Phase II Environmental Investigation Report

225 Louisiana Street and Associated Parcels
Buffalo, New York

February 2019 B0305-018-001

Prepared For:

The Frizlen Group

Prepared By:

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PHASE II ENVIRONMENTAL INVESTIGATION REPORT

225 LOUISIANA STREET AND ASSOCIATED PARCELS

BUFFALO, NEW YORK

February 2019 B0305-018-001

Prepared for:

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1.0 INTRODUCTION

1.1 Background and Site Description

Benchmark Environmental Engineering & Science, PLLC (Benchmark) performed a Phase II Environmental Investigation on behalf of The Frizlen Group at 225 Louisiana Street and Associated Parcels in the City of Buffalo, Erie County, New York (Site).

The Site is located in a highly developed residential, commercial and industrial area of the City of Buffalo (see Figure 1). The Site is supplied with and has access to municipal sanitary sewer, electric, natural-gas and public water.

As shown on Figure 2, one structure is present on the Site. The existing building has an industrial history and is currently used as a distribution facility by several tenants. The existing building also includes vacant spaces and storage areas. Associated parcels, which are currently used as asphalt and gravel parking lots and green areas, are also shown on Figure 2.

The Site, consisting of five parcels totaling 4.2-acres, is defined in the table below:

Parcel Address	Size (acres)	Tax ID No.	Corresponding Figure	Current Use
225 Louisiana	2.2	122.47-1-1	See Figure 2A	Industrial building currently used as a distribution facility.
245 Louisiana	1.6	122.40-9-1		Parking lot and green area.
96 Kentucky	0.06	122.47-4-3		Green area.
175 Louisiana	0.06	122.47-4-28		Green area.
177 Louisiana	0.33	122.47-4-2		Gravel parking lot.

As further detailed below, a previous environmental assessment has been completed at the Site.

1.2 Previous Study

Benchmark completed a Phase I Environmental Site Assessment (ESA) for the Site dated November 2018. The following provides a summary of historic Site uses identified through Benchmark's review of historic Sanborn maps, city directories, regulatory documents and municipal records.

225 Louisiana

Approximate Years	Reported or Suspected Use	Owner/Occupant
At least 1889 through 1920	Lumber yard with storage, sawing and planning areas and lumber piles.	Buffalo Hardwood Lumber Company
1920 to 1990s	Existing building, reportedly constructed in 1920, used for heavy industrial/factory purposes. Operations included, but are not limited to, manufacturing, a foundry, nickel plating, machine shops, iron works, spray booths/painting, annealing, a forge shop with 17 oil furnaces and dipping with dip tanks. The Site has an extensive tank history estimated at eight underground storage tanks (USTs) located on-Site between 1940 and 1992. The only UST removal record was a municipal document indicating removal of one 15,000-gallon fuel oil UST from the Site in 1992. Registered chemical bulk storage (CBS) aboveground storage tanks (ASTs) were also identified.	Barcalo Manufacturing, Crescent Niagara Corporation, McLean Box Company.
1990s to current	Warehousing/distribution facility	Current owner is 1035 Abbott Road Corp.

245 Louisiana

Approximate Years	Reported or Suspected Use	Owner/Occupant
At least 1889 through prior to 1899	Oil works with one bulk oil storage tank and three former buildings.	Empire Oil Works
Prior to 1899 through prior to 1926	Lumber yard/company with former buildings.	Niagara Lumber Company
At least 1926 through prior to 1950	Automotive repair in a former building.	Unknown individual owner.
At least 1950 through current	Vacant land and/or parking lot areas.	Current owner is 1035 Abbott Road Corp.

175-177 Louisiana and 96 Kentucky

Approximate Years	Reported or Suspected Use	Owner/Occupant
At least 1889 through prior to 1981.	Developed with railroad tracks and former buildings including residences, storefronts, and grain/feed warehouses.	Unknown individual owners.
At least 1981 to current	Gravel parking/storage area.	Current owner is Buffalo Mercantile Ltd.

Benchmark's assessment revealed the following recognized environmental conditions (RECs) in connection with the Site:

- Past commercial and industrial uses including manufacturing with a foundry, nickel plating, machine shops, iron works, dip tanks, and a forge shop, lumber yards, oil works with at least one bulk oil storage tank, automotive repair, railroad tracks and grain/feed warehousing.
- The extensive tank history as sufficient tank closure documentation apparently does not exist. Regulatory listings indicate the former presence of CBS ASTs along with the potential for additional tanks.
- Spill No. 9204109, dated July 9, 1992, involving a former fuel oil UST as there is no indication of confirmatory soil sampling when the New York State Department of Environmental Conservation (NYSDEC) reclassified the spill as "closed" on January 30, 2001. It is possible that the reported former fuel oil UST disturbance and suspect vent pipe bracket observed by Benchmark east adjacent to the existing building are associated with the former fuel oil UST identified under the spill incident.
- The pipe of unknown nature identified protruding from the ground along the east wall of the building and unknown bracket on the wall proximate to the pipe as the nature is unknown.
- The transformer room with five privately-owned transformers, one of which is inactive, as such may contain polychlorinated biphenyls (PCBs). Electronic wastes such as light ballasts may also contain PCBs.
- The black staining noted in the transformer room, including a reported former transformer location, due to the potential for PCB impacts.
- The additional black staining noted within the building due to the potential for impacts beneath the building slab.
- The trench drain noted within the building due to the potential for subsurface impacts from historic discharges.
- The reported conveyor from the existing building across Kentucky Street and to the east adjacent building as the nature of the conveyor and piping contents are unknown.
- The potential for fill material from unknown sources based on the urban location of the Site and former buildings.
- The industrial nature of surrounding properties.

In consideration of the RECs detailed above, this Phase II was completed to further assess subsurface soil/fill and groundwater conditions at the Site.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 Test Pit Investigation

On January 3, 2019, January 4, 2019, and February 14, 2019 Benchmark mobilized a track-mounted excavator to the Site to assess subsurface conditions on exterior portions of the Site. As shown on Figure 2, 18 test pits designated as TP-1 through TP-18 were completed at the Site. The test pits were advanced to depths ranging between 3 feet below ground surface (fbgs) and 12 fbgs.

The physical characteristics of all test pits were classified using the ASTM D2488 Visual-Manual Procedure Description. Soil/fill from each test pit was screened via headspace screening using a MiniRae 2000 Photoionization Detector (PID). Visual and/or olfactory observations, if any, were noted. All field observations, including lithology, depths, PID scan results, etc., at each investigation location are summarized on Table 1. Photographs taken during the work are included in Appendix B.

A total of fourteen (14) soil/fill samples were selected for laboratory analysis for Target Compound List (TCL) plus Commissioners Policy-51 (CP-51) volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs) and/or Resource Conservation and Recovery Act (RCRA) metals. The soil samples collected as part of the investigation were transported under chain-of custody command for analysis to TestAmerica Laboratories, Inc. (TestAmerica) in Amherst, New York. Samples were collected in laboratory provided sample jars and cooled to 4 C° prior to transport.

2.2 Soil Boring Investigation

On January 4th, 2019, Benchmark's subcontractor, TREC Environmental, Inc. (TREC), mobilized a 54LT Geoprobe direct-push drill rig equipped with a two-inch diameter, 48-inch long macro-core sampler to the Site to assess subsurface conditions within the existing building. As shown on Figure 2, 8 soil borings designated as SB-1 through SB-8 were completed at the Site. Each soil boring was completed subsequent to concrete removal with a concrete corer. As further described in Section 2.4, three soil borings were converted into temporary one-inch diameter monitoring wells. The soil borings were advanced to a target depth of 12 fbgs.

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 Benchmark'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 PID. Visual and/or olfactory observations, if any, 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.

A total of five soil/fill samples were selected for laboratory analysis for TCL plus CP-51 VOCs, PAHs and/or RCRA metals.

The soil/fill samples collected as part of the investigation were transported under chain-of custody command for analysis to TestAmerica in Amherst, New York. Samples were collected in laboratory provided sample jars and cooled to 4 C° prior to transport.

2.3 Interior Hand Core Surface/Near Surface Sampling and Trench Floor Drain Sampling

A concrete corer was used to remove concrete from the transformer room in order to access soil/fill beneath the building foundation as this area is inaccessible to a drill rig. One soil/fill sample designated as TR-1 from beneath the concrete foundation in the transformer room was analyzed by TestAmerica for PCBs.

One sludge/sediment sample designated as FD-1 was collected using hand tools from a floor trench drain within the building was analyzed by TestAmerica for TCL plus CP-51 VOCs, PAHs and RCRA metals.

2.4 Groundwater Sampling

Three soil borings, SB-1, SB-4, and SB-7, were converted into temporary one-inch diameter monitoring wells. The temporary wells were installed using one-inch diameter Schedule 40 PVC well screen and riser. Groundwater grab samples were collected from the temporary wells using a dedicated and disposable 0.5" polyethylene bailer. The temporary wells were manually decommissioned (pulled) following groundwater sampling activities. The resulting open annulus was backfilled with Site soils.

Three groundwater samples were placed in pre-cleaned laboratory provided sample bottles, cooled to 4 °C in the field, and transported under chain-of-custody to TestAmerica for analysis of TCL plus CP-51 VOCs.

3.0 INVESTIGATION FINDINGS

3.1 Site Geology/Hydrogeology

The overburden geology observed during the test pit and soil boring investigation is generally described as non-native fill materials at depths ranging between 1 fbgs and 8 fbgs overlying native soils consisting of fine sand, sandy lean clay, and/or sand with silt and gravel to a depth of at least 12 fbgs (see Test Pit Summary provided as Table 1 and Soil Boring Logs in Appendix A). Specific to fill materials encountered during investigation activities, black fill material consisting of cinders, brick, glass, coal, metal, ash, and/or slag was noted at depths ranging in thickness between approximately 1 fbgs and 8 fbgs at interior soil borings and between 1 fbgs and 4 fbgs at exterior test pits. During the test pit investigation on the northern portion of the Site (i.e., test pits TP-1, TP-2, TP-3, TP-5, TP-6, TP-7, TP-8, TP-9), a separate deeper white/gray fill unit consisting mostly of ash was noted beneath the black fill unit at depths ranging between approximately 1 fbgs and 6 fbgs.

Groundwater was encountered during the fieldwork at most test pit and soil boring investigation locations at depths ranging from near surface at approximately 0.5 fbgs to 6 fbgs.

Groundwater flow is likely to the west toward the Buffalo River. 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 test pit and soil boring investigation were observed and scanned via headspace screening for volatile organics using a PID. A description of the field observations during the soil boring and test pit investigations are presented below and included in Table 1 and Appendix A.

Investigation Location ID	Environmental Concern Assessed	Highest PID reading (parts per million, ppm) and depth (fbgs)	Other Observations
TEST PIT INVESTIGATION			
TP-1	Former building	0	Fill to 6 fbgs.
TP-2	Former bulk oil storage tank	0	Fill to 6 fbgs.
TP-3	Former automotive repair	250 ppm-6 fbgs.	Encountered orphan UST in poor condition with field evidence of petroleum impacts.
TP-4		145 ppm- 5 fbgs.	Field evidence of petroleum impacts.
TP-5	Former building location	0	Fill to 2 fbgs.
TP-6	Former empire oil works	0	Fill to 3.5 fbgs.
TP-7		0	Fill to 5 fbgs.
TP-8		0	Fill to 2 fbgs.
TP-9		3 ppm- 6 fbgs.	Fill to 2 fbgs.
TP-10		0	Fill to 2 fbgs.
TP-11	Former building location	0	Fill to 4 fbgs.
TP-12		0	Fill to 3 fbgs.
TP-13	Railroad tracks	4.2 ppm- 8.5 fbgs.	Fill to 3 fbgs. Petroleum-like odors.
TP-14		0.1 ppm - 8 fbgs.	Fill to 2 fbgs.
TP-15		0	Fill to at least 2 fbgs.
TP-16		0	Fill to at least 3 fbgs. Slight sheen on groundwater.
TP-17	Former building location	0	Fill to 3 fbgs. Slight sheen on groundwater.
TP-18	General subsurface conditions in current parking lot on northern portion of Site.	0	Fill to 2 fbgs.
SOIL BORING INVESTIGATION			
SB-1	Former machine shop	0	Fill to 2.5 fbgs.
SB-2	Former machine shop, foundry	0	Fill to 3 fbgs.
SB-3	Former foundry	0	Fill to 2 fbgs.
SB-4		3 ppm- 1 fbgs.	Fill to 5 fbgs.
SB-5	Former USTs	0	Fill to 1 fbgs.
SB-6		0	Fill to 8 fbgs.
SB-7		0.5 ppm- 4 fbgs.	Fill to 2 fbgs.
SB-8		0	Fill to 6 fbgs.

3.3 NYSDEC Spill Incident

Due to the presence of an orphan UST in poor condition along with visual petroleum impacts (i.e., black stained soils and a sheen on groundwater) observed by Benchmark, as required by law, the NYSDEC was notified and Spill No. 1810137 was assigned to 245 Louisiana Street. Tom Johnson is reportedly the NYSDEC Spill Engineer assigned to the spill incident.

3.4 Soil Analytical Results

Table 2 presents a summary of the laboratory analytical results. For comparative purposes, Table 2 includes 6NYCRR Part 375 Unrestricted Soil Cleanup Objectives (USCOs), Restricted Residential SCOs (RRSCOs), and Commercial SCOs (CSCOs). Based on the anticipated future use of the Site, RRSCOs apply as the comparative criteria. Appendix C contains a copy of the laboratory analytical data package.

As summarized on Table 2, petroleum VOCs exceed USCOs and/or RRSCOs at TP-3, where an orphan UST was encountered.

PAHs were identified at concentrations exceeding USCOs, RRSCOs, and/or CSCOs in eight of the sixteen soil/fill samples collected across the Site at SB-4, SB-7, TP-2, TP-3, TP-8, TP-11, TP-16, and TP-18. One or more individual PAHs yielded concentrations exceeding RRSCOs in seven of the soil/fill samples collected across the Site at SB-4, SB-7, TP-2, TP-8, TP-11, TP-16 and TP-18.

Metals were identified at concentrations exceeding USCOs, RRSCOs, and/or CSCOs in fifteen of the sixteen soil/fill samples collected across the Site at SB-1, SB-2, SB-5, SB-7, TP-2, TP-3, TP-7, TP-8, TP-9, TP-11, TP-12, TP-14, TP-16, TP-17, and TP-18. RRSCO exceedances were identified at SB-1 (mercury, arsenic, cadmium and lead), SB-2 (barium), SB-5 (mercury), SB-7 (mercury), TP-2 (barium), TP-3 (mercury), TP-8 (lead), TP-9 (arsenic, mercury), TP-11 (lead, mercury) and TP-17 (lead). Of note, concentrations of arsenic (136 milligrams per kilogram, mg/kg) and lead (5,680 mg/kg) at SB-1 significantly exceed their respective RRSCOs of 16 mg/kg and 1,000 mg/kg, respectively.

