	____ of ____ COCs
Address: 2558 Hamburg TPKE	Analysis Turnaround Time			Sampler:
City/State/Zip: Buffalo NY 14218	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 716-713-3437	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: West Tupper + Trimble	☐ 1 week			
Site:	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	CP-51+TCL VOCs	Sample Specific Notes:
SB-6W	2/9/22	14:05	G	AQ	3			X	
SB-7W	2/9/22	14:35	G	AQ	3			X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

#1 ICE

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: 0.0	Corr'd: ____	Therm ID No.: ____

Relinquished by:	Company: BMK	Date/Time: 2/9/22 1254	Received by:	Company: TAB	Date/Time: 2-9-22 12:15
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-194853-1

Login Number: 194853

List Source: Eurofins Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
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.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers 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	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	bmtk
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

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ANALYTICAL REPORT

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-196661-1
Client Project/Site: Benchmark - WestTupper & Trinity

For:
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Lackawanna, New York 14218

Attn: Bryan Mayback

Authorized for release by:
4/18/2022 4:29:55 PM
Rebecca Jones, Project Management Assistant I
Rebecca.Jones@et.eurofinsus.com

Designee for

Brian Fischer, Manager of Project Management
(716)504-9835
Brian.Fischer@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-196661-1
Project/Site: Benchmark - WestTupper & Trinity

Qualifiers

GC/MS Semi 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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-1

Job ID: 480-196661-1

Laboratory: Eurofins Buffalo

Narrative

Job Narrative
480-196661-1

Comments
No additional comments.

Receipt
The samples were received on 4/11/2022 2:40 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.7º C.

GC/MS Semi VOA
Method 8270D: The following sample was diluted due to color and appearance: HC-1 (480-196661-1). Elevated reporting limits (RL) are provided.

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

Metals
No analytical or quality issues were noted, other than those described 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: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-1

Client Sample ID: HC-1 — Lab Sample ID: 480-196661-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	460	J	1400	210	ug/Kg	5	☼	8270D	Total/NA
Acenaphthylene	470	J	1400	180	ug/Kg	5	☼	8270D	Total/NA
Anthracene	1300	J	1400	350	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]anthracene	4100		1400	140	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	4100		1400	210	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	5300		1400	220	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	2700		1400	150	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	2000		1400	180	ug/Kg	5	☼	8270D	Total/NA
Chrysene	4400		1400	310	ug/Kg	5	☼	8270D	Total/NA
Dibenz(a,h)anthracene	820	J	1400	250	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	8800		1400	150	ug/Kg	5	☼	8270D	Total/NA
Fluorene	490	J	1400	170	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	2800		1400	170	ug/Kg	5	☼	8270D	Total/NA
Naphthalene	380	J	1400	180	ug/Kg	5	☼	8270D	Total/NA
Pyrene	8300		1400	170	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	6400		1400	210	ug/Kg	5	☼	8270D	Total/NA
Arsenic	12.9		3.4		mg/Kg	1	☼	6010C	Total/NA
Barium	337		0.86		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.84		0.34		mg/Kg	1	☼	6010C	Total/NA
Chromium	25.7		0.86		mg/Kg	1	☼	6010C	Total/NA
Lead	946		1.7		mg/Kg	1	☼	6010C	Total/NA
Mercury	8.8		0.17		mg/Kg	5	☼	7471B	Total/NA

Client Sample ID: HC-3 — Lab Sample ID: 480-196661-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	44	J	180	27	ug/Kg	1	☼	8270D	Total/NA
Acenaphthylene	25	J	180	23	ug/Kg	1	☼	8270D	Total/NA
Anthracene	100	J	180	45	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	310		180	18	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	300		180	27	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	340		180	29	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	190		180	19	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	210		180	23	ug/Kg	1	☼	8270D	Total/NA
Chrysene	310		180	40	ug/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	60	J	180	32	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	580		180	19	ug/Kg	1	☼	8270D	Total/NA
Fluorene	41	J	180	21	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	190		180	22	ug/Kg	1	☼	8270D	Total/NA
Pyrene	520		180	21	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	410		180	27	ug/Kg	1	☼	8270D	Total/NA
Arsenic	6.5		2.3		mg/Kg	1	☼	6010C	Total/NA
Barium	203		0.57		mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.2		0.23		mg/Kg	1	☼	6010C	Total/NA
Chromium	21.5		0.57		mg/Kg	1	☼	6010C	Total/NA
Lead	844		1.1		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.76		0.022		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: HC-6 — Lab Sample ID: 480-196661-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	37	J	210	31	ug/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Client Sample ID: HC-6 (Continued)

Lab Sample ID: 480-196661-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	46	J	210	33	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	26	J	210	22	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	64	J	210	22	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	27	J	210	26	ug/Kg	1	☼	8270D	Total/NA
Pyrene	46	J	210	24	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	42	J	210	31	ug/Kg	1	☼	8270D	Total/NA
Arsenic	14.7		2.6		mg/Kg	1	☼	6010C	Total/NA
Barium	63.7		0.64		mg/Kg	1	☼	6010C	Total/NA
Chromium	10.6		0.64		mg/Kg	1	☼	6010C	Total/NA
Lead	59.8		1.3		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.15		0.026		mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HC-1
Date Collected: 04/11/22 12:00
Date Received: 04/11/22 14:40