PCBs were not identified at a concentration above laboratory detection limits in the soil/fill sample collected from the transformer room.

VOCs were either not detected or were at concentrations below USCOs in the sludge collected from the trench floor drain.

A summary of impacts at the Site is provided as Figure 3.

3.5 Groundwater Analytical Results

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

As indicated on Table 3, VOC concentrations in all three groundwater samples were either not detected or below their respective Class GA GWQS.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the Phase II Environmental Investigation at the Site, Benchmark offers the following conclusions and recommendations:

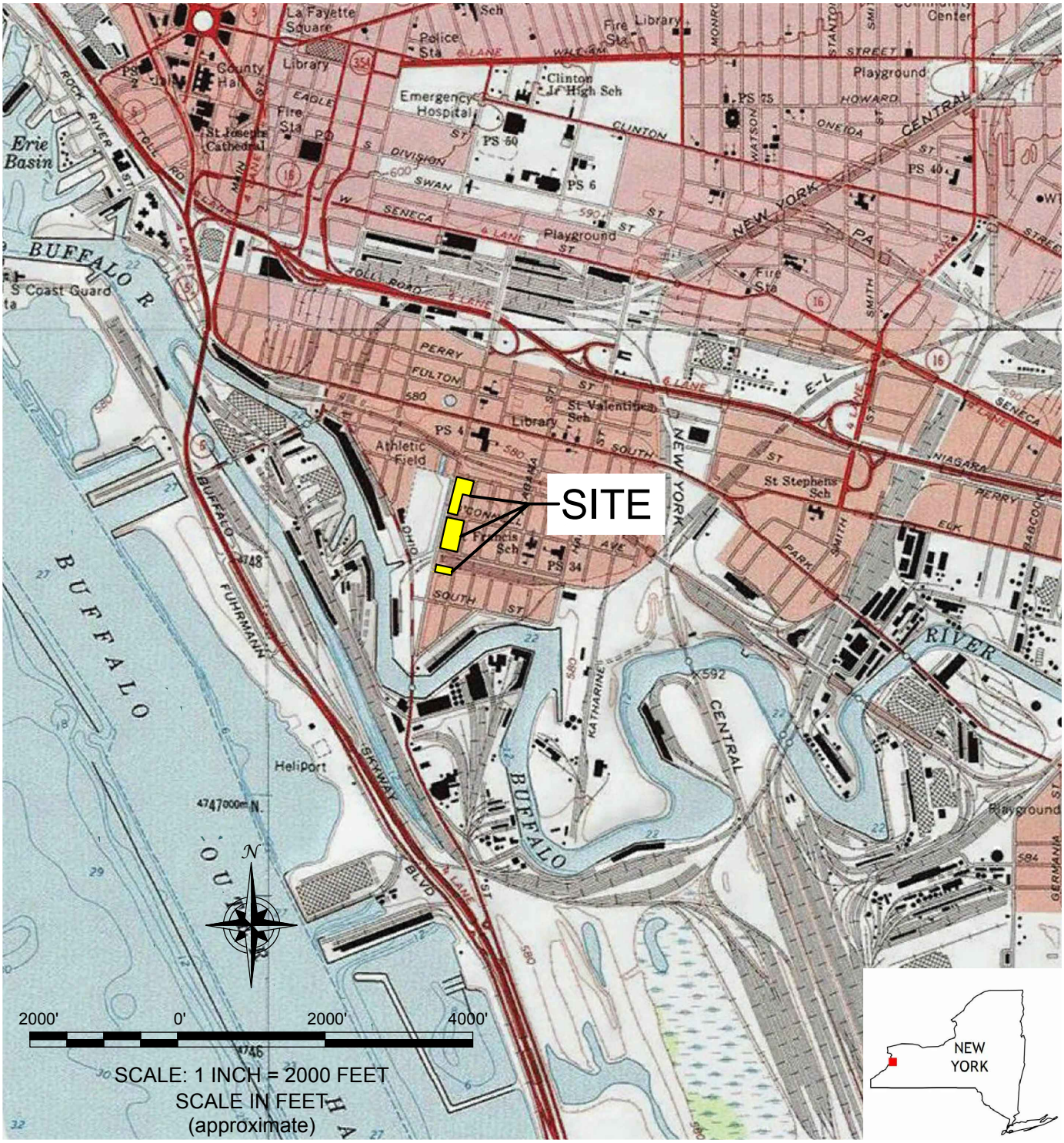
- Past commercial and industrial uses of the Site include manufacturing with a foundry, nickel plating, machine shops, iron works, dipping with dip tanks, a forge shop, lumber yards, oil works with at least one bulk oil storage tank, automotive repair, railroad tracks and grain/feed warehousing.
- One orphan UST, noted in poor condition, was encountered by Benchmark at TP-3. Visually impacted media (i.e., black stained soils and a sheen on groundwater) and elevated PID readings were identified proximate to the orphan UST; analytical results from TP-3 indicate VOCs present at concentrations above USCOs and RRSCOs. Due to the presence of this orphan UST with visual impacts at TP-3, as required by law, the NYSDEC was notified and Spill No. 1810137 was assigned to 245 Louisiana Street. Tom Johnson is reportedly the NYSDEC Spill Engineer assigned to the spill incident.
- Black stained soils were also observed by Benchmark west of the orphan UST area at TP-4. In addition, a slight sheen was observed on groundwater at TP-16 and TP-17 and petroleum-like odors were noted at TP-13.
- Fill materials generally range between 1 fbgs and 8 fbgs. Specifically:
    - Black fill material consisting of cinders, brick, glass, coal, metal, ash, and/or slag was noted at depths ranging in thickness between approximately 1 fbgs and 8 fbgs at interior soil borings and between 1 fbgs and 4 fbgs at exterior test pits.
    - During the test pit investigation on the northern portion of the Site (i.e., test pits TP-1, TP-2, TP-3, TP-5, TP-6, TP-7, TP-8, and TP-9), a separate deeper white/gray fill unit consisting mostly of ash was noted beneath the black fill unit at depths ranging between approximately 1 fbgs and 6 fbgs.
- Laboratory analytical results indicate that fill materials across the Site are impacted by PAHs and metals (arsenic, barium, cadmium, lead and mercury) with concentrations exceeding Part 375 SCOs, including USCOs, RRSCOs and CSCOs.
- VOC concentrations in groundwater samples were either not detected above laboratory detection limits or were at concentrations below GWQS.
- We understand the property is being considered for redevelopment in a residential and commercial re-use scenario. Applicable SCOs would be RRSCOs based on planned use of the Site. Based on the findings detailed above, the Site is a potential candidate for the New York Brownfield Cleanup Program (BCP). Regardless of whether the BCP is pursued, the NYSDEC will require that Spill No. 1810137 be properly addressed by the property owner. Further, impacted fill 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 The Frizlen Group. 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 The Frizlen Group. Use of or reliance on this report or its findings by any other person or entity is prohibited without written permission of Benchmark Environmental Engineering & Science, PLLC.

FIGURES

FIGURE 1



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PROJECT NO.: B0305-018-001

DATE: January, 2019

DRAFTED BY: CMS

SITE LOCATION AND VICINITY MAP

PHASE II ENVIRONMENTAL INVESTIGATION

225 LOUISIANA STREET AND ASSOCIATED PARCELS
BUFFALO, NEW YORK

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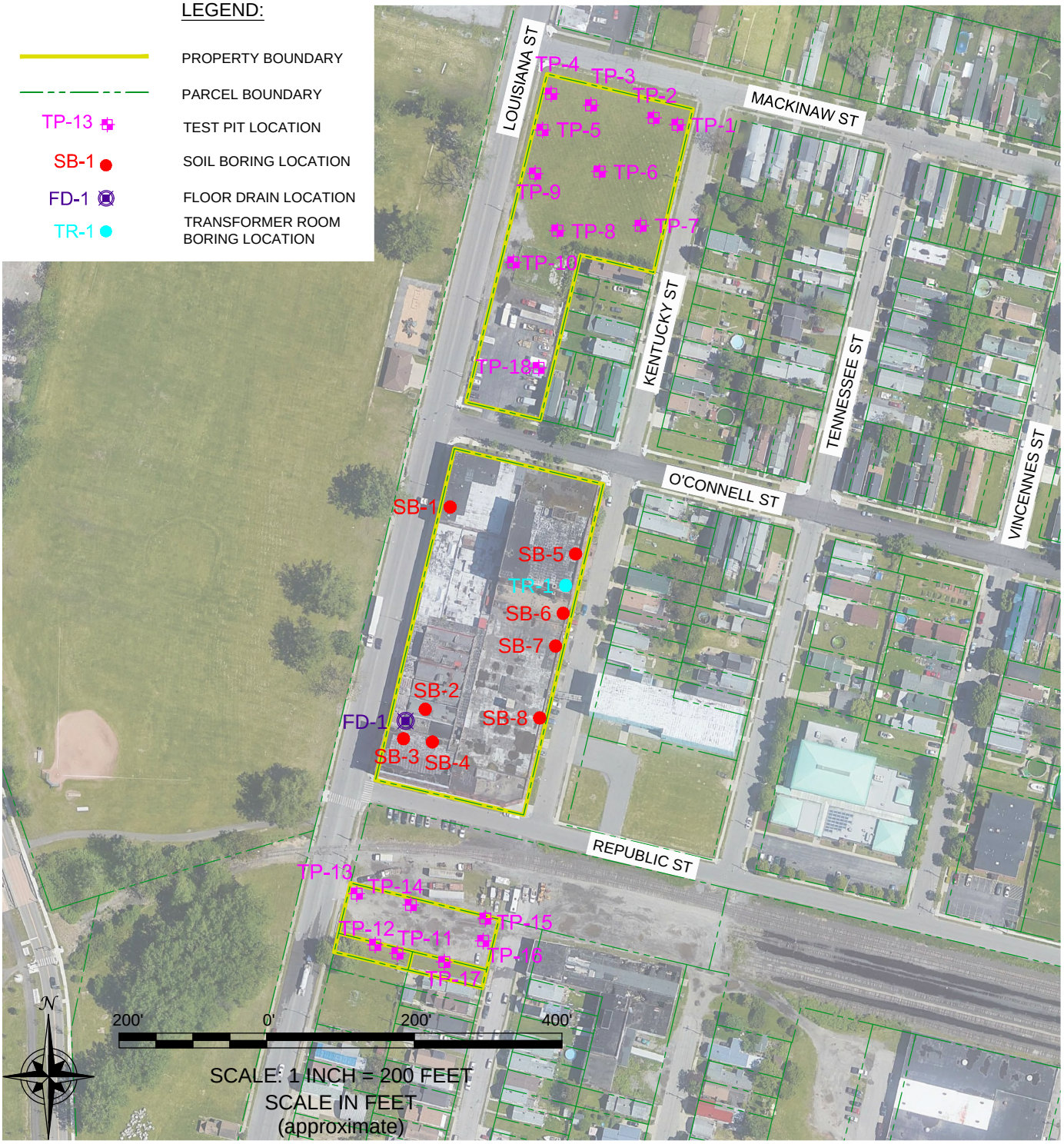
F:\CAD\Benchmark\Frizlen\Louisiana Street Parcels\Figure 2-5 - Site Plans.dwg

FIGURE 2



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INVESTIGATION LOCATIONS

PHASE II ENVIRONMENTAL SITE INVESTIGATION

225 LOUISIANA STREET AND ASSOCIATED PARCELS
BUFFALO, NEW YORK

PREPARED FOR

THE FRIZLEN GROUP

F:\CAD\Benchmark\Frizlen\Louisiana Street Parcels\Figure 3 - Areas of Concern.dwg

DATE: FEBRUARY 2019
DRAFTED BY: CMS

LEGEND:

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- TP-13 TEST PIT LOCATION
- SB-1 SOIL BORING LOCATION
- FD-1 FLOOR DRAIN LOCATION
- TR-1 TRANSFORMER ROOM BORING LOCATION
- METALS EXCEEDING RRSCOs
- VOCs EXCEEDING RRSCOs
- PAHs EXCEEDING RRSCOs

NOTE: FILL MATERIALS OBSERVED FROM 1-8 FBGS IN ALL SAMPLE LOCATIONS (INC. GLASS, BRICK, CINDERS, ASH, WOOD, ETC.)

FIGURE 3

AREAS OF CONCERN

PHASE II ENVIRONMENTAL SITE INVESTIGATION

225 LOUISIANA STREET AND ASSOCIATED PARCELS
BUFFALO, NEW YORK

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TABLES

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 1
SUMMARY OF TEST PIT LOCATIONS
LOUISIANA STREET PARCELS

Location	Date	Fill Present	Depth of Fill	Visually Impacted Soil/Fill?	Olfactory Odor	Maximum PID Depth (fbgs) - Reading (ppm)	Soil Description and Depth (fbgs)
Test Pit Locations - 245 Louisiana Street							
TP-1	01/03/19	Yes	6'				**0-1' - Fill-** Black, moist, mostly cinders, some fill (glass, cinders, brick, ash, metal, wood), little fine sand, loose when disturbed, no odors **1-6' - Fill-** White, grey, moist, mostly ash, some fill (brick, glass, wood , metal, ash, cinders), loose when disturbed, no odors **6-8'- Fine sand**- Tan, wet (6'), mostly fine sand, few sub rounded gravel, medium dense, no odors **8-10'- Sandy lean clay** - Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors
TP-2	01/03/19	Yes	6'				**0-2' - Fill-** Black, moist, mostly cinders, some fill (glass, cinders, coal, brick), little silty sand, loose when disturbed, no odors **2-6' - Fill-** White, grey, moist, mostly ash, some fill (brick, glass, wood , metal, ash. coal, cinders), loose when disturbed, no odors **6-8'- Fine sand**- Tan/ blue, wet (6'), mostly fine sand, few sub rounded gravel, medium dense, no odors **8-10'- Sandy lean clay** - Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors
TP-3	01/03/19	Yes	3', orphan tank to 8'	Black staining, sheen	Yes	6'- 250	**0-1' - Fill-** Black, moist, mostly cinders, some fill (glass, cinders, coal, brick), little silty sand, loose when disturbed, no odors **1-2' - Fill-** White, grey, moist, mostly ash, some fill (brick, glass, wood , metal, ash. coal, cinders), loose when disturbed, no odors **2-3'- Iron stained fill** - Orange, moist, mostly fill (metal, glass, ash brick), no odors **3-8 Underground storage Tank encountered** **3-10'- Sandy lean clay-** Black stained, wet (3'), mostly medium plasticity fines, some fine sand, sheen on water and soil, petroleum-like odors, tank encountered
TP-4	01/03/19	Yes	1'	Black Staining	Yes	5'- 145	**0-1' - Fill-** Black, moist, mostly cinders, some fill (glass, cinders, coal, brick), little silty sand, loose when disturbed, no odors **1-3' - Sandy lean clay-** Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, no odors **3-6' - Fine sand**- Grey/black stained, wet (3'), mostly fine sand, medium dense, petroleum-like odors **6-10' - Sandy lean clay** - Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors
TP-5	01/03/19	Yes	2'				**0-1' - Fill-** Black, moist, mostly cinders, some fill (glass, cinders, brick, ash, metal, wood), little fine sand, loose when disturbed, no odors **1-2' - Fill-** White, grey, moist, mostly ash, some fill (brick, glass, wood , metal, ash, cinders), loose when disturbed, no odors **2-5' - Sandy lean clay-** Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors **5-7'- Fine sand**- Tan, wet (6'), mostly fine sand, few sub rounded gravel, medium dense, no odors **7-10'- Sandy lean clay** - Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors
TP-6	01/03/19	Yes	3.5'				**0-1' - Fill-** Black, moist, mostly cinders, some fill (glass, cinders, coal, brick), little silty sand, loose when disturbed, no odors **1-3.5' - Fill-** White, grey, moist, mostly ash, some fill (brick, glass, wood , metal, ash, slag, coal, cinders), loose when disturbed, no odors **3.5-8'- Fine sand**- Tan/ grey, wet (5'), mostly fine sand, few sub rounded gravel, medium dense, no odors **8-10'- Sandy lean clay** - Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors
TP-7	01/03/19	Yes	5'				**0-1.5' - Fill-** Black, moist, mostly cinders, some fill (glass, cinders, coal, slag, brick), little silty sand, loose when disturbed, no odors **1.5-3' - Fill-** White, grey, moist, mostly ash, some fill (brick, glass, wood , metal, ash. coal, cinders), loose when disturbed, no odors **3-5'- Iron stained fill** - Orange, moist, mostly fill (slag, metal, glass, ash brick), no odors **5-8'- Fine sand-** Tan, wet (5'), mostly fine sand, little sub rounded gravel, no odors **8-10' - Sandy lean clay-** Reddish brown, moist, mostly medium plasticity fines, some fine sand, no odors
TP-8	01/03/19	Yes	2'				**0-1.5' - Fill-** Black, moist, mostly cinders, some fill (glass, cinders, coal, brick), little silty sand, loose when disturbed, no odors **1.5-2' - Fill-** White, grey, moist, mostly ash, some fill (brick, glass, wood , metal, ash, slag, coal, cinders), loose when disturbed, no odors **2-6'- Fine sand**- Tan/ grey, wet (6'), mostly fine sand, few sub rounded gravel, medium dense, no odors **6-10'- Sandy lean clay** - Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors
TP-9	01/03/19	Yes	2'		Yes	6'- 3	**0-0.5' - Fill-** Black, moist, mostly cinders, some fill (glass, cinders, brick, ash, metal, wood), little fine sand, loose when disturbed, no odors **0.5-2' - Fill-** White, grey, moist, mostly ash, some fill (brick, glass, wood , metal, ash, slag, cinders), loose when disturbed, no odors **2-6' - Sandy lean clay-** Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors **6-8'- Fine sand**- Tan, wet (6'), mostly fine sand, few sub rounded gravel, medium dense, unknown odors **8-10'- Sandy lean clay** - Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors
TP-10	01/03/19	Yes	2'				**0-2' - Fill-** Black, moist, mostly cinders, some fill (glass, cinders, coal, brick), little silty sand, loose when disturbed, no odors **2-8'- Fine sand**- Tan/ grey, wet (6'), mostly fine sand, few sub rounded gravel, medium dense, no odors **8-10'- Sandy lean clay** - Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors
TP-18	02/14/19	Yes	2'				**0-0.25'- Asphalt** **.25-2' - Fill-** Black, moist, mostly fine sand, some fill (slag, glass, cinders, brick, ash), little fine sand, loose when disturbed, no odors **2-3' -Sandy lean clay-** Grey/tan, moist, mostly medium plasticity fines, some fine sand, few subrounded gravel, stiff, no odors
Test Pit Locations - 175-177 Louisiana Street and 96 Kentucky Street							
TP-11	01/04/19	Yes	4'				**0-0.5- Asphalt** **.5-2' - Subangular gravel-** grey, moist, mostly subangular gravel, loose when disturbed, no odors **2-4' Fill-** Black, moist, mostly cinders, some fill (glass, cinders, graphite, brick, ash, metal, wood, bones), little fine sand, loose when disturbed, no odors **4-6' - Sandy lean clay-** greyish blue, tan mottling, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors **6-8'- Fine sand**- Tan, wet (6'), mostly fine sand, few sub rounded gravel, medium dense **8-10'- Sandy lean clay** - Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors
TP-12	01/04/19	Yes	3'				**0-0.5'- Asphalt** **.5-1' - Subangular gravel-** grey, moist, mostly subangular gravel, loose when disturbed, no odors **1-3' Fill-** Black, moist, mostly cinders, some fill (slag, glass, cinders, graphite, brick, ash, wood), little fine sand, loose when disturbed, no odors **3-5 - Sandy lean clay-** Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors **5-8'- Fine sand**- Tan, wet (6'), mostly fine sand, few sub rounded gravel, medium dense **8-10'- Sandy lean clay** - Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors
TP-13	01/04/19	Yes	3'		Yes	8.5'-4.2	**0-0.5'- Asphalt** **.5-2' - Subangular gravel-** grey, moist, mostly subangular gravel, loose when disturbed, no odors **2-3' Fill-** Black, moist, mostly cinders, some fill (slag, glass, cinders, graphite, brick, ash, wood), little fine sand, loose when disturbed, no odors **3-8.5 -Sandy lean clay-** Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, petroleum-like odors **8.5-9.5'- Fine sand**- Tan, wet (6'), mostly fine sand, few sub rounded gravel, medium dense, petroleum-like odors **9.5-12'- Sandy lean clay** - Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors
TP-14	01/04/19	Yes	2'				**0-0.5'- Asphalt** **.5-1' - Subangular gravel-** grey, moist, mostly subangular gravel, loose when disturbed, no odors **1-2'-Fill-** Black, moist, mostly cinders, some fill (slag, glass, cinders, graphite, brick, ash, wood), little fine sand, loose when disturbed, no odors **2-4'- Fine sand-** reddish brown/ black, moist, mostly fine sand, medium dense, no odors **4-8 -Sandy lean clay-** Grey, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors **8-9'- Fine sand**- grey, wet (8'), mostly fine sand, few sub rounded gravel, medium dense **9-12'- Sandy lean clay** - Reddish brown, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors
TP-15	01/04/19	Yes	at least 2'				**0-0.5'- Asphalt** **.5-1' - Sub rounded gravel (railroad bed)-** grey, moist, mostly subangular gravel, loose when disturbed, no odors **1-2'-Fill-** Black, wet (1'), mostly fill (slag, glass, cinders, graphite, ash, wood), little fine sand, loose when disturbed, sooty odor
TP-16	01/04/19	Yes	at least 3'	slight sheen on water			**0-0.25'- Asphalt** **.25-.5' - Sub rounded gravel (railroad bed)-** grey, moist, mostly subangular gravel, loose when disturbed, no odors **.5-3'-Fill-** Black, wet (.5'), mostly fill (slag, glass, cinders, graphite, brick, ash, wood), little fine sand, loose when disturbed, sooty odor
TP-17	01/04/19	Yes	3'	slight sheen on water			**0-0.5'- Asphalt** **.5-2' - Subangular gravel-** grey, moist, mostly subangular gravel, loose when disturbed, no odors **2-3'-Fill-** Black, wet (2'), mostly fine sand, some fill (slag, glass, cinders, brick, ash, wood), little fine sand, loose when disturbed, no odors **3-8 -Sandy lean clay-** Grey, moist, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors **8-9'- Fine sand**- grey, moist, mostly fine sand, few sub rounded gravel, medium dense **9-10'- Sandy lean clay** - Reddish brown, wet, mostly medium plasticity fines, some fine sand, few sub rounded gravel, grey mottling, stiff, no odors

Definitions:
fbgs = feet below ground surface
PID = MiniRae photoionization detector equipped with a 10.6 eV lamp
ppm = parts per million
N/A = Non applicable

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 2

SUMMARY OF SUBSURFACE SOIL/FILL AND FLOOR DRAIN SLUDGE ANALYTICAL RESULTS

225 LOUISIANA STREET AND ASSOCIATED PARCELS
BUFFALO, NEW YORK

PARAMETER [1]	Unrestricted Use SCOs [2]	Restricted Residential Use SCOs [2]	Commercial Use SCOs [2]	SOIL/FILL SAMPLE LOCATION (DEPTH)																				
				SB-1 (.25-2')	SB-2 (.25-2')	SB-4 (.25-1.5')	SB-5 (.5-1')	SB-7 (0-1.5')	TP-2 (2-4')	TP-3 (1-2')	TP-3 (6-8')	TP-4 (4-6')	TP-7 (3-5')	TP-8 (1-2')	TP-9 (1.5-2')	TP-11 (2-4')	TP-12 (1-2')	TP-13 (8.5-9.5')	TP-14 (1-2')	TP-16 (2-3')	TP-17 (2-3')	TP-18 (.5-1.5')	TR-1 (.5-1')	FD-1
Sample Date				*1/4/2019*					*1/3/2019*					*2/14/2019*		*1/4/2019*	*2/14/2019*	*1/4/2019*	*2/14/2019*	*1/4/2019*	*1/4/2019*	*2/14/2019*	*1/4/2019*	
Volatile Organic Compounds (VOCs) - mg/Kg [3]																								
1,2,4-Trimethylbenzene	**3.6**	**52**	**190**	--	--	--	--	--	--	--	**71**	ND	--	--	--	--	--	ND	--	--	--	--	--	0.87 J
1,3,5-Trimethylbenzene	**8.4**	**52**	**190**	--	--	--	--	--	--	--	**43**	ND	--	--	--	--	--	ND	--	--	--	--	--	ND
2-Butanone (MEK)	**0.12**	**100**	**500**	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	0.0043 J vs	--	--	--	--	--	ND
Acetone	**0.05**	**100**	**500**	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	0.034 vs	--	--	--	--	--	ND
Cyclohexane	**--**	**--**	**--**	--	--	--	--	--	--	--	48	ND	--	--	--	--	--	ND	--	--	--	--	--	ND
Isopropylbenzene (Cumene)	**--**	**--**	**--**	--	--	--	--	--	--	--	3.2	ND	--	--	--	--	--	ND	--	--	--	--	--	ND
Methyl acetate	**--**	**--**	**--**	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	ND	--	--	--	--	--	0.8 J
Methylcyclohexane	**--**	**--**	**--**	--	--	--	--	--	--	--	200 DL	ND	--	--	--	--	--	ND	--	--	--	--	--	ND
Methylene chloride	**0.05**	**100**	**500**	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	ND	--	--	--	--	--	1
n-Butylbenzene	**12**	**--**	**--**	--	--	--	--	--	--	--	4.4	ND	--	--	--	--	--	ND	--	--	--	--	--	1.1
n-Propylbenzene	**3.9**	**100**	**500**	--	--	--	--	--	--	--	3.2	ND	--	--	--	--	--	ND	--	--	--	--	--	ND
sec-Butylbenzene	**11**	**100**	**500**	--	--	--	--	--	--	--	2.9	ND	--	--	--	--	--	ND	--	--	--	--	--	ND
Total Xylenes	**0.26**	**100**	**500**	--	--	ND	--	--	--	--	**4.1 B,J**	ND	--	--	--	--	--	ND	--	--	--	--	--	ND
Polycyclic Aromatic Hydrocarbons (PAHs) - mg/Kg [3]																								
Acenaphthene	**20**	**100**	**500**	ND	ND	0.13 J	ND	1 J	7.2 F1 F2	--	ND	--	ND	0.76 J	ND	0.22 J	ND	--	ND	ND	ND	ND	--	--
Acenaphthylene	**100**	**100**	**500**	ND	ND	ND	ND	ND	0.27 J	--	ND	--	ND	0.39 J	ND	0.56 J	ND	--	ND	ND	ND	ND	--	--
Anthracene	**100**	**100**	**500**	ND	ND	0.46	ND	1.4 J	9.8 F2	--	ND	--	ND	1.7	ND	1.4	ND	--	ND	ND	ND	ND	--	--
Benzo(a)anthracene	**1**	**1**	**5.6**	ND	0.25	**3.4**	ND	**3 J**	**12 F2**	--	0.95 J	--	0.077 J	**3.9**	0.09 J	**5.1**	0.11 J	--	ND	**1.6**	ND	**1.3**	--	--
Benzo(a)pyrene	**1**	**1**	**1**	ND	0.17 J	**3.6**	ND	**2.4 J**	**9.6 F2**	--	0.72 J	--	0.068 J	**3.3**	0.089 J	**4.4**	ND	--	ND	**1.5**	ND	**1.3**	--	--
Benzo(b)fluoranthene	**1**	**1**	**5.6**	ND	0.24	**4.8**	ND	**3.9 J**	**13 F2**	--	0.82 J	--	0.11 J	**4**	0.1 J	**5.3**	0.15 J	--	ND	**2**	ND	**1.8**	--	--
Benzo(ghi)perylene	**100**	**100**	**500**	ND	0.14 J	3	ND	1.7 J	6.8 F1 F2	--	0.62 J	--	0.07 J	2.1	0.074 J	2.9	0.11 J	--	ND	1.4	ND	0.96 J	--	--
Benzo(k)fluoranthene	**0.8**	**3.9**	**56**	ND	0.11 J	**2.2**	ND	**1.1 J**	**4.3 F1 F2**	--	0.41 J	--	0.043 J	**1.8**	ND	**3.1**	ND	--	ND	**0.9 J**	ND	0.62 J	--	--
Chrysene	**1**	**3.9**	**56**	ND	0.33	**4.2**	ND	**3.6 J**	**11 F2**	--	**1.1 J**	--	0.088 J	**3.4**	0.12 J	**4.6**	ND	--	ND	**1.6**	ND	**1.5**	--	--
Dibenzo(a,h)anthracene	**0.33**	**0.33**	**0.56**	ND	ND	ND	ND	ND	**1.8 F1 F2**	--	ND	--	ND	**0.66 J**	ND	**1**	ND	--	ND	ND	ND	0.31 J	--	--
Fluoranthene	**100**	**100**	**500**	0.49 J	0.33	7.3, DL	0.95 J	8.9	33 F2	--	1.6 J	--	0.12 J	8.4	0.14 J	11	0.21 J	--	1.2 J	3.2	ND	2.6	--	--
Fluorene	**30**	**100**	**500**	ND	ND	0.14 J	ND	0.64 J	6 F1 F2	--	ND	--	ND	0.78 J	ND	0.26 J	ND	--	ND	ND	ND	ND	--	--
Indeno(1,2,3-cd)pyrene	**0.5**	**0.5**	**5.6**	ND	0.12 J	**2.7**	ND	**1.3 J**	**6.3 F1 F2**	--	0.48 J	--	0.056 J	**1.8**	0.057 J	**2.8**	ND	--	ND	**1.2 J**	ND	**0.8 J**	--	--
Naphthalene	**12**	**100**	**500**	ND	0.049 J	0.083 J	ND	ND	4.2 F1 F2	--	ND	--	ND	0.4 J	ND	ND	ND	--	ND	ND	ND	ND	--	--
Phenanthrene	**100**	**100**	**500**	ND	0.31	4.4	ND	8.5	43 DL	--	2 J	--	0.079 J	6.1	0.12 J	4.1	0.18 J	--	ND	1.4	ND	1.4	--	--
Pyrene	**100**	**100**	**500**	0.34 J	0.31	5.6	0.69 J	6.5	25 F2	--	1.8 J	--	0.12 J	7.4	0.12 J	8	0.18 J	--	ND	2.6	ND	2.4	--	--
Metals - mg/Kg																								
Arsenic	**13**	**16**	**16**	**136**	**15.1**	11.1	9.8	10.4	6.4	6.4	--	--	**14**	11.2	**21.7**	10.9	3.9	--	**15.6**	10.4	**15.9**	**14.7**	--	--
Barium	**350**	**400**	**400**	162	**435**	68.3	247	116	**633**	96.6	--	--	40.3	81.3	117	**370**	63.9	--	151	72.7	186	169	--	--
Cadmium	**2.5**	**4.3**	**9.3**	**23.9**	ND	0.44	0.76	0.41	0.64	0.35	--	--	0.49	0.34	ND	1.3	1.6	--	ND	0.75	2.2	1.1	--	--
Chromium	**30**	**180**	**1500**	11.8	8.4	16.5	11.5	8.2	13	10	--	--	5.1	14.4	16.1	21	5.6	--	10.2	23.5	14.7	**57.7**	--	--
Lead	**63**	**400**	**1000**	**5680**	**64**	59.7	**324**	**206**	**300 F2**	**223**	--	--	**339**	**1080**	**215**	**724**	5.3	--	**77**	**321**	**563**	**323**	--	--
Mercury	**0.18**	**0.81**	**2.8**	**2.0**	0.12	0.062	**8.3**	**6.7**	**0.59**	**1 F1 F2**	--	--	0.16	**0.42**	**3.2**	**1.3**	**0.19**	--	0.055	**0.38**	**0.27**	**0.28 F1**	--	--
Selenium	**3.9**	**180**	**1500**	27.8	ND	ND	ND	ND	ND	ND	--	--	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	--	--
Silver	**2**	**180**	**1500**	**3.2**	ND	ND	ND	ND	ND	ND	--	--	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	--	--
Polychlorinated biphenyls (PCBs) - mg/Kg																								
Total PCBs	**0.1**	**1**	**1**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	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 SCOs