Lab Sample ID: 480-196661-1
Matrix: Solid
Percent Solids: 59.5

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	460	J	1400	210	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Acenaphthylene	470	J	1400	180	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Anthracene	1300	J	1400	350	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Benzo[a]anthracene	4100		1400	140	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Benzo[a]pyrene	4100		1400	210	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Benzo[b]fluoranthene	5300		1400	220	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Benzo[g,h,i]perylene	2700		1400	150	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Benzo[k]fluoranthene	2000		1400	180	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Chrysene	4400		1400	310	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Dibenz(a,h)anthracene	820	J	1400	250	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Fluoranthene	8800		1400	150	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Fluorene	490	J	1400	170	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Indeno[1,2,3-cd]pyrene	2800		1400	170	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Naphthalene	380	J	1400	180	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Pyrene	8300		1400	170	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5
Phenanthrene	6400		1400	210	ug/Kg	☼	04/12/22 15:43	04/13/22 17:26	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*86*		*54 - 120*	*04/12/22 15:43*	*04/13/22 17:26*	*5*
2-Fluorobiphenyl	*100*		*60 - 120*	*04/12/22 15:43*	*04/13/22 17:26*	*5*
2-Fluorophenol (Surr)	*84*		*52 - 120*	*04/12/22 15:43*	*04/13/22 17:26*	*5*
Phenol-d5 (Surr)	*86*		*54 - 120*	*04/12/22 15:43*	*04/13/22 17:26*	*5*
p-Terphenyl-d14 (Surr)	*100*		*79 - 130*	*04/12/22 15:43*	*04/13/22 17:26*	*5*
Nitrobenzene-d5 (Surr)	*80*		*53 - 120*	*04/12/22 15:43*	*04/13/22 17:26*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12.9		3.4		mg/Kg	☼	04/12/22 15:31	04/14/22 19:32	1
Barium	337		0.86		mg/Kg	☼	04/12/22 15:31	04/14/22 19:32	1
Cadmium	0.84		0.34		mg/Kg	☼	04/12/22 15:31	04/14/22 19:32	1
Chromium	25.7		0.86		mg/Kg	☼	04/12/22 15:31	04/14/22 19:32	1
Lead	946		1.7		mg/Kg	☼	04/12/22 15:31	04/14/22 19:32	1
Selenium	ND		6.9		mg/Kg	☼	04/12/22 15:31	04/14/22 19:32	1
Silver	ND		1.0		mg/Kg	☼	04/12/22 15:31	04/14/22 19:32	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	8.8		0.17		mg/Kg	☼	04/14/22 10:37	04/15/22 09:55	5

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-1

Client Sample ID: HC-3
Date Collected: 04/11/22 12:30
Date Received: 04/11/22 14:40

Lab Sample ID: 480-196661-3
Matrix: Solid
Percent Solids: 92.6

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	44	J	180	27	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Acenaphthylene	25	J	180	23	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Anthracene	100	J	180	45	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Benzo[a]anthracene	310		180	18	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Benzo[a]pyrene	300		180	27	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Benzo[b]fluoranthene	340		180	29	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Benzo[g,h,i]perylene	190		180	19	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Benzo[k]fluoranthene	210		180	23	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Chrysene	310		180	40	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Dibenz(a,h)anthracene	60	J	180	32	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Fluoranthene	580		180	19	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Fluorene	41	J	180	21	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Indeno[1,2,3-cd]pyrene	190		180	22	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Naphthalene	ND		180	23	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Pyrene	520		180	21	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1
Phenanthrene	410		180	27	ug/Kg	☼	04/12/22 15:43	04/13/22 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*105*		*54 - 120*	*04/12/22 15:43*	*04/13/22 17:50*	*1*
2-Fluorobiphenyl	*97*		*60 - 120*	*04/12/22 15:43*	*04/13/22 17:50*	*1*
2-Fluorophenol (Surr)	*78*		*52 - 120*	*04/12/22 15:43*	*04/13/22 17:50*	*1*
Phenol-d5 (Surr)	*84*		*54 - 120*	*04/12/22 15:43*	*04/13/22 17:50*	*1*
p-Terphenyl-d14 (Surr)	*97*		*79 - 130*	*04/12/22 15:43*	*04/13/22 17:50*	*1*
Nitrobenzene-d5 (Surr)	*90*		*53 - 120*	*04/12/22 15:43*	*04/13/22 17:50*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.5		2.3		mg/Kg	☼	04/12/22 15:31	04/14/22 19:36	1
Barium	203		0.57		mg/Kg	☼	04/12/22 15:31	04/14/22 19:36	1
Cadmium	1.2		0.23		mg/Kg	☼	04/12/22 15:31	04/14/22 19:36	1
Chromium	21.5		0.57		mg/Kg	☼	04/12/22 15:31	04/14/22 19:36	1
Lead	844		1.1		mg/Kg	☼	04/12/22 15:31	04/14/22 19:36	1
Selenium	ND		4.6		mg/Kg	☼	04/12/22 15:31	04/14/22 19:36	1
Silver	ND		0.69		mg/Kg	☼	04/12/22 15:31	04/14/22 19:36	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.76		0.022		mg/Kg	☼	04/14/22 10:37	04/14/22 13:55	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-1

Client Sample ID: HC-6
Date Collected: 04/11/22 13:15
Date Received: 04/11/22 14:40