Definitions:

ND = Parameter not detected above laboratory detection limit.
"--" = No value available for the parameter. Or parameter not analysed for.
J = Estimated value; result is less than the sample quantitation limit but greater than zero.
F1 = MS and/or MSD Recovery is outside acceptance limits.
F2= MS/MSD RPD exceeds control limits.
DL = Compounds were identified in an analyisis at the secondary dilution factor.

Bold	= Result exceeds Unrestricted Use SCOs.
Bold	= Result exceeds Restricted Residential Use SCOs.
Bold	= Result exceeds Commercial Use SCOs.

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TABLE 3

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

LOUISIANA STREET PARCELS
BUFFALO, NEW YORK

Parameters [1]	Class GA GWQS[2]	Sample Location		
		SB-1W	SB-4W	SB-7W
		1/4/19	1/4/19	1/4/19
Volatile Organic Compounds (VOCs) - ug/L				
Acetone	**50**	11 J	3.8 J	8.9 J
Carbon disulfide	**--**	ND	ND	0.46 J, B
Methylene Chloride	**5**	0.96 J	ND	ND
Methylcyclohexane	**--**	ND	ND	0.37 J

Notes:

1. Only 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 TOGS 1.1.1 Class GA Groundwater Quality Standards.

Qualifiers:

ND = Parameter not detected above laboratory detection limit.

BOLD = Result exceeds GWQS.

APPENDIX A

SOIL BORING LOGS

Project No: B0305-018-001

Borehole Number: SB-1

Project: Louisana Street Parcels

A.K.A.:

Client: The Frizlen Group

Logged By: NAS

Site Location: Buffalo, NY

Checked By: BWM

Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	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	Ground Surface							
	0.0	***Concrete***					0.0		
		Fill Grey/black, moist, mostly fill (cinders,brick, glass,ash), some well graded sand, loose when disturbed, no odors	1		3.5		0.0		
	-2.3 / 2.3	***Fine sand*** Grey/ tan, wet (3'), mostly fine sand, few subrounded gravel, medium dense, no odors					0.0		
5.0			2		4		0.0		
							0.0		
							0.0		
	-9.0 / 9.0	***Sandy Lean Clay*** Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, massive, no odors					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
Drill Rig Type: Geoprobe 54LT
Drill Method: Direct Push
Comments:
Drill Date(s): 1/4/2019

Hole Size: 2.25"
Stick-up: 3"
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0305-018-001

Borehole Number: SB-2

Project: Louisana Street Parcels

A.K.A.:

Client: The Frizlen Group

Logged By: NAS

Site Location: Buffalo, NY

Checked By: BWM

Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	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	Ground Surface							
	0.0	***Concrete***							
		Fill Black, moist, mostly fill (cinders,brick, glass,ash,slag), some well graded sand, loose when disturbed, no odors	1		2		0.0 / 0.0 / 0.0 / 0.0		
	-3.0 3.0	***Sandy Lean Clay*** Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, massive, no odors							
5.0	-5.0 5.0	***Fine sand*** Grey/ tan, wet (6'), mostly fine sand, few subrounded gravel, medium dense, no odors	2		4		0.0 / 0.0 / 0.0 / 0.0		
	-8.0 8.0	***Sandy Lean Clay*** Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, massive, no odors							
10.0			3		4		0.0 / 0.0 / 0.0 / 0.0		
	-12.0 12.0	End of Borehole							
15.0									

Drilled By: Trec Environmental
Drill Rig Type: Geoprobe 54LT
Drill Method: Direct Push
Comments:
Drill Date(s): 1/4/2019

Hole Size: 2.25"
Stick-up: 3"
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0305-018-001

Borehole Number: SB-3

Project: Louisana Street Parcels

A.K.A.:

Client: The Frizlen Group

Logged By: NAS

Site Location: Buffalo, NY

Checked By: BWM

Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	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	Ground Surface							
	0.0	***Concrete***							
		Fill Black, moist, mostly fill (cinders,brick, slag), some well graded sand, loose when disturbed, no odors					0.0		
	-2.0 / 2.0	***Fine sand*** Tan, wet, mostly fine sand, few subrounded gravel, medium dense, no odors	1		.5		0.0		
							0.0		
							0.0		
5.0	-5.0 / 5.0	***Sandy Lean Clay*** Grey with tan mottling, moist, mostly medium plasticity fines, some fine sand, stiff, massive, no odors	2		3		0.0		
							0.0		
							0.0		
	-8.0 / 8.0	***Fine sand*** Grey, moist, mostly fine sand, few subrounded gravel, medium dense, no odors					0.0		
		Sandy Lean Clay Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, massive, no odors					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
Drill Rig Type: Geoprobe 54LT
Drill Method: Direct Push
Comments:
Drill Date(s): 1/4/2019

Hole Size: 2.25"
Stick-up: 3"
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0305-018-001

Borehole Number: SB-4

Project: Louisana Street Parcels

A.K.A.:

Client: The Frizlen Group

Logged By: NAS

Site Location: Buffalo, NY

Checked By: BWM

Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	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	Ground Surface							
	0.0	***Concrete***							
		Fill Black, moist to wet (4'), mostly fill (cinders,brick, slag, ash), some well graded sand, loose when disturbed, slight odors	1		2		3.0 / 0.0 / 0.0 / 0.0		
5.0	-5.0 / 5.0	***Fine sand*** Grey, moist, mostly fine sand, few subrounded gravel, medium dense, no odors	2		4		0.0 / 0.0 / 0.0 / 0.0		
	-8.0 / 8.0	***Sandy Lean Clay*** Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, massive, no odors	3		4		0.0 / 0.0 / 0.0 / 0.0		
10.0	-12.0 / 12.0	End of Borehole							
15.0									

Drilled By: Trec Environmental
Drill Rig Type: Geoprobe 54LT
Drill Method: Direct Push
Comments:
Drill Date(s): 1/4/2019

Hole Size: 2.25"
Stick-up: 3"
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0305-018-001

Borehole Number: SB-5

Project: Louisana Street Parcels

A.K.A.:

Client: The Frizlen Group

Logged By: NAS

Site Location: Buffalo, NY

Checked By: BWM

Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	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	Ground Surface							
	0.0	***Brick***							
	-1.0 / 1.0	***Fill*** Black, moist, mostly fill (cinders,brick, ash), some well graded sand, loose when disturbed, slight odors					0.0		
	-1.5 / 1.5	***Sandy Lean Clay*** Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, massive, no odors	1		3.5		0.0		
		Fine sand Grey/ black, wet, mostly fine sand, few subrounded gravel, medium dense, no odors					0.0		
5.0							0.0		
	-6.0 / 6.0	***Fine sand*** As above, Tan	2		4		0.0		
							0.0		
	-8.0 / 8.0	***Sandy Lean Clay*** Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, massive, no odors					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
Drill Rig Type: Geoprobe 54LT
Drill Method: Direct Push
Comments:
Drill Date(s): 1/4/2019

Hole Size: 2.25"
Stick-up: 3"
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0305-018-001

Borehole Number: SB-6

Project: Louisana Street Parcels

A.K.A.:

Client: The Frizlen Group

Logged By: NAS

Site Location: Buffalo, NY

Checked By: BWM

Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	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	Ground Surface							
	0.0	***Brick***							
		Fill Black/grey, moist, mostly fill (cinders,brick, ash), some well graded sand, loose when disturbed, slight odors					0.0		
	-2.0 / 2.0	***Sandy Lean Clay*** Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, massive, no odors	1		3		0.0		
							0.0		
							0.0		
5.0							0.0		
	-6.0 / 6.0	***Fill*** White, wet, mostly fine sand, some fill (white chalky material), little subangular gravel, no odors	2		4		0.0		
							0.0		
	-8.0 / 8.0	***Sandy Lean Clay*** Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, massive, no odors					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
Drill Rig Type: Geoprobe 54LT
Drill Method: Direct Push
Comments:
Drill Date(s): 1/4/2019

Hole Size: 2.25"
Stick-up: 3"
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0305-018-001

Borehole Number: SB-7

Project: Louisana Street Parcels

A.K.A.:

Client: The Frizlen Group

Logged By: NAS

Site Location: Buffalo, NY

Checked By: BWM

Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface					0 50 100		
	0.0	***Fill*** Brown/grey, moist, mostly fill (cinders,brick, ash), some subangular gravel, loose when disturbed, no odors					0.0		
	-2.0 2.0	***Fine sand*** Brown, wet, mostly fine sand, few subrounded gravel, medium dense, no odors	1		1.5		0.0 0.0 0.5		
	-4.5 4.5	***Sandy Lean Clay*** Grey, wet, mostly medium plasticity fines, some fine sand, stiff, massive, no odors	2		2.5		0.0 0.0 0.0		
5.0	-6.5 6.5	***Sandy Lean Clay*** Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, massive, no odors	3		2.5		0.0 0.0 0.0 0.0		
10.0	-12.0 12.0	End of Borehole							
15.0									

Drilled By: Trec Environmental
Drill Rig Type: Geoprobe 54LT
Drill Method: Direct Push
Comments:
Drill Date(s): 1/4/2019

Hole Size: 2.25"
Stick-up: 3"
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0305-018-001

Borehole Number: SB-8

Project: Louisana Street Parcels

A.K.A.:

Client: The Frizlen Group

Logged By: NAS

Site Location: Buffalo, NY

Checked By: BWM

Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	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	Ground Surface							
	0.0	***Topsoil***							
		Fill Black/grey, moist, mostly fill (cinders,brick, ash), some subangular gravel, loose when disturbed, no odors	1		2.5		0.0 / 0.0 / 0.0 / 0.0		
	-4.0								
	4.0	***Fill*** Greyish brown, wet, mostly medium plasticity fines, some fill (coal, cinders, glass, brick) loose when disturbed, no odors							
5.0			2		2.5		0.0 / 0.0 / 0.0 / 0.0		
	-6.0								
	6.0	***Sandy Lean Clay*** Reddish brown, moist, mostly medium plasticity fines, some fine sand, stiff, massive, no odors							
			3		3.5		0.0 / 0.0 / 0.0 / 0.0		
10.0									
	-12.0								
	12.0	End of Borehole							
15.0									

Drilled By: Trec Environmental
Drill Rig Type: Geoprobe 54LT
Drill Method: Direct Push
Comments:
Drill Date(s): 1/4/2019

Hole Size: 2.25"
Stick-up: 3"
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 excavation of TP-1.

Photo 2: View of the fill materials encountered during the test pit investigation.

Photo 3: View of TP-2.

Photo 4: View of TP-4.

Louisiana Street Parcels Photo Date: January 2019	BENCHMARK

SITE PHOTOGRAPHS

Photo 5:

Photo 6:

Photo 7:

Photo 8:

Photo 5: View of TP-3 with orphan UST encountered.

Photo 6: View of the sheen noted on soil proximate to the orphan UST.

Photo 7: View of a portion of the orphan UST encountered.

Photo 8: View of the fill materials noted across the Site.

Louisiana Street Parcels Photo Date: January 2019	BENCHMARK

SITE PHOTOGRAPHS

Photo 9:

Photo 10:

Photo 11:

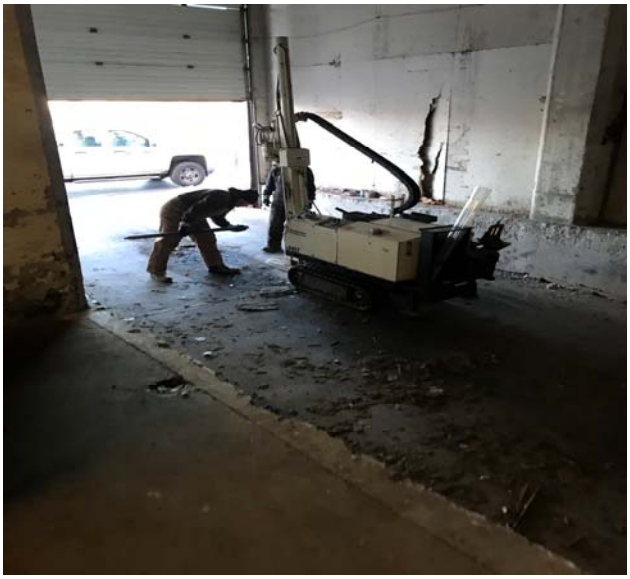

Photo 12:

Photo 9, 10: View of the fill materials noted within the test pits on-Site

Photo 11: View of the drilling of SB-1.

Photo 12: View of the drilling of SB-2.

SITE PHOTOGRAPHS

Photo 13:

Photo 14:

Photo 15:

Photo 16:

Photo 13: View of the typical soils encountered in the soil borings.

Photo 14: View of TP-11 on the southern portion of the Site.

Photo 15: View of TP-16.

Photo 16: View of TP-16. (note slight sheen on water)

Louisiana Street Parcels Photo Date: January 2019	BENCHMARK

APPENDIX C

LABORATORY ANALYTICAL DATA SUMMARY PACKAGE

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-147629-1
Client Project/Site: Benchmark - 225 Louisiana St. site

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

Attn: Bryan Mayback

Joseph V. Giacomazza

Authorized for release by:
1/18/2019 9:39:45 AM
Joe Giacomazza, Project Management Assistant II
joe.giacomazza@testamericainc.com

Designee for

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

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

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

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

Table of Contents

Qualifiers

GC/MS 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.
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
F2	MS/MSD RPD exceeds control limits
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
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-147629-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-147629-1

Comments
No additional comments.

Receipt
The samples were received on 1/7/2019 4:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0º C.

GC/MS VOA
Method(s) 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: SB-1W (480-147629-16). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following samples were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: SB-1W (480-147629-16).
The sample was analyzed within 7 days per EPA recommendation.

Method(s) 8260C: The laboratory control sample (LCS) for preparation batch 480-454737 and analytical batch 480-454857 recovered outside control limits for the following analyte: Bromoform. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C: The following sample was analyzed using medium level soil analysis and diluted to bring the concentration of target analytes within the calibration range: TP-3 (6-8 FT) (480-147629-3). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following samples were analyzed using medium level soil analysis and diluted due to the nature of the sample matrix: TP-4 (4-6 FT) (480-147629-4), FD-1 (480-147629-15), (480-147629-A-4-B MS) and (480-147629-A-4-C MSD). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following sample was analyzed using medium level soil analysis and diluted to bring the concentration of target analytes within the calibration range: TP-3 (6-8 FT) (480-147629-3). Elevated reporting limits (RLs) are provided.

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

GC/MS Semi VOA
Method(s) 8270D: The following samples were diluted due to color and, viscosity: TP-2 (2-4 FT) (480-147629-1), TP-3 (6-8 FT) (480-147629-3), TP-11 (2-4 FT) (480-147629-6), TP-16 (2-3 FT) (480-147629-8), SB-1 (.25-2 FT) (480-147629-9), SB-5 (.5-1 FT) (480-147629-12), SB-7 (0-1.5 FT) (480-147629-13), FD-1 (480-147629-15), (480-147629-C-1-A MS) and (480-147629-C-1-B MSD). Elevated reporting limits (RL) are provided.

Method(s) 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 480-454574 and analytical batch 480-454961 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8270D: The following samples required a dilution due to the nature of the sample matrix: SB-5 (.5-1 FT) (480-147629-12), SB-7 (0-1.5 FT) (480-147629-13) and FD-1 (480-147629-15). 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(s) 8270D: The following samples were diluted to bring the concentration of target analytes within the calibration range: TP-2 (2-4 FT) (480-147629-1) and SB-4 (.25-1.5 FT) (480-147629-11). Elevated reporting limits (RLs) are provided.

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

GC Semi VOA

Job ID: 480-147629-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

Method(s) 8082A: The following samples are associated with a continuing calibration verification (CCV 480-454528/5 and 480-454528/31) that had recoveries for the surrogate Decachlorobiphenyl that were above acceptance limits: TR-1 (.5-1 FT) (480-147629-14). The secondary surrogate Tetrachloro-m-xylene is within limits. Therefore, the data has been reported.

Method(s) 8082A: The following samples are associated with a laboratory control sample (LCS 480-454399/2) that had recoveries for the surrogate Decachlorobiphenyl that were slightly below acceptance limits: TR-1 (.5-1 FT) (480-147629-14). The secondary surrogate Tetrachloro-m-xylene and all analyte recoveries were within limits. Therefore, the data has been reported.

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
Method(s) 3550C: The following sample: FD-1 (480-147629-15) was decanted prior to preparation.

Method(s) 3550C: Due to the matrix, the initial volume(s) used for the following sample deviated from the standard procedure: FD-1 (480-147629-15). The reporting limits (RLs) have been adjusted proportionately.

Method(s) 3550C: Due to the matrix, the following sample could not be concentrated to the final method required volume: FD-1 (480-147629-15). The reporting limits (RLs) are elevated proportionately.

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

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: TP-2 (2-4 FT) — Lab Sample ID: 480-147629-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	7200	F1 F2	1100	160	ug/Kg	5	☼	8270D	Total/NA
Acenaphthylene	270	J	1100	140	ug/Kg	5	☼	8270D	Total/NA
Anthracene	9800	F2	1100	270	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]anthracene	12000	F2	1100	110	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	9600	F2	1100	160	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	13000	F2	1100	180	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	6800	F1 F2	1100	120	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	4300	F1 F2	1100	140	ug/Kg	5	☼	8270D	Total/NA
Chrysene	11000	F2	1100	250	ug/Kg	5	☼	8270D	Total/NA
Dibenz(a,h)anthracene	1800	F1 F2	1100	200	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	33000	F2	1100	120	ug/Kg	5	☼	8270D	Total/NA
Fluorene	6000	F1 F2	1100	130	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	6300	F1 F2	1100	140	ug/Kg	5	☼	8270D	Total/NA
Naphthalene	4200	F1 F2	1100	140	ug/Kg	5	☼	8270D	Total/NA
Pyrene	25000	F2	1100	130	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene - DL	43000		4400	650	ug/Kg	20	☼	8270D	Total/NA
Arsenic	6.4		2.6		mg/Kg	1	☼	6010C	Total/NA
Barium	633		0.64		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.64		0.26		mg/Kg	1	☼	6010C	Total/NA
Chromium	13.0		0.64		mg/Kg	1	☼	6010C	Total/NA
Lead	300	F2	1.3		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.59		0.025		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: TP-3 (1-2 FT) — Lab Sample ID: 480-147629-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	6.4		2.8		mg/Kg	1	☼	6010C	Total/NA
Barium	96.6		0.70		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.35		0.28		mg/Kg	1	☼	6010C	Total/NA
Chromium	10.0		0.70		mg/Kg	1	☼	6010C	Total/NA
Lead	223		1.4		mg/Kg	1	☼	6010C	Total/NA
Mercury	1.0	F1 F2	0.028		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: TP-3 (6-8 FT) — Lab Sample ID: 480-147629-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	71000		1400	400	ug/Kg	4	☼	8260C	Total/NA
1,3,5-Trimethylbenzene	43000		1400	440	ug/Kg	4	☼	8260C	Total/NA
Cyclohexane	48000		1400	320	ug/Kg	4	☼	8260C	Total/NA
Isopropylbenzene	3200		1400	220	ug/Kg	4	☼	8260C	Total/NA
m,p-Xylene	3600		2900	800	ug/Kg	4	☼	8260C	Total/NA
n-Butylbenzene	4400		1400	420	ug/Kg	4	☼	8260C	Total/NA
N-Propylbenzene	3200		1400	380	ug/Kg	4	☼	8260C	Total/NA
o-Xylene	450	J B	1400	190	ug/Kg	4	☼	8260C	Total/NA
sec-Butylbenzene	2900		1400	530	ug/Kg	4	☼	8260C	Total/NA
Xylenes, Total	4100		2900	800	ug/Kg	4	☼	8260C	Total/NA
Methylcyclohexane - DL	200000		3600	1700	ug/Kg	10	☼	8260C	Total/NA
Benzo[a]anthracene	950	J	2300	230	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	720	J	2300	340	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	820	J	2300	370	ug/Kg	5	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TP-3 (6-8 FT) (Continued) — Lab Sample ID: 480-147629-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[g,h,i]perylene	620	J	2300	240	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	410	J	2300	300	ug/Kg	5	☼	8270D	Total/NA
Chrysene	1100	J	2300	520	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	1600	J	2300	240	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	480	J	2300	290	ug/Kg	5	☼	8270D	Total/NA
Pyrene	1800	J	2300	270	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	2000	J	2300	340	ug/Kg	5	☼	8270D	Total/NA

Client Sample ID: TP-4 (4-6 FT) — Lab Sample ID: 480-147629-4

No Detections.

Client Sample ID: TP-7 (3-5 FT) — Lab Sample ID: 480-147629-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	77	J	200	20	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	68	J	200	30	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	110	J	200	32	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	70	J	200	22	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	43	J	200	26	ug/Kg	1	☼	8270D	Total/NA
Chrysene	88	J	200	45	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	120	J	200	22	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	56	J	200	25	ug/Kg	1	☼	8270D	Total/NA
Pyrene	120	J	200	24	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	79	J	200	30	ug/Kg	1	☼	8270D	Total/NA
Arsenic	14.0		2.4		mg/Kg	1	☼	6010C	Total/NA
Barium	40.3		0.61		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.49		0.24		mg/Kg	1	☼	6010C	Total/NA
Chromium	5.1		0.61		mg/Kg	1	☼	6010C	Total/NA
Lead	339		1.2		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.16		0.025		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: TP-11 (2-4 FT) — Lab Sample ID: 480-147629-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	220	J	1000	150	ug/Kg	5	☼	8270D	Total/NA
Acenaphthylene	560	J	1000	130	ug/Kg	5	☼	8270D	Total/NA
Anthracene	1400		1000	250	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]anthracene	5100		1000	100	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	4400		1000	150	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	5300		1000	160	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	2900		1000	110	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	3100		1000	130	ug/Kg	5	☼	8270D	Total/NA
Chrysene	4600		1000	230	ug/Kg	5	☼	8270D	Total/NA
Dibenz(a,h)anthracene	1000		1000	180	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	11000		1000	110	ug/Kg	5	☼	8270D	Total/NA
Fluorene	260	J	1000	120	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	2800		1000	130	ug/Kg	5	☼	8270D	Total/NA
Pyrene	8000		1000	120	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	4100		1000	150	ug/Kg	5	☼	8270D	Total/NA
Arsenic	10.9		2.4		mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: TP-11 (2-4 FT) (Continued) — Lab Sample ID: 480-147629-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	370		0.60		mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.3		0.24		mg/Kg	1	☼	6010C	Total/NA
Chromium	21.0		0.60		mg/Kg	1	☼	6010C	Total/NA
Lead	724		1.2		mg/Kg	1	☼	6010C	Total/NA
Mercury	1.3		0.025		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: TP-13 (8.5-9.5 FT) — Lab Sample ID: 480-147629-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	34	vs	29	4.9	ug/Kg	1	☼	8260C	Total/NA
2-Butanone (MEK)	4.3	J vs	29	2.1	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: TP-16 (2-3 FT) — Lab Sample ID: 480-147629-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	1600		1400	140	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	1500		1400	210	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	2000		1400	230	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	1400		1400	150	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	900	J	1400	190	ug/Kg	5	☼	8270D	Total/NA
Chrysene	1600		1400	320	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	3200		1400	150	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	1200	J	1400	180	ug/Kg	5	☼	8270D	Total/NA
Pyrene	2600		1400	170	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	1400		1400	210	ug/Kg	5	☼	8270D	Total/NA
Arsenic	10.4		3.3		mg/Kg	1	☼	6010C	Total/NA
Barium	72.7		0.82		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.75		0.33		mg/Kg	1	☼	6010C	Total/NA
Chromium	23.5		0.82		mg/Kg	1	☼	6010C	Total/NA
Lead	321		1.6		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.38		0.032		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-1 (.25-2 FT) — Lab Sample ID: 480-147629-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	490	J	2500	260	ug/Kg	10	☼	8270D	Total/NA
Pyrene	340	J	2500	290	ug/Kg	10	☼	8270D	Total/NA
Arsenic	136		2.9		mg/Kg	1	☼	6010C	Total/NA
Barium	162		0.73		mg/Kg	1	☼	6010C	Total/NA
Cadmium	23.9		0.29		mg/Kg	1	☼	6010C	Total/NA
Chromium	11.8		0.73		mg/Kg	1	☼	6010C	Total/NA
Lead	5680		1.5		mg/Kg	1	☼	6010C	Total/NA
Selenium	27.8		5.9		mg/Kg	1	☼	6010C	Total/NA
Silver	3.2		0.88		mg/Kg	1	☼	6010C	Total/NA
Mercury	2.0		0.029		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-2 (.25-2 FT) — Lab Sample ID: 480-147629-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	250		220	22	ug/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: SB-2 (.25-2 FT) (Continued) — Lab Sample ID: 480-147629-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	170	J	220	32	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	240		220	34	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	140	J	220	23	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	110	J	220	28	ug/Kg	1	☼	8270D	Total/NA
Chrysene	330		220	48	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	330		220	23	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	120	J	220	27	ug/Kg	1	☼	8270D	Total/NA
Naphthalene	49	J	220	28	ug/Kg	1	☼	8270D	Total/NA
Pyrene	310		220	25	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	310		220	32	ug/Kg	1	☼	8270D	Total/NA
Arsenic	15.1		2.5		mg/Kg	1	☼	6010C	Total/NA
Barium	435		0.63		mg/Kg	1	☼	6010C	Total/NA
Chromium	8.4		0.63		mg/Kg	1	☼	6010C	Total/NA
Lead	64.0		1.3		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.12		0.023		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-4 (.25-1.5 FT) — Lab Sample ID: 480-147629-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	130	J	180	27	ug/Kg	1	☼	8270D	Total/NA
Anthracene	460		180	45	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	3400		180	18	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	3600		180	27	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	4800		180	29	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	3000		180	19	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	2200		180	23	ug/Kg	1	☼	8270D	Total/NA
Chrysene	4200		180	40	ug/Kg	1	☼	8270D	Total/NA
Fluorene	140	J	180	21	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	2700		180	22	ug/Kg	1	☼	8270D	Total/NA
Naphthalene	83	J	180	23	ug/Kg	1	☼	8270D	Total/NA
Pyrene	5600		180	21	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	4400		180	27	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene - DL	7300		900	95	ug/Kg	5	☼	8270D	Total/NA
Arsenic	11.1		2.1		mg/Kg	1	☼	6010C	Total/NA
Barium	68.3		0.52		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.44		0.21		mg/Kg	1	☼	6010C	Total/NA
Chromium	16.5		0.52		mg/Kg	1	☼	6010C	Total/NA
Lead	59.7		1.0		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.062		0.022		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-5 (.5-1 FT) — Lab Sample ID: 480-147629-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	950	J	4400	460	ug/Kg	20	☼	8270D	Total/NA
Pyrene	690	J	4400	510	ug/Kg	20	☼	8270D	Total/NA
Arsenic	9.8		2.6		mg/Kg	1	☼	6010C	Total/NA
Barium	247		0.66		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.76		0.26		mg/Kg	1	☼	6010C	Total/NA
Chromium	11.5		0.66		mg/Kg	1	☼	6010C	Total/NA
Lead	324		1.3		mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-5 (.5-1 FT) (Continued) — Lab Sample ID: 480-147629-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	8.3		0.13		mg/Kg	5	☼	7471B	Total/NA