Lab Sample ID: 480-196661-6
Matrix: Solid
Percent Solids: 79.7

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		210	31	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Acenaphthylene	ND		210	27	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Anthracene	ND		210	51	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Benzo[a]anthracene	ND		210	21	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Benzo[a]pyrene	**37**	**J**	210	31	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Benzo[b]fluoranthene	**46**	**J**	210	33	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Benzo[g,h,i]perylene	**26**	**J**	210	22	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Benzo[k]fluoranthene	ND		210	27	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Chrysene	ND		210	47	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Dibenz(a,h)anthracene	ND		210	37	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Fluoranthene	**64**	**J**	210	22	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Fluorene	ND		210	24	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Indeno[1,2,3-cd]pyrene	**27**	**J**	210	26	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Naphthalene	ND		210	27	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Pyrene	**46**	**J**	210	24	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1
Phenanthrene	**42**	**J**	210	31	ug/Kg	☼	04/12/22 15:43	04/13/22 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*92*		*54 - 120*	*04/12/22 15:43*	*04/13/22 18:14*	*1*
2-Fluorobiphenyl	*84*		*60 - 120*	*04/12/22 15:43*	*04/13/22 18:14*	*1*
2-Fluorophenol (Surr)	*67*		*52 - 120*	*04/12/22 15:43*	*04/13/22 18:14*	*1*
Phenol-d5 (Surr)	*74*		*54 - 120*	*04/12/22 15:43*	*04/13/22 18:14*	*1*
p-Terphenyl-d14 (Surr)	*86*		*79 - 130*	*04/12/22 15:43*	*04/13/22 18:14*	*1*
Nitrobenzene-d5 (Surr)	*79*		*53 - 120*	*04/12/22 15:43*	*04/13/22 18:14*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**14.7**		2.6		mg/Kg	☼	04/12/22 15:31	04/14/22 19:39	1
Barium	**63.7**		0.64		mg/Kg	☼	04/12/22 15:31	04/14/22 19:39	1
Cadmium	ND		0.26		mg/Kg	☼	04/12/22 15:31	04/14/22 19:39	1
Chromium	**10.6**		0.64		mg/Kg	☼	04/12/22 15:31	04/14/22 19:39	1
Lead	**59.8**		1.3		mg/Kg	☼	04/12/22 15:31	04/14/22 19:39	1
Selenium	ND		5.1		mg/Kg	☼	04/12/22 15:31	04/14/22 19:39	1
Silver	ND		0.77		mg/Kg	☼	04/12/22 15:31	04/14/22 19:39	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.15**		0.026		mg/Kg	☼	04/14/22 10:37	04/14/22 13:57	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
		TBP	FBP	2FP	PHL	TPHd14	NBZ		
Lab Sample ID	Client Sample ID	(54-120)	(60-120)	(52-120)	(54-120)	(79-130)	(53-120)		
480-196661-1	HC-1	86	100	84	86	100	80		
480-196661-3	HC-3	105	97	78	84	97	90		
480-196661-6	HC-6	92	84	67	74	86	79		
LCS 480-621440/2-A	Lab Control Sample	96	91	68	74	103	81		
MB 480-621440/1-A	Method Blank	78	89	75	77	104	85		

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
NBZ = Nitrobenzene-d5 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-621440/1-A
Matrix: Solid
Analysis Batch: 621544

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 621440

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		170	25	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Acenaphthylene	ND		170	22	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Anthracene	ND		170	41	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Benzo[a]anthracene	ND		170	17	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Benzo[a]pyrene	ND		170	25	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Chrysene	ND		170	37	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Fluoranthene	ND		170	18	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Fluorene	ND		170	20	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Naphthalene	ND		170	22	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Pyrene	ND		170	20	ug/Kg		04/12/22 15:43	04/13/22 14:38	1
Phenanthrene	ND		170	25	ug/Kg		04/12/22 15:43	04/13/22 14:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*78*		*54 - 120*	*04/12/22 15:43*	*04/13/22 14:38*	*1*
2-Fluorobiphenyl	*89*		*60 - 120*	*04/12/22 15:43*	*04/13/22 14:38*	*1*
2-Fluorophenol (Surr)	*75*		*52 - 120*	*04/12/22 15:43*	*04/13/22 14:38*	*1*
Phenol-d5 (Surr)	*77*		*54 - 120*	*04/12/22 15:43*	*04/13/22 14:38*	*1*
p-Terphenyl-d14 (Surr)	*104*		*79 - 130*	*04/12/22 15:43*	*04/13/22 14:38*	*1*
Nitrobenzene-d5 (Surr)	*85*		*53 - 120*	*04/12/22 15:43*	*04/13/22 14:38*	*1*

Lab Sample ID: LCS 480-621440/2-A
Matrix: Solid
Analysis Batch: 621544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 621440

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	1620	1540		ug/Kg		95	62 - 120
Acenaphthylene	1620	1360		ug/Kg		84	58 - 121
Anthracene	1620	1490		ug/Kg		92	62 - 120
Benzo[a]anthracene	1620	1510		ug/Kg		93	65 - 120
Benzo[a]pyrene	1620	1450		ug/Kg		89	64 - 120
Benzo[b]fluoranthene	1620	1450		ug/Kg		90	64 - 120
Benzo[g,h,i]perylene	1620	1520		ug/Kg		94	45 - 145
Benzo[k]fluoranthene	1620	1660		ug/Kg		103	65 - 120
Chrysene	1620	1610		ug/Kg		100	64 - 120
Dibenz(a,h)anthracene	1620	1590		ug/Kg		98	54 - 132
Fluoranthene	1620	1510		ug/Kg		93	62 - 120
Fluorene	1620	1450		ug/Kg		90	63 - 120
Indeno[1,2,3-cd]pyrene	1620	1580		ug/Kg		97	56 - 134
Naphthalene	1620	1370		ug/Kg		85	55 - 120
Pyrene	1620	1720		ug/Kg		106	61 - 133
Phenanthrene	1620	1550		ug/Kg		96	60 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-621440/2-A
Matrix: Solid
Analysis Batch: 621544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 621440

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	96		54 - 120
2-Fluorobiphenyl	91		60 - 120
2-Fluorophenol (Surr)	68		52 - 120
Phenol-d5 (Surr)	74		54 - 120
p-Terphenyl-d14 (Surr)	103		79 - 130
Nitrobenzene-d5 (Surr)	81		53 - 120

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-621416/1-A
Matrix: Solid
Analysis Batch: 621910

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 621416

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.1		mg/Kg		04/12/22 15:31	04/14/22 18:31	1
Barium	ND		0.52		mg/Kg		04/12/22 15:31	04/14/22 18:31	1
Cadmium	ND		0.21		mg/Kg		04/12/22 15:31	04/14/22 18:31	1
Chromium	ND		0.52		mg/Kg		04/12/22 15:31	04/14/22 18:31	1
Lead	ND		1.0		mg/Kg		04/12/22 15:31	04/14/22 18:31	1
Selenium	ND		4.2		mg/Kg		04/12/22 15:31	04/14/22 18:31	1
Silver	ND		0.62		mg/Kg		04/12/22 15:31	04/14/22 18:31	1

Lab Sample ID: LCSSRM 480-621416/2-A
Matrix: Solid
Analysis Batch: 621910

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 621416

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	156	151.1		mg/Kg		96.9	69.9 - 130.1
Barium	239	235.5		mg/Kg		98.6	74.9 - 124.7
Cadmium	137	131.8		mg/Kg		96.2	75.2 - 124.8
Chromium	154	156.5		mg/Kg		101.6	70.1 - 129.9
Lead	130	145.0		mg/Kg		111.5	71.8 - 128.5
Selenium	167	159.8		mg/Kg		95.7	67.7 - 132.3
Silver	33.6	31.63		mg/Kg		94.1	68.5 - 131.3

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-621613/1-A
Matrix: Solid
Analysis Batch: 621784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 621613

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020		mg/Kg		04/14/22 10:37	04/14/22 13:37	1

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCSSRM 480-621613/2-A ^10
Matrix: Solid
Analysis Batch: 621784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 621613

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			27.2	24.98		mg/Kg		91.8	59.9 - 140.1		

GC/MS Semi VOA

Prep Batch: 621440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-1	HC-1	Total/NA	Solid	3550C	
480-196661-3	HC-3	Total/NA	Solid	3550C	
480-196661-6	HC-6	Total/NA	Solid	3550C	
MB 480-621440/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-621440/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 621544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-1	HC-1	Total/NA	Solid	8270D	621440
480-196661-3	HC-3	Total/NA	Solid	8270D	621440
480-196661-6	HC-6	Total/NA	Solid	8270D	621440
MB 480-621440/1-A	Method Blank	Total/NA	Solid	8270D	621440
LCS 480-621440/2-A	Lab Control Sample	Total/NA	Solid	8270D	621440

Metals

Prep Batch: 621416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-1	HC-1	Total/NA	Solid	3050B	
480-196661-3	HC-3	Total/NA	Solid	3050B	
480-196661-6	HC-6	Total/NA	Solid	3050B	
MB 480-621416/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-621416/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 621613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-1	HC-1	Total/NA	Solid	7471B	
480-196661-3	HC-3	Total/NA	Solid	7471B	
480-196661-6	HC-6	Total/NA	Solid	7471B	
MB 480-621613/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-621613/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 621784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-3	HC-3	Total/NA	Solid	7471B	621613
480-196661-6	HC-6	Total/NA	Solid	7471B	621613
MB 480-621613/1-A	Method Blank	Total/NA	Solid	7471B	621613
LCSSRM 480-621613/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	621613

Analysis Batch: 621910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-1	HC-1	Total/NA	Solid	6010C	621416
480-196661-3	HC-3	Total/NA	Solid	6010C	621416
480-196661-6	HC-6	Total/NA	Solid	6010C	621416
MB 480-621416/1-A	Method Blank	Total/NA	Solid	6010C	621416
LCSSRM 480-621416/2-A	Lab Control Sample	Total/NA	Solid	6010C	621416

Analysis Batch: 621935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-1	HC-1	Total/NA	Solid	7471B	621613

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-196661-1
Project/Site: Benchmark - WestTupper & Trinity

General Chemistry

Analysis Batch: 621619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-1	HC-1	Total/NA	Solid	Moisture	
480-196661-3	HC-3	Total/NA	Solid	Moisture	
480-196661-6	HC-6	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-1

Client Sample ID: HC-1
Date Collected: 04/11/22 12:00
Date Received: 04/11/22 14:40

Lab Sample ID: 480-196661-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	621619	04/13/22 16:26	JMM	TAL BUF

Client Sample ID: HC-1
Date Collected: 04/11/22 12:00
Date Received: 04/11/22 14:40