Client Sample ID: SB-7 (0-1.5 FT) — Lab Sample ID: 480-147629-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	1000	J	4800	700	ug/Kg	20	☼	8270D	Total/NA
Anthracene	1400	J	4800	1200	ug/Kg	20	☼	8270D	Total/NA
Benzo[a]anthracene	3000	J	4800	480	ug/Kg	20	☼	8270D	Total/NA
Benzo[a]pyrene	2400	J	4800	700	ug/Kg	20	☼	8270D	Total/NA
Benzo[b]fluoranthene	3900	J	4800	750	ug/Kg	20	☼	8270D	Total/NA
Benzo[g,h,i]perylene	1700	J	4800	500	ug/Kg	20	☼	8270D	Total/NA
Benzo[k]fluoranthene	1100	J	4800	610	ug/Kg	20	☼	8270D	Total/NA
Chrysene	3600	J	4800	1100	ug/Kg	20	☼	8270D	Total/NA
Fluoranthene	8900		4800	500	ug/Kg	20	☼	8270D	Total/NA
Fluorene	640	J	4800	560	ug/Kg	20	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	1300	J	4800	590	ug/Kg	20	☼	8270D	Total/NA
Pyrene	6500		4800	560	ug/Kg	20	☼	8270D	Total/NA
Phenanthrene	8500		4800	700	ug/Kg	20	☼	8270D	Total/NA
Arsenic	10.4		2.8		mg/Kg	1	☼	6010C	Total/NA
Barium	116		0.70		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.41		0.28		mg/Kg	1	☼	6010C	Total/NA
Chromium	8.2		0.70		mg/Kg	1	☼	6010C	Total/NA
Lead	206		1.4		mg/Kg	1	☼	6010C	Total/NA
Mercury	6.7		0.14		mg/Kg	5	☼	7471B	Total/NA

Client Sample ID: TR-1 (.5-1 FT) — Lab Sample ID: 480-147629-14

No Detections.

Client Sample ID: FD-1 — Lab Sample ID: 480-147629-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	870	J	1000	290	ug/Kg	4	☼	8260C	Total/NA
Methyl acetate	800	J	5200	500	ug/Kg	4	☼	8260C	Total/NA
Methylene Chloride	1000		1000	210	ug/Kg	4	☼	8260C	Total/NA
n-Butylbenzene	1100		1000	310	ug/Kg	4	☼	8260C	Total/NA

Client Sample ID: SB-1W — Lab Sample ID: 480-147629-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	11	J	20	6.0	ug/L	2		8260C	Total/NA
Methylene Chloride	0.96	J	2.0	0.88	ug/L	2		8260C	Total/NA

Client Sample ID: SB-4W — Lab Sample ID: 480-147629-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.8	J	10	3.0	ug/L	1		8260C	Total/NA

Client Sample ID: SB-7W — Lab Sample ID: 480-147629-18

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-7W (Continued)

Lab Sample ID: 480-147629-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	8.9	J	10	3.0	ug/L	1		8260C	Total/NA
Carbon disulfide	0.46	J B	1.0	0.19	ug/L	1		8260C	Total/NA
Methylcyclohexane	0.37	J	1.0	0.16	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TP-2 (2-4 FT)
Date Collected: 01/03/19 09:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-1
Matrix: Solid
Percent Solids: 76.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	7200	F1 F2	1100	160	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Acenaphthylene	270	J	1100	140	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Anthracene	9800	F2	1100	270	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Benzo[a]anthracene	12000	F2	1100	110	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Benzo[a]pyrene	9600	F2	1100	160	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Benzo[b]fluoranthene	13000	F2	1100	180	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Benzo[g,h,i]perylene	6800	F1 F2	1100	120	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Benzo[k]fluoranthene	4300	F1 F2	1100	140	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Chrysene	11000	F2	1100	250	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Dibenz(a,h)anthracene	1800	F1 F2	1100	200	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Fluoranthene	33000	F2	1100	120	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Fluorene	6000	F1 F2	1100	130	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Indeno[1,2,3-cd]pyrene	6300	F1 F2	1100	140	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Naphthalene	4200	F1 F2	1100	140	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5
Pyrene	25000	F2	1100	130	ug/Kg	☼	01/10/19 14:39	01/14/19 17:53	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*95*		*54 - 120*	*01/10/19 14:39*	*01/14/19 17:53*	*5*
2-Fluorobiphenyl	*95*		*60 - 120*	*01/10/19 14:39*	*01/14/19 17:53*	*5*
2-Fluorophenol (Surr)	*82*		*52 - 120*	*01/10/19 14:39*	*01/14/19 17:53*	*5*
Phenol-d5 (Surr)	*80*		*54 - 120*	*01/10/19 14:39*	*01/14/19 17:53*	*5*
p-Terphenyl-d14 (Surr)	*103*		*65 - 121*	*01/10/19 14:39*	*01/14/19 17:53*	*5*
Nitrobenzene-d5 (Surr)	*81*		*53 - 120*	*01/10/19 14:39*	*01/14/19 17:53*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	43000		4400	650	ug/Kg	☼	01/10/19 14:39	01/15/19 22:53	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*104*		*54 - 120*	*01/10/19 14:39*	*01/15/19 22:53*	*20*
2-Fluorobiphenyl	*95*		*60 - 120*	*01/10/19 14:39*	*01/15/19 22:53*	*20*
2-Fluorophenol (Surr)	*92*		*52 - 120*	*01/10/19 14:39*	*01/15/19 22:53*	*20*
Phenol-d5 (Surr)	*89*		*54 - 120*	*01/10/19 14:39*	*01/15/19 22:53*	*20*
p-Terphenyl-d14 (Surr)	*119*		*65 - 121*	*01/10/19 14:39*	*01/15/19 22:53*	*20*
Nitrobenzene-d5 (Surr)	*76*		*53 - 120*	*01/10/19 14:39*	*01/15/19 22:53*	*20*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.4		2.6		mg/Kg	☼	01/11/19 08:28	01/14/19 10:17	1
Barium	633		0.64		mg/Kg	☼	01/11/19 08:28	01/14/19 10:17	1
Cadmium	0.64		0.26		mg/Kg	☼	01/11/19 08:28	01/14/19 10:17	1
Chromium	13.0		0.64		mg/Kg	☼	01/11/19 08:28	01/14/19 10:17	1
Lead	300	F2	1.3		mg/Kg	☼	01/11/19 08:28	01/14/19 10:17	1
Selenium	ND		5.1		mg/Kg	☼	01/11/19 08:28	01/14/19 10:17	1
Silver	ND		0.77		mg/Kg	☼	01/11/19 08:28	01/14/19 10:17	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.59		0.025		mg/Kg	☼	01/14/19 12:45	01/14/19 13:51	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: TP-3 (1-2 FT)
Date Collected: 01/03/19 09:45
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-2
Matrix: Solid
Percent Solids: 72.8

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.4		2.8		mg/Kg	☼	01/11/19 08:28	01/14/19 10:36	1
Barium	96.6		0.70		mg/Kg	☼	01/11/19 08:28	01/14/19 10:36	1
Cadmium	0.35		0.28		mg/Kg	☼	01/11/19 08:28	01/14/19 10:36	1
Chromium	10.0		0.70		mg/Kg	☼	01/11/19 08:28	01/14/19 10:36	1
Lead	223		1.4		mg/Kg	☼	01/11/19 08:28	01/14/19 10:36	1
Selenium	ND		5.6		mg/Kg	☼	01/11/19 08:28	01/14/19 10:36	1
Silver	ND		0.83		mg/Kg	☼	01/11/19 08:28	01/14/19 10:36	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.0	F1 F2	0.028		mg/Kg	☼	01/14/19 12:45	01/14/19 13:52	1

Client Sample ID: TP-3 (6-8 FT)
Date Collected: 01/03/19 10:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-3
Matrix: Solid
Percent Solids: 36.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1400	400	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,1,2,2-Tetrachloroethane	ND		1400	230	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1400	720	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,1,2-Trichloroethane	ND		1400	300	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,1-Dichloroethane	ND		1400	450	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,1-Dichloroethene	ND		1400	500	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,2,4-Trichlorobenzene	ND		1400	550	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,2,4-Trimethylbenzene	**71000**		1400	400	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,2-Dibromo-3-Chloropropane	ND		1400	720	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,2-Dichlorobenzene	ND		1400	370	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,2-Dichloroethane	ND		1400	590	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,2-Dichloropropane	ND		1400	230	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,3,5-Trimethylbenzene	**43000**		1400	440	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,3-Dichlorobenzene	ND		1400	390	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,4-Dichlorobenzene	ND		1400	200	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
2-Butanone (MEK)	ND		7200	4300	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
2-Hexanone	ND		7200	3000	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
4-Isopropyltoluene	ND		1400	490	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
4-Methyl-2-pentanone (MIBK)	ND		7200	460	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Acetone	ND		7200	5900	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Benzene	ND		1400	270	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Bromoform	ND	*	1400	720	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Bromomethane	ND		1400	320	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Carbon disulfide	ND		1400	660	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Carbon tetrachloride	ND		1400	370	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Chlorobenzene	ND		1400	190	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Dibromochloromethane	ND		1400	700	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Chloroethane	ND		1400	300	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Chloroform	ND		1400	990	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Chloromethane	ND		1400	340	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
cis-1,2-Dichloroethene	ND		1400	400	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Cyclohexane	**48000**		1400	320	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Bromodichloromethane	ND		1400	290	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Dichlorodifluoromethane	ND		1400	630	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Ethylbenzene	ND		1400	420	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
1,2-Dibromoethane	ND		1400	250	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Isopropylbenzene	**3200**		1400	220	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Methyl acetate	ND		7200	690	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Methyl tert-butyl ether	ND		1400	550	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Methylene Chloride	ND		1400	290	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
m,p-Xylene	**3600**		2900	800	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
n-Butylbenzene	**4400**		1400	420	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
N-Propylbenzene	**3200**		1400	380	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
o-Xylene	**450**	**J B**	1400	190	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
sec-Butylbenzene	**2900**		1400	530	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Tetrachloroethene	ND		1400	190	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Toluene	ND		1400	390	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
trans-1,2-Dichloroethene	ND		1400	340	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
trans-1,3-Dichloropropene	ND		1400	140	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4

Client Sample ID: TP-3 (6-8 FT)

Date Collected: 01/03/19 10:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-3

Matrix: Solid
Percent Solids: 36.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		1400	400	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Trichlorofluoromethane	ND		1400	680	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Vinyl chloride	ND		1400	480	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Xylenes, Total	**4100**		2900	800	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
cis-1,3-Dichloropropene	ND		1400	340	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
Styrene	ND		1400	350	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4
tert-Butylbenzene	ND		1400	400	ug/Kg	☼	01/11/19 13:55	01/14/19 16:44	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*53 - 146*	*01/11/19 13:55*	*01/14/19 16:44*	*4*
4-Bromofluorobenzene (Surr)	*105*		*49 - 148*	*01/11/19 13:55*	*01/14/19 16:44*	*4*
Toluene-d8 (Surr)	*100*		*50 - 149*	*01/11/19 13:55*	*01/14/19 16:44*	*4*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**200000**		3600	1700	ug/Kg	☼	01/11/19 13:55	01/15/19 17:50	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*53 - 146*	*01/11/19 13:55*	*01/15/19 17:50*	*10*
4-Bromofluorobenzene (Surr)	*107*		*49 - 148*	*01/11/19 13:55*	*01/15/19 17:50*	*10*
Toluene-d8 (Surr)	*101*		*50 - 149*	*01/11/19 13:55*	*01/15/19 17:50*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2300	340	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Acenaphthylene	ND		2300	300	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Anthracene	ND		2300	570	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Benzo[a]anthracene	**950**	**J**	2300	230	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Benzo[a]pyrene	**720**	**J**	2300	340	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Benzo[b]fluoranthene	**820**	**J**	2300	370	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Benzo[g,h,i]perylene	**620**	**J**	2300	240	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Benzo[k]fluoranthene	**410**	**J**	2300	300	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Chrysene	**1100**	**J**	2300	520	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Dibenz(a,h)anthracene	ND		2300	410	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Fluoranthene	**1600**	**J**	2300	240	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Fluorene	ND		2300	270	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Indeno[1,2,3-cd]pyrene	**480**	**J**	2300	290	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Naphthalene	ND		2300	300	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Pyrene	**1800**	**J**	2300	270	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5
Phenanthrene	**2000**	**J**	2300	340	ug/Kg	☼	01/10/19 14:39	01/14/19 18:18	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*114*		*54 - 120*	*01/10/19 14:39*	*01/14/19 18:18*	*5*
2-Fluorobiphenyl	*95*		*60 - 120*	*01/10/19 14:39*	*01/14/19 18:18*	*5*
2-Fluorophenol (Surr)	*73*		*52 - 120*	*01/10/19 14:39*	*01/14/19 18:18*	*5*
Phenol-d5 (Surr)	*78*		*54 - 120*	*01/10/19 14:39*	*01/14/19 18:18*	*5*
p-Terphenyl-d14 (Surr)	*97*		*65 - 121*	*01/10/19 14:39*	*01/14/19 18:18*	*5*
Nitrobenzene-d5 (Surr)	*90*		*53 - 120*	*01/10/19 14:39*	*01/14/19 18:18*	*5*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: TP-4 (4-6 FT)
Date Collected: 01/03/19 11:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-4
Matrix: Solid
Percent Solids: 89.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		470	130	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,1,2,2-Tetrachloroethane	ND		470	77	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		470	240	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,1,2-Trichloroethane	ND		470	99	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,1-Dichloroethane	ND		470	150	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,1-Dichloroethene	ND		470	160	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,2,4-Trichlorobenzene	ND		470	180	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,2,4-Trimethylbenzene	ND		470	130	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,2-Dibromo-3-Chloropropane	ND		470	240	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,2-Dichlorobenzene	ND		470	120	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,2-Dichloroethane	ND		470	190	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,2-Dichloropropane	ND		470	76	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,3,5-Trimethylbenzene	ND		470	140	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,3-Dichlorobenzene	ND		470	130	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,4-Dichlorobenzene	ND		470	66	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
2-Butanone (MEK)	ND		2400	1400	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
2-Hexanone	ND		2400	970	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
4-Isopropyltoluene	ND		470	160	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
4-Methyl-2-pentanone (MIBK)	ND		2400	150	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Acetone	ND		2400	1900	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Benzene	ND		470	90	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Bromoform	ND	*	470	240	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Bromomethane	ND		470	100	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Carbon disulfide	ND		470	210	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Carbon tetrachloride	ND		470	120	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Chlorobenzene	ND		470	62	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Dibromochloromethane	ND		470	230	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Chloroethane	ND		470	98	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Chloroform	ND		470	320	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Chloromethane	ND		470	110	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
cis-1,2-Dichloroethene	ND		470	130	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Cyclohexane	ND		470	100	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Bromodichloromethane	ND		470	94	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Dichlorodifluoromethane	ND		470	210	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Ethylbenzene	ND		470	140	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
1,2-Dibromoethane	ND		470	83	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Isopropylbenzene	ND		470	71	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Methyl acetate	ND		2400	220	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Methyl tert-butyl ether	ND		470	180	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Methylcyclohexane	ND		470	220	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Methylene Chloride	ND	F2	470	93	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
m,p-Xylene	ND		940	260	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
n-Butylbenzene	ND		470	140	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
N-Propylbenzene	ND		470	120	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
o-Xylene	ND		470	61	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
sec-Butylbenzene	ND		470	170	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Tetrachloroethene	ND		470	63	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Toluene	ND		470	130	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
trans-1,2-Dichloroethene	ND		470	110	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: TP-4 (4-6 FT)
Date Collected: 01/03/19 11:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-4
Matrix: Solid
Percent Solids: 89.4