Lab Sample ID: 480-196661-1
Matrix: Solid
Percent Solids: 59.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			621440	04/12/22 15:43	SJM	TAL BUF
Total/NA	Analysis	8270D		5	621544	04/13/22 17:26	PJQ	TAL BUF
Total/NA	Prep	3050B			621416	04/12/22 15:31	NBS	TAL BUF
Total/NA	Analysis	6010C		1	621910	04/14/22 19:32	LMH	TAL BUF
Total/NA	Prep	7471B			621613	04/14/22 10:37	NVK	TAL BUF
Total/NA	Analysis	7471B		5	621935	04/15/22 09:55	BMB	TAL BUF

Client Sample ID: HC-3
Date Collected: 04/11/22 12:30
Date Received: 04/11/22 14:40

Lab Sample ID: 480-196661-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	621619	04/13/22 16:26	JMM	TAL BUF

Client Sample ID: HC-3
Date Collected: 04/11/22 12:30
Date Received: 04/11/22 14:40

Lab Sample ID: 480-196661-3
Matrix: Solid
Percent Solids: 92.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			621440	04/12/22 15:43	SJM	TAL BUF
Total/NA	Analysis	8270D		1	621544	04/13/22 17:50	PJQ	TAL BUF
Total/NA	Prep	3050B			621416	04/12/22 15:31	NBS	TAL BUF
Total/NA	Analysis	6010C		1	621910	04/14/22 19:36	LMH	TAL BUF
Total/NA	Prep	7471B			621613	04/14/22 10:37	NVK	TAL BUF
Total/NA	Analysis	7471B		1	621784	04/14/22 13:55	BMB	TAL BUF

Client Sample ID: HC-6
Date Collected: 04/11/22 13:15
Date Received: 04/11/22 14:40

Lab Sample ID: 480-196661-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	621619	04/13/22 16:26	JMM	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-196661-1
Project/Site: Benchmark - WestTupper & Trinity

Client Sample ID: HC-6
Lab Sample ID: 480-196661-6
Date Collected: 04/11/22 13:15
Matrix: Solid
Date Received: 04/11/22 14:40
Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			621440	04/12/22 15:43	SJM	TAL BUF
Total/NA	Analysis	8270D		1	621544	04/13/22 18:14	PJQ	TAL BUF
Total/NA	Prep	3050B			621416	04/12/22 15:31	NBS	TAL BUF
Total/NA	Analysis	6010C		1	621910	04/14/22 19:39	LMH	TAL BUF
Total/NA	Prep	7471B			621613	04/14/22 10:37	NVK	TAL BUF
Total/NA	Analysis	7471B		1	621784	04/14/22 13:57	BMB	TAL BUF

Laboratory References:

TAL BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-196661-1
Project/Site: Benchmark - WestTupper & Trinity

Laboratory: Eurofins Buffalo

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-23

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
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
7471B	Mercury (CVAA)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF
3050B	Preparation, Metals	SW846	TAL BUF
3550C	Ultrasonic Extraction	SW846	TAL BUF
7471B	Preparation, Mercury	SW846	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-196661-1	HC-1	Solid	04/11/22 12:00	04/11/22 14:40
480-196661-3	HC-3	Solid	04/11/22 12:30	04/11/22 14:40
480-196661-6	HC-6	Solid	04/11/22 13:15	04/11/22 14:40

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

[redacted]

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler: Nicole Sorali	Lab PM: Brian Fisk	Carrier Tracking No(s):	COC No:
Client Contact: Benchmark EES Nicolson	Phone: 716-713-3937	E-Mail:	State of Origin:	Page:
Company:		Accreditations Required (See note):		Job #:
Address: 2558 hamburg Tpke	Due Date Requested: Standard			
City: Buffalo NY 14218	TAT Requested (days):			
State, Zip:				
Phone: 716-713-3937	PO #: T6099-022-001			
Email:	WO #:			
Project Name: West Tupper + Trinity	Project #:			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
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)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PAH's	RCRA Metals	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
HC-1	4/11/22	12:00	G	S			X	X		
HC-2	↓	12:15	↓	↓						hold
HC-3	↓	12:30	↓	↓			X	X		
HC-4	↓	12:45	↓	↓						hold
HC-5	↓	13:00	↓	↓						hold
HC-6	↓	13:15	↓	↓			X	X		

480-196661 Chain of Custody

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ______ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: [signature]	Date/Time: 4/11/22 14:40	Company	Received by: [signature]	Date/Time: 4/11/22 14:40	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.7 #1 ICE

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-196661-1

Login Number: 196661

List Source: Eurofins Buffalo

List Number: 1

Creator: Yeager, Brian A

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
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.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers 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	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	benchmark
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

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ANALYTICAL REPORT

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-196661-3
Client Project/Site: Benchmark - WestTupper & Trinity

For:
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Lackawanna, New York 14218

Attn: Bryan Mayback

Authorized for release by:
4/25/2022 3:01:38 PM
Rebecca Jones, Project Management Assistant I
Rebecca.Jones@et.eurofinsus.com

Designee for

Brian Fischer, Manager of Project Management
(716)504-9835
Brian.Fischer@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-196661-3
Project/Site: Benchmark - WestTupper & Trinity

Qualifiers

GC/MS Semi 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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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

Job ID: 480-196661-3

Laboratory: Eurofins Buffalo

Narrative

Job Narrative
480-196661-3

Comments
No additional comments.