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		470	46	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Trichloroethene	ND		470	130	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Trichlorofluoromethane	ND		470	220	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Vinyl chloride	ND		470	160	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Xylenes, Total	ND		940	260	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
cis-1,3-Dichloropropene	ND		470	110	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
Styrene	ND		470	110	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4
tert-Butylbenzene	ND		470	130	ug/Kg	☼	01/11/19 13:55	01/14/19 17:11	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*53 - 146*	*01/11/19 13:55*	*01/14/19 17:11*	*4*
4-Bromofluorobenzene (Surr)	*103*		*49 - 148*	*01/11/19 13:55*	*01/14/19 17:11*	*4*
Toluene-d8 (Surr)	*101*		*50 - 149*	*01/11/19 13:55*	*01/14/19 17:11*	*4*

Client Sample ID: TP-7 (3-5 FT)

Date Collected: 01/03/19 13:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-5

Matrix: Solid
Percent Solids: 82.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		200	30	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Acenaphthylene	ND		200	26	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Anthracene	ND		200	50	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Benzo[a]anthracene	**77**	**J**	200	20	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Benzo[a]pyrene	**68**	**J**	200	30	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Benzo[b]fluoranthene	**110**	**J**	200	32	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Benzo[g,h,i]perylene	**70**	**J**	200	22	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Benzo[k]fluoranthene	**43**	**J**	200	26	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Chrysene	**88**	**J**	200	45	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Dibenz(a,h)anthracene	ND		200	36	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Fluoranthene	**120**	**J**	200	22	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Fluorene	ND		200	24	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Indeno[1,2,3-cd]pyrene	**56**	**J**	200	25	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Naphthalene	ND		200	26	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Pyrene	**120**	**J**	200	24	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1
Phenanthrene	**79**	**J**	200	30	ug/Kg	☼	01/10/19 14:39	01/14/19 18:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*108*		*54 - 120*	*01/10/19 14:39*	*01/14/19 18:44*	*1*
2-Fluorobiphenyl	*94*		*60 - 120*	*01/10/19 14:39*	*01/14/19 18:44*	*1*
2-Fluorophenol (Surr)	*72*		*52 - 120*	*01/10/19 14:39*	*01/14/19 18:44*	*1*
Phenol-d5 (Surr)	*78*		*54 - 120*	*01/10/19 14:39*	*01/14/19 18:44*	*1*
p-Terphenyl-d14 (Surr)	*107*		*65 - 121*	*01/10/19 14:39*	*01/14/19 18:44*	*1*
Nitrobenzene-d5 (Surr)	*84*		*53 - 120*	*01/10/19 14:39*	*01/14/19 18:44*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**14.0**		2.4		mg/Kg	☼	01/11/19 08:28	01/14/19 10:40	1
Barium	**40.3**		0.61		mg/Kg	☼	01/11/19 08:28	01/14/19 10:40	1
Cadmium	**0.49**		0.24		mg/Kg	☼	01/11/19 08:28	01/14/19 10:40	1
Chromium	**5.1**		0.61		mg/Kg	☼	01/11/19 08:28	01/14/19 10:40	1
Lead	**339**		1.2		mg/Kg	☼	01/11/19 08:28	01/14/19 10:40	1
Selenium	ND		4.9		mg/Kg	☼	01/11/19 08:28	01/14/19 10:40	1
Silver	ND		0.73		mg/Kg	☼	01/11/19 08:28	01/14/19 10:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.16**		0.025		mg/Kg	☼	01/14/19 12:45	01/14/19 14:09	1

Client Sample ID: TP-11 (2-4 FT)

Date Collected: 01/04/19 08:30
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-6

Matrix: Solid
Percent Solids: 81.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	220	J	1000	150	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Acenaphthylene	560	J	1000	130	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Anthracene	1400		1000	250	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Benzo[a]anthracene	5100		1000	100	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Benzo[a]pyrene	4400		1000	150	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Benzo[b]fluoranthene	5300		1000	160	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Benzo[g,h,i]perylene	2900		1000	110	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Benzo[k]fluoranthene	3100		1000	130	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Chrysene	4600		1000	230	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Dibenz(a,h)anthracene	1000		1000	180	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Fluoranthene	11000		1000	110	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Fluorene	260	J	1000	120	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Indeno[1,2,3-cd]pyrene	2800		1000	130	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Naphthalene	ND		1000	130	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Pyrene	8000		1000	120	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5
Phenanthrene	4100		1000	150	ug/Kg	☼	01/10/19 14:39	01/14/19 19:09	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*100*		*54 - 120*	*01/10/19 14:39*	*01/14/19 19:09*	*5*
2-Fluorobiphenyl	*97*		*60 - 120*	*01/10/19 14:39*	*01/14/19 19:09*	*5*
2-Fluorophenol (Surr)	*78*		*52 - 120*	*01/10/19 14:39*	*01/14/19 19:09*	*5*
Phenol-d5 (Surr)	*86*		*54 - 120*	*01/10/19 14:39*	*01/14/19 19:09*	*5*
p-Terphenyl-d14 (Surr)	*101*		*65 - 121*	*01/10/19 14:39*	*01/14/19 19:09*	*5*
Nitrobenzene-d5 (Surr)	*84*		*53 - 120*	*01/10/19 14:39*	*01/14/19 19:09*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10.9		2.4		mg/Kg	☼	01/11/19 08:28	01/14/19 10:55	1
Barium	370		0.60		mg/Kg	☼	01/11/19 08:28	01/14/19 10:55	1
Cadmium	1.3		0.24		mg/Kg	☼	01/11/19 08:28	01/14/19 10:55	1
Chromium	21.0		0.60		mg/Kg	☼	01/11/19 08:28	01/14/19 10:55	1
Lead	724		1.2		mg/Kg	☼	01/11/19 08:28	01/14/19 10:55	1
Selenium	ND		4.8		mg/Kg	☼	01/11/19 08:28	01/14/19 10:55	1
Silver	ND		0.71		mg/Kg	☼	01/11/19 08:28	01/14/19 10:55	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.3		0.025		mg/Kg	☼	01/14/19 12:45	01/14/19 13:58	1

Client Sample ID: TP-13 (8.5-9.5 FT)
Date Collected: 01/04/19 10:30
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-7
Matrix: Solid
Percent Solids: 83.6

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	5.8	0.42	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,1,2,2-Tetrachloroethane	ND	vs	5.8	0.94	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	5.8	1.3	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,1,2-Trichloroethane	ND	vs	5.8	0.76	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,1-Dichloroethane	ND	vs	5.8	0.71	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,1-Dichloroethene	ND	vs	5.8	0.71	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,2,4-Trichlorobenzene	ND	vs	5.8	0.35	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,2,4-Trimethylbenzene	ND	vs	5.8	1.1	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,2-Dibromo-3-Chloropropane	ND	vs	5.8	2.9	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,2-Dichlorobenzene	ND	vs	5.8	0.46	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,2-Dichloroethane	ND	vs	5.8	0.29	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,2-Dichloropropane	ND	vs	5.8	2.9	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,3,5-Trimethylbenzene	ND	vs	5.8	0.37	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,3-Dichlorobenzene	ND	vs	5.8	0.30	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,4-Dichlorobenzene	ND	vs	5.8	0.81	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
2-Hexanone	ND	vs	29	2.9	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
4-Isopropyltoluene	ND	vs	5.8	0.47	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Acetone	**34**	**vs**	29	4.9	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Benzene	ND	vs	5.8	0.29	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Bromoform	ND	vs	5.8	2.9	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Bromomethane	ND	vs	5.8	0.52	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Carbon disulfide	ND	vs	5.8	2.9	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Carbon tetrachloride	ND	vs	5.8	0.56	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Chlorobenzene	ND	vs	5.8	0.77	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Dibromochloromethane	ND	vs	5.8	0.75	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Chloroethane	ND	vs	5.8	1.3	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Chloroform	ND	vs	5.8	0.36	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Chloromethane	ND	vs	5.8	0.35	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
cis-1,2-Dichloroethene	ND	vs	5.8	0.75	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
cis-1,3-Dichloropropene	ND	vs	5.8	0.84	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Cyclohexane	ND	vs	5.8	0.81	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Bromodichloromethane	ND	vs	5.8	0.78	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Dichlorodifluoromethane	ND	vs	5.8	0.48	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Ethylbenzene	ND	vs	5.8	0.40	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
1,2-Dibromoethane	ND	vs	5.8	0.75	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Isopropylbenzene	ND	vs	5.8	0.88	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Methyl acetate	ND	vs	29	3.5	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
2-Butanone (MEK)	**4.3**	**J vs**	29	2.1	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
4-Methyl-2-pentanone (MIBK)	ND	vs	29	1.9	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Methyl tert-butyl ether	ND	vs	5.8	0.57	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Methylcyclohexane	ND	vs	5.8	0.88	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Methylene Chloride	ND	vs	5.8	2.7	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
m,p-Xylene	ND	vs	12	0.98	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
n-Butylbenzene	ND	vs	5.8	0.51	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
N-Propylbenzene	ND	vs	5.8	0.47	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
o-Xylene	ND	vs	5.8	0.76	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
sec-Butylbenzene	ND	vs	5.8	0.51	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Styrene	ND	vs	5.8	0.29	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
tert-Butylbenzene	ND	vs	5.8	0.61	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: TP-13 (8.5-9.5 FT)
Date Collected: 01/04/19 10:30
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-7
Matrix: Solid
Percent Solids: 83.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND	vs	5.8	0.78	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Toluene	ND	vs	5.8	0.44	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
trans-1,2-Dichloroethene	ND	vs	5.8	0.60	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
trans-1,3-Dichloropropene	ND	vs	5.8	2.6	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Trichloroethene	ND	vs	5.8	1.3	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Trichlorofluoromethane	ND	vs	5.8	0.55	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Vinyl chloride	ND	vs	5.8	0.71	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1
Xylenes, Total	ND	vs	12	0.98	ug/Kg	☼	01/14/19 12:00	01/14/19 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*01/14/19 12:00*	*01/14/19 13:52*	*1*
Toluene-d8 (Surr)	*74*		*71 - 125*	*01/14/19 12:00*	*01/14/19 13:52*	*1*
4-Bromofluorobenzene (Surr)	*74*		*72 - 126*	*01/14/19 12:00*	*01/14/19 13:52*	*1*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: TP-16 (2-3 FT)
Date Collected: 01/04/19 12:30
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-8
Matrix: Solid
Percent Solids: 58.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1400	210	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Acenaphthylene	ND		1400	190	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Anthracene	ND		1400	360	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Benzo[a]anthracene	**1600**		1400	140	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Benzo[a]pyrene	**1500**		1400	210	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Benzo[b]fluoranthene	**2000**		1400	230	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Benzo[g,h,i]perylene	**1400**		1400	150	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Benzo[k]fluoranthene	**900**	**J**	1400	190	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Chrysene	**1600**		1400	320	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Dibenz(a,h)anthracene	ND		1400	250	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Fluoranthene	**3200**		1400	150	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Fluorene	ND		1400	170	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Indeno[1,2,3-cd]pyrene	**1200**	**J**	1400	180	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Naphthalene	ND		1400	190	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Pyrene	**2600**		1400	170	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5
Phenanthrene	**1400**		1400	210	ug/Kg	☼	01/10/19 14:39	01/14/19 19:34	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*98*		*54 - 120*	*01/10/19 14:39*	*01/14/19 19:34*	*5*
2-Fluorobiphenyl	*93*		*60 - 120*	*01/10/19 14:39*	*01/14/19 19:34*	*5*
2-Fluorophenol (Surr)	*75*		*52 - 120*	*01/10/19 14:39*	*01/14/19 19:34*	*5*
Phenol-d5 (Surr)	*77*		*54 - 120*	*01/10/19 14:39*	*01/14/19 19:34*	*5*
p-Terphenyl-d14 (Surr)	*106*		*65 - 121*	*01/10/19 14:39*	*01/14/19 19:34*	*5*
Nitrobenzene-d5 (Surr)	*80*		*53 - 120*	*01/10/19 14:39*	*01/14/19 19:34*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**10.4**		3.3		mg/Kg	☼	01/11/19 08:28	01/14/19 10:59	1
Barium	**72.7**		0.82		mg/Kg	☼	01/11/19 08:28	01/14/19 10:59	1
Cadmium	**0.75**		0.33		mg/Kg	☼	01/11/19 08:28	01/14/19 10:59	1
Chromium	**23.5**		0.82		mg/Kg	☼	01/11/19 08:28	01/14/19 10:59	1
Lead	**321**		1.6		mg/Kg	☼	01/11/19 08:28	01/14/19 10:59	1
Selenium	ND		6.6		mg/Kg	☼	01/11/19 08:28	01/14/19 10:59	1
Silver	ND		0.99		mg/Kg	☼	01/11/19 08:28	01/14/19 10:59	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.38**		0.032		mg/Kg	☼	01/14/19 12:45	01/14/19 13:59	1

Client Sample ID: SB-1 (.25-2 FT)