Receipt
The samples were received on 4/11/2022 2:40 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.7º C.

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

Metals
No analytical or quality issues were noted, other than those described 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: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-196661-3
Project/Site: Benchmark - WestTupper & Trinity

Client Sample ID: HC-4 — Lab Sample ID: 480-196661-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.9		2.6		mg/Kg	1	☼	6010C	Total/NA
Barium	104		0.66		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.93		0.26		mg/Kg	1	☼	6010C	Total/NA
Chromium	15.4		0.66		mg/Kg	1	☼	6010C	Total/NA
Lead	433		1.3		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.35		0.025		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: HC-5 — Lab Sample ID: 480-196661-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	56	J	250	36	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	120	J	250	39	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	56	J	250	26	ug/Kg	1	☼	8270D	Total/NA
Chrysene	300		250	55	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	68	J	250	26	ug/Kg	1	☼	8270D	Total/NA
Naphthalene	68	J	250	32	ug/Kg	1	☼	8270D	Total/NA
Pyrene	85	J	250	29	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	140	J	250	36	ug/Kg	1	☼	8270D	Total/NA
Arsenic	38.4		2.8		mg/Kg	1	☼	6010C	Total/NA
Barium	185		0.71		mg/Kg	1	☼	6010C	Total/NA
Chromium	10		0.71		mg/Kg	1	☼	6010C	Total/NA
Lead	32.6		1.4		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.070		0.031		mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-3

Client Sample ID: HC-4
Date Collected: 04/11/22 12:45
Date Received: 04/11/22 14:40

Lab Sample ID: 480-196661-4
Matrix: Solid
Percent Solids: 78.3

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.9**		2.6		mg/Kg	☼	04/21/22 15:22	04/24/22 20:08	1
Barium	**104**		0.66		mg/Kg	☼	04/21/22 15:22	04/24/22 20:08	1
Cadmium	**0.93**		0.26		mg/Kg	☼	04/21/22 15:22	04/24/22 20:08	1
Chromium	**15.4**		0.66		mg/Kg	☼	04/21/22 15:22	04/24/22 20:08	1
Lead	**433**		1.3		mg/Kg	☼	04/21/22 15:22	04/24/22 20:08	1
Selenium	ND		5.3		mg/Kg	☼	04/21/22 15:22	04/24/22 20:08	1
Silver	ND		0.79		mg/Kg	☼	04/21/22 15:22	04/24/22 20:08	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.35**		0.025		mg/Kg	☼	04/22/22 09:35	04/22/22 12:32	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-3

Client Sample ID: HC-5
Date Collected: 04/11/22 13:00
Date Received: 04/11/22 14:40

Lab Sample ID: 480-196661-5
Matrix: Solid
Percent Solids: 68.1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		250	36	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Acenaphthylene	ND		250	32	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Anthracene	ND		250	61	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Benzo[a]anthracene	ND		250	25	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Benzo[a]pyrene	**56**	**J**	250	36	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Benzo[b]fluoranthene	**120**	**J**	250	39	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Benzo[g,h,i]perylene	**56**	**J**	250	26	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Benzo[k]fluoranthene	ND		250	32	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Chrysene	**300**		250	55	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Dibenz(a,h)anthracene	ND		250	44	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Fluoranthene	**68**	**J**	250	26	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Fluorene	ND		250	29	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Indeno[1,2,3-cd]pyrene	ND		250	31	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Naphthalene	**68**	**J**	250	32	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Pyrene	**85**	**J**	250	29	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1
Phenanthrene	**140**	**J**	250	36	ug/Kg	☼	04/20/22 15:18	04/22/22 06:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*95*		*54 - 120*	*04/20/22 15:18*	*04/22/22 06:11*	*1*
2-Fluorobiphenyl	*88*		*60 - 120*	*04/20/22 15:18*	*04/22/22 06:11*	*1*
2-Fluorophenol (Surr)	*76*		*52 - 120*	*04/20/22 15:18*	*04/22/22 06:11*	*1*
Phenol-d5 (Surr)	*74*		*54 - 120*	*04/20/22 15:18*	*04/22/22 06:11*	*1*
p-Terphenyl-d14 (Surr)	*88*		*79 - 130*	*04/20/22 15:18*	*04/22/22 06:11*	*1*
Nitrobenzene-d5 (Surr)	*84*		*53 - 120*	*04/20/22 15:18*	*04/22/22 06:11*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**38.4**		2.8		mg/Kg	☼	04/21/22 15:22	04/24/22 20:12	1
Barium	**185**		0.71		mg/Kg	☼	04/21/22 15:22	04/24/22 20:12	1
Cadmium	ND		0.28		mg/Kg	☼	04/21/22 15:22	04/24/22 20:12	1
Chromium	**10**		0.71		mg/Kg	☼	04/21/22 15:22	04/24/22 20:12	1
Lead	**32.6**		1.4		mg/Kg	☼	04/21/22 15:22	04/24/22 20:12	1
Selenium	ND		5.6		mg/Kg	☼	04/21/22 15:22	04/24/22 20:12	1
Silver	ND		0.85		mg/Kg	☼	04/21/22 15:22	04/24/22 20:12	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.070**		0.031		mg/Kg	☼	04/22/22 09:35	04/22/22 12:33	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-3

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
		TBP	FBP	2FP	PHL	TPHd14	NBZ		
Lab Sample ID	Client Sample ID	(54-120)	(60-120)	(52-120)	(54-120)	(79-130)	(53-120)		
480-196661-5	HC-5	95	88	76	74	88	84		
LCS 480-622510/2-A	Lab Control Sample	92	87	68	71	103	81		
MB 480-622510/1-A	Method Blank	71	87	75	77	94	80		

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
NBZ = Nitrobenzene-d5 (Surr)

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-3

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-622510/1-A
Matrix: Solid
Analysis Batch: 622665

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 622510

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		170	24	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Acenaphthylene	ND		170	22	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Anthracene	ND		170	41	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Benzo[a]anthracene	ND		170	17	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Benzo[a]pyrene	ND		170	24	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Benzo[b]fluoranthene	ND		170	26	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Chrysene	ND		170	37	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Dibenz(a,h)anthracene	ND		170	29	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Fluoranthene	ND		170	18	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Fluorene	ND		170	20	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Naphthalene	ND		170	22	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Pyrene	ND		170	20	ug/Kg		04/20/22 15:18	04/22/22 04:12	1
Phenanthrene	ND		170	24	ug/Kg		04/20/22 15:18	04/22/22 04:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*71*		*54 - 120*	*04/20/22 15:18*	*04/22/22 04:12*	*1*
2-Fluorobiphenyl	*87*		*60 - 120*	*04/20/22 15:18*	*04/22/22 04:12*	*1*
2-Fluorophenol (Surr)	*75*		*52 - 120*	*04/20/22 15:18*	*04/22/22 04:12*	*1*
Phenol-d5 (Surr)	*77*		*54 - 120*	*04/20/22 15:18*	*04/22/22 04:12*	*1*
p-Terphenyl-d14 (Surr)	*94*		*79 - 130*	*04/20/22 15:18*	*04/22/22 04:12*	*1*
Nitrobenzene-d5 (Surr)	*80*		*53 - 120*	*04/20/22 15:18*	*04/22/22 04:12*	*1*

Lab Sample ID: LCS 480-622510/2-A
Matrix: Solid
Analysis Batch: 622665

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 622510

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	1650	1560		ug/Kg		94	62 - 120
Acenaphthylene	1650	1410		ug/Kg		85	58 - 121
Anthracene	1650	1500		ug/Kg		91	62 - 120
Benzo[a]anthracene	1650	1580		ug/Kg		96	65 - 120
Benzo[a]pyrene	1650	1470		ug/Kg		89	64 - 120
Benzo[b]fluoranthene	1650	1810		ug/Kg		109	64 - 120
Benzo[g,h,i]perylene	1650	1620		ug/Kg		98	45 - 145
Benzo[k]fluoranthene	1650	1540		ug/Kg		93	65 - 120
Chrysene	1650	1650		ug/Kg		100	64 - 120
Dibenz(a,h)anthracene	1650	1600		ug/Kg		97	54 - 132
Fluoranthene	1650	1550		ug/Kg		94	62 - 120
Fluorene	1650	1490		ug/Kg		90	63 - 120
Indeno[1,2,3-cd]pyrene	1650	1620		ug/Kg		98	56 - 134
Naphthalene	1650	1390		ug/Kg		84	55 - 120
Pyrene	1650	1730		ug/Kg		104	61 - 133
Phenanthrene	1650	1530		ug/Kg		93	60 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-622510/2-A
Matrix: Solid
Analysis Batch: 622665

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 622510

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	*92*		*54 - 120*
2-Fluorobiphenyl	*87*		*60 - 120*
2-Fluorophenol (Surr)	*68*		*52 - 120*
Phenol-d5 (Surr)	*71*		*54 - 120*
p-Terphenyl-d14 (Surr)	*103*		*79 - 130*
Nitrobenzene-d5 (Surr)	*81*		*53 - 120*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-622641/1-A
Matrix: Solid
Analysis Batch: 623050

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 622641

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0		mg/Kg		04/21/22 15:22	04/24/22 18:58	1
Barium	ND		0.49		mg/Kg		04/21/22 15:22	04/24/22 18:58	1
Cadmium	ND		0.20		mg/Kg		04/21/22 15:22	04/24/22 18:58	1
Chromium	ND		0.49		mg/Kg		04/21/22 15:22	04/24/22 18:58	1
Lead	ND		0.98		mg/Kg		04/21/22 15:22	04/24/22 18:58	1
Selenium	ND		3.9		mg/Kg		04/21/22 15:22	04/24/22 18:58	1
Silver	ND		0.59		mg/Kg		04/21/22 15:22	04/24/22 18:58	1

Lab Sample ID: LCSSRM 480-622641/2-A
Matrix: Solid
Analysis Batch: 623050

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 622641

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	156	149.6		mg/Kg		95.9	69.9 - 130.1
Barium	239	232.5		mg/Kg		97.3	74.9 - 124.7
Cadmium	137	137.4		mg/Kg		100.3	75.2 - 124.8
Chromium	154	155.8		mg/Kg		101.2	70.1 - 129.9
Lead	130	142.1		mg/Kg		109.3	71.8 - 128.5
Selenium	167	161.9		mg/Kg		97.0	67.7 - 132.3
Silver	33.6	30.96		mg/Kg		92.1	68.5 - 131.3

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-622712/1-A
Matrix: Solid
Analysis Batch: 622899

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 622712

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020		mg/Kg		04/22/22 09:35	04/22/22 12:08	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-3

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCSSRM 480-622712/2-A
Matrix: Solid
Analysis Batch: 622899

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 622712

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			27.2	19.46		mg/Kg		71.5	59.9 - 140.1		

GC/MS Semi VOA

Prep Batch: 622510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-5	HC-5	Total/NA	Solid	3550C	
MB 480-622510/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-622510/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 622665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-5	HC-5	Total/NA	Solid	8270D	622510
MB 480-622510/1-A	Method Blank	Total/NA	Solid	8270D	622510
LCS 480-622510/2-A	Lab Control Sample	Total/NA	Solid	8270D	622510

Metals

Prep Batch: 622641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-4	HC-4	Total/NA	Solid	3050B	
480-196661-5	HC-5	Total/NA	Solid	3050B	
MB 480-622641/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-622641/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 622712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-4	HC-4	Total/NA	Solid	7471B	
480-196661-5	HC-5	Total/NA	Solid	7471B	
MB 480-622712/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-622712/2-A	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 622899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-4	HC-4	Total/NA	Solid	7471B	622712
480-196661-5	HC-5	Total/NA	Solid	7471B	622712
MB 480-622712/1-A	Method Blank	Total/NA	Solid	7471B	622712
LCSSRM 480-622712/2-A	Lab Control Sample	Total/NA	Solid	7471B	622712

Analysis Batch: 623050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-4	HC-4	Total/NA	Solid	6010C	622641
480-196661-5	HC-5	Total/NA	Solid	6010C	622641
MB 480-622641/1-A	Method Blank	Total/NA	Solid	6010C	622641
LCSSRM 480-622641/2-A	Lab Control Sample	Total/NA	Solid	6010C	622641

General Chemistry

Analysis Batch: 622916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-196661-5	HC-5	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-3

Client Sample ID: HC-4

Lab Sample ID: 480-196661-4

Date Collected: 04/11/22 12:45
Date Received: 04/11/22 14:40

Matrix: Solid
Percent Solids: 78.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			622641	04/21/22 15:22	VAK	TAL BUF
Total/NA	Analysis	6010C		1	623050	04/24/22 20:08	LMH	TAL BUF
Total/NA	Prep	7471B			622712	04/22/22 09:35	NBS	TAL BUF
Total/NA	Analysis	7471B		1	622899	04/22/22 12:32	BMB	TAL BUF

Client Sample ID: HC-5

Lab Sample ID: 480-196661-5

Date Collected: 04/11/22 13:00
Date Received: 04/11/22 14:40

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	622916	04/22/22 17:33	IMZ	TAL BUF

Client Sample ID: HC-5

Lab Sample ID: 480-196661-5

Date Collected: 04/11/22 13:00
Date Received: 04/11/22 14:40

Matrix: Solid
Percent Solids: 68.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			622510	04/20/22 15:18	SJM	TAL BUF
Total/NA	Analysis	8270D		1	622665	04/22/22 06:11	PJQ	TAL BUF
Total/NA	Prep	3050B			622641	04/21/22 15:22	VAK	TAL BUF
Total/NA	Analysis	6010C		1	623050	04/24/22 20:12	LMH	TAL BUF
Total/NA	Prep	7471B			622712	04/22/22 09:35	NBS	TAL BUF
Total/NA	Analysis	7471B		1	622899	04/22/22 12:33	BMB	TAL BUF

Laboratory References:

TAL BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-196661-3
Project/Site: Benchmark - WestTupper & Trinity

Laboratory: Eurofins Buffalo

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-23

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
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-196661-3
Project/Site: Benchmark - WestTupper & Trinity

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
7471B	Mercury (CVAA)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF
3050B	Preparation, Metals	SW846	TAL BUF
3550C	Ultrasonic Extraction	SW846	TAL BUF
7471B	Preparation, Mercury	SW846	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - WestTupper & Trinity

Job ID: 480-196661-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-196661-4	HC-4	Solid	04/11/22 12:45	04/11/22 14:40
480-196661-5	HC-5	Solid	04/11/22 13:00	04/11/22 14:40

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

[redacted]

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler: Nicole Surali	Lab PM: Brian Fisher	Carrier Tracking No(s):	COC No:
Client Contact: Benchmark EES Nicholson	Phone: 716-713-3937	E-Mail:	State of Origin:	Page:
Company:		Accreditations Required (See note):		Job #:
Address: 2558 Hamburg Tpke	Due Date Requested: Standard			
City: Buffalo NY 14218	TAT Requested (days):			
State, Zip:				
Phone: 716-713-3937	PO #: T6099-022-001			
Email:	WO #:			
Project Name: West Tupper + Trinity	Project #:			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
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)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PAH's	RCRA Metals	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
HC-1	4/11/22	12:00	G	S			X	X		
HC-2	↓	12:15	↓	↓						hold
HC-3	↓	12:30	↓	↓			X	X		
HC-4	↓	12:45	↓	↓						hold
HC-5	↓	13:00	↓	↓						hold
HC-6		13:15					X	X		

480-196661 Chain of Custody

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) | Primary Deliverable Rank: 2 | Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by: [signature]	Date/Time: 4/11/22 14:40	Company	Received by: [signature]	Date/Time: 4/11/22 14:40	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 4.7 # 1 ICE		

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-196661-3

Login Number: 196661

List Source: Eurofins Buffalo

List Number: 1

Creator: Yeager, Brian A

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
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.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers 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	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	benchmark
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	