Lab Sample ID: 480-147629-9

Date Collected: 01/04/19 08:00

Matrix: Solid

Date Received: 01/07/19 16:45

Percent Solids: 68.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2500	360	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Acenaphthylene	ND		2500	320	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Anthracene	ND		2500	610	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Benzo[a]anthracene	ND		2500	250	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Benzo[a]pyrene	ND		2500	360	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Benzo[b]fluoranthene	ND		2500	390	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Benzo[g,h,i]perylene	ND		2500	260	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Benzo[k]fluoranthene	ND		2500	320	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Chrysene	ND		2500	550	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Dibenz(a,h)anthracene	ND		2500	440	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Fluoranthene	**490**	**J**	2500	260	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Fluorene	ND		2500	290	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Indeno[1,2,3-cd]pyrene	ND		2500	300	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Naphthalene	ND		2500	320	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Pyrene	**340**	**J**	2500	290	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10
Phenanthrene	ND		2500	360	ug/Kg	☼	01/10/19 14:39	01/14/19 20:00	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*66*		*54 - 120*	*01/10/19 14:39*	*01/14/19 20:00*	*10*
2-Fluorobiphenyl	*87*		*60 - 120*	*01/10/19 14:39*	*01/14/19 20:00*	*10*
2-Fluorophenol (Surr)	*81*		*52 - 120*	*01/10/19 14:39*	*01/14/19 20:00*	*10*
Phenol-d5 (Surr)	*79*		*54 - 120*	*01/10/19 14:39*	*01/14/19 20:00*	*10*
p-Terphenyl-d14 (Surr)	*90*		*65 - 121*	*01/10/19 14:39*	*01/14/19 20:00*	*10*
Nitrobenzene-d5 (Surr)	*78*		*53 - 120*	*01/10/19 14:39*	*01/14/19 20:00*	*10*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**136**		2.9		mg/Kg	☼	01/11/19 08:28	01/15/19 12:34	1
Barium	**162**		0.73		mg/Kg	☼	01/11/19 08:28	01/15/19 12:34	1
Cadmium	**23.9**		0.29		mg/Kg	☼	01/11/19 08:28	01/15/19 12:34	1
Chromium	**11.8**		0.73		mg/Kg	☼	01/11/19 08:28	01/15/19 12:34	1
Lead	**5680**		1.5		mg/Kg	☼	01/11/19 08:28	01/15/19 12:34	1
Selenium	**27.8**		5.9		mg/Kg	☼	01/11/19 08:28	01/15/19 12:34	1
Silver	**3.2**		0.88		mg/Kg	☼	01/11/19 08:28	01/15/19 12:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**2.0**		0.029		mg/Kg	☼	01/14/19 12:45	01/14/19 14:00	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: SB-2 (.25-2 FT)
Date Collected: 01/04/19 09:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-10
Matrix: Solid
Percent Solids: 78.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		220	32	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Acenaphthylene	ND		220	28	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Anthracene	ND		220	53	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Benzo[a]anthracene	**250**		220	22	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Benzo[a]pyrene	**170**	**J**	220	32	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Benzo[b]fluoranthene	**240**		220	34	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Benzo[g,h,i]perylene	**140**	**J**	220	23	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Benzo[k]fluoranthene	**110**	**J**	220	28	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Chrysene	**330**		220	48	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Dibenz(a,h)anthracene	ND		220	38	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Fluoranthene	**330**		220	23	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Fluorene	ND		220	25	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Indeno[1,2,3-cd]pyrene	**120**	**J**	220	27	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Naphthalene	**49**	**J**	220	28	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Pyrene	**310**		220	25	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1
Phenanthrene	**310**		220	32	ug/Kg	☼	01/10/19 14:39	01/14/19 20:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*116*		*54 - 120*	*01/10/19 14:39*	*01/14/19 20:25*	*1*
2-Fluorobiphenyl	*99*		*60 - 120*	*01/10/19 14:39*	*01/14/19 20:25*	*1*
2-Fluorophenol (Surr)	*73*		*52 - 120*	*01/10/19 14:39*	*01/14/19 20:25*	*1*
Phenol-d5 (Surr)	*81*		*54 - 120*	*01/10/19 14:39*	*01/14/19 20:25*	*1*
p-Terphenyl-d14 (Surr)	*106*		*65 - 121*	*01/10/19 14:39*	*01/14/19 20:25*	*1*
Nitrobenzene-d5 (Surr)	*90*		*53 - 120*	*01/10/19 14:39*	*01/14/19 20:25*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**15.1**		2.5		mg/Kg	☼	01/11/19 08:28	01/14/19 11:06	1
Barium	**435**		0.63		mg/Kg	☼	01/11/19 08:28	01/14/19 11:06	1
Cadmium	ND		0.25		mg/Kg	☼	01/11/19 08:28	01/14/19 11:06	1
Chromium	**8.4**		0.63		mg/Kg	☼	01/11/19 08:28	01/14/19 11:06	1
Lead	**64.0**		1.3		mg/Kg	☼	01/11/19 08:28	01/14/19 11:06	1
Selenium	ND		5.0		mg/Kg	☼	01/11/19 08:28	01/14/19 11:06	1
Silver	ND		0.75		mg/Kg	☼	01/11/19 08:28	01/14/19 11:06	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.12**		0.023		mg/Kg	☼	01/14/19 12:45	01/14/19 14:04	1

Client Sample ID: SB-4 (.25-1.5 FT)

Date Collected: 01/04/19 11:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-11

Matrix: Solid
Percent Solids: 93.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**130**	**J**	180	27	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Acenaphthylene	ND		180	23	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Anthracene	**460**		180	45	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Benzo[a]anthracene	**3400**		180	18	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Benzo[a]pyrene	**3600**		180	27	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Benzo[b]fluoranthene	**4800**		180	29	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Benzo[g,h,i]perylene	**3000**		180	19	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Benzo[k]fluoranthene	**2200**		180	23	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Chrysene	**4200**		180	40	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Dibenz(a,h)anthracene	ND		180	32	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Fluorene	**140**	**J**	180	21	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Indeno[1,2,3-cd]pyrene	**2700**		180	22	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Naphthalene	**83**	**J**	180	23	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Pyrene	**5600**		180	21	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1
Phenanthrene	**4400**		180	27	ug/Kg	☼	01/10/19 14:39	01/14/19 20:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*117*		*54 - 120*	*01/10/19 14:39*	*01/14/19 20:50*	*1*
2-Fluorobiphenyl	*95*		*60 - 120*	*01/10/19 14:39*	*01/14/19 20:50*	*1*
2-Fluorophenol (Surr)	*74*		*52 - 120*	*01/10/19 14:39*	*01/14/19 20:50*	*1*
Phenol-d5 (Surr)	*80*		*54 - 120*	*01/10/19 14:39*	*01/14/19 20:50*	*1*
p-Terphenyl-d14 (Surr)	*102*		*65 - 121*	*01/10/19 14:39*	*01/14/19 20:50*	*1*
Nitrobenzene-d5 (Surr)	*89*		*53 - 120*	*01/10/19 14:39*	*01/14/19 20:50*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	**7300**		900	95	ug/Kg	☼	01/10/19 14:39	01/15/19 23:18	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*101*		*54 - 120*	*01/10/19 14:39*	*01/15/19 23:18*	*5*
2-Fluorobiphenyl	*95*		*60 - 120*	*01/10/19 14:39*	*01/15/19 23:18*	*5*
2-Fluorophenol (Surr)	*83*		*52 - 120*	*01/10/19 14:39*	*01/15/19 23:18*	*5*
Phenol-d5 (Surr)	*87*		*54 - 120*	*01/10/19 14:39*	*01/15/19 23:18*	*5*
p-Terphenyl-d14 (Surr)	*110*		*65 - 121*	*01/10/19 14:39*	*01/15/19 23:18*	*5*
Nitrobenzene-d5 (Surr)	*87*		*53 - 120*	*01/10/19 14:39*	*01/15/19 23:18*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**11.1**		2.1		mg/Kg	☼	01/11/19 08:28	01/14/19 11:10	1
Barium	**68.3**		0.52		mg/Kg	☼	01/11/19 08:28	01/14/19 11:10	1
Cadmium	**0.44**		0.21		mg/Kg	☼	01/11/19 08:28	01/14/19 11:10	1
Chromium	**16.5**		0.52		mg/Kg	☼	01/11/19 08:28	01/14/19 11:10	1
Lead	**59.7**		1.0		mg/Kg	☼	01/11/19 08:28	01/14/19 11:10	1
Selenium	ND		4.2		mg/Kg	☼	01/11/19 08:28	01/14/19 11:10	1
Silver	ND		0.62		mg/Kg	☼	01/11/19 08:28	01/14/19 11:10	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.062**		0.022		mg/Kg	☼	01/14/19 12:45	01/14/19 14:05	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: SB-5 (.5-1 FT)
Date Collected: 01/04/19 13:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-12
Matrix: Solid
Percent Solids: 76.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		4400	640	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Acenaphthylene	ND		4400	570	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Anthracene	ND		4400	1100	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Benzo[a]anthracene	ND		4400	440	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Benzo[a]pyrene	ND		4400	640	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Benzo[b]fluoranthene	ND		4400	690	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Benzo[g,h,i]perylene	ND		4400	460	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Benzo[k]fluoranthene	ND		4400	570	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Chrysene	ND		4400	980	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Dibenz(a,h)anthracene	ND		4400	770	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Fluoranthene	**950**	**J**	4400	460	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Fluorene	ND		4400	510	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Indeno[1,2,3-cd]pyrene	ND		4400	540	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Naphthalene	ND		4400	570	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Pyrene	**690**	**J**	4400	510	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20
Phenanthrene	ND		4400	640	ug/Kg	☼	01/10/19 14:39	01/14/19 21:16	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*130*	*X*	*54 - 120*	*01/10/19 14:39*	*01/14/19 21:16*	*20*
2-Fluorobiphenyl	*86*		*60 - 120*	*01/10/19 14:39*	*01/14/19 21:16*	*20*
2-Fluorophenol (Surr)	*88*		*52 - 120*	*01/10/19 14:39*	*01/14/19 21:16*	*20*
Phenol-d5 (Surr)	*73*		*54 - 120*	*01/10/19 14:39*	*01/14/19 21:16*	*20*
p-Terphenyl-d14 (Surr)	*94*		*65 - 121*	*01/10/19 14:39*	*01/14/19 21:16*	*20*
Nitrobenzene-d5 (Surr)	*90*		*53 - 120*	*01/10/19 14:39*	*01/14/19 21:16*	*20*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**9.8**		2.6		mg/Kg	☼	01/11/19 08:28	01/14/19 11:14	1
Barium	**247**		0.66		mg/Kg	☼	01/11/19 08:28	01/14/19 11:14	1
Cadmium	**0.76**		0.26		mg/Kg	☼	01/11/19 08:28	01/14/19 11:14	1
Chromium	**11.5**		0.66		mg/Kg	☼	01/11/19 08:28	01/14/19 11:14	1
Lead	**324**		1.3		mg/Kg	☼	01/11/19 08:28	01/14/19 11:14	1
Selenium	ND		5.3		mg/Kg	☼	01/11/19 08:28	01/14/19 11:14	1
Silver	ND		0.79		mg/Kg	☼	01/11/19 08:28	01/14/19 11:14	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**8.3**		0.13		mg/Kg	☼	01/14/19 12:45	01/14/19 14:22	5

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: SB-7 (0-1.5 FT)
Date Collected: 01/04/19 15:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-13
Matrix: Solid
Percent Solids: 71.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	1000	J	4800	700	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Acenaphthylene	ND		4800	610	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Anthracene	1400	J	4800	1200	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Benzo[a]anthracene	3000	J	4800	480	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Benzo[a]pyrene	2400	J	4800	700	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Benzo[b]fluoranthene	3900	J	4800	750	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Benzo[g,h,i]perylene	1700	J	4800	500	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Benzo[k]fluoranthene	1100	J	4800	610	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Chrysene	3600	J	4800	1100	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Dibenz(a,h)anthracene	ND		4800	840	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Fluoranthene	8900		4800	500	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Fluorene	640	J	4800	560	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Indeno[1,2,3-cd]pyrene	1300	J	4800	590	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Naphthalene	ND		4800	610	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Pyrene	6500		4800	560	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20
Phenanthrene	8500		4800	700	ug/Kg	☼	01/10/19 14:39	01/14/19 21:41	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*105*		*54 - 120*	*01/10/19 14:39*	*01/14/19 21:41*	*20*
2-Fluorobiphenyl	*89*		*60 - 120*	*01/10/19 14:39*	*01/14/19 21:41*	*20*
2-Fluorophenol (Surr)	*89*		*52 - 120*	*01/10/19 14:39*	*01/14/19 21:41*	*20*
Phenol-d5 (Surr)	*69*		*54 - 120*	*01/10/19 14:39*	*01/14/19 21:41*	*20*
p-Terphenyl-d14 (Surr)	*95*		*65 - 121*	*01/10/19 14:39*	*01/14/19 21:41*	*20*
Nitrobenzene-d5 (Surr)	*81*		*53 - 120*	*01/10/19 14:39*	*01/14/19 21:41*	*20*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10.4		2.8		mg/Kg	☼	01/11/19 08:28	01/14/19 11:18	1
Barium	116		0.70		mg/Kg	☼	01/11/19 08:28	01/14/19 11:18	1
Cadmium	0.41		0.28		mg/Kg	☼	01/11/19 08:28	01/14/19 11:18	1
Chromium	8.2		0.70		mg/Kg	☼	01/11/19 08:28	01/14/19 11:18	1
Lead	206		1.4		mg/Kg	☼	01/11/19 08:28	01/14/19 11:18	1
Selenium	ND		5.6		mg/Kg	☼	01/11/19 08:28	01/14/19 11:18	1
Silver	ND		0.84		mg/Kg	☼	01/11/19 08:28	01/14/19 11:18	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	6.7		0.14		mg/Kg	☼	01/14/19 12:45	01/14/19 14:26	5

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: TR-1 (.5-1 FT)
Date Collected: 01/04/19 16:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-14
Matrix: Solid
Percent Solids: 79.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.28	0.056	mg/Kg	☼	01/09/19 14:25	01/10/19 15:29	1
PCB-1221	ND		0.28	0.056	mg/Kg	☼	01/09/19 14:25	01/10/19 15:29	1
PCB-1232	ND		0.28	0.056	mg/Kg	☼	01/09/19 14:25	01/10/19 15:29	1
PCB-1242	ND		0.28	0.056	mg/Kg	☼	01/09/19 14:25	01/10/19 15:29	1
PCB-1248	ND		0.28	0.056	mg/Kg	☼	01/09/19 14:25	01/10/19 15:29	1
PCB-1254	ND		0.28	0.13	mg/Kg	☼	01/09/19 14:25	01/10/19 15:29	1
PCB-1260	ND		0.28	0.13	mg/Kg	☼	01/09/19 14:25	01/10/19 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*91*		*60 - 154*	*01/09/19 14:25*	*01/10/19 15:29*	*1*
DCB Decachlorobiphenyl	*111*		*65 - 174*	*01/09/19 14:25*	*01/10/19 15:29*	*1*

Client Sample ID: FD-1
Date Collected: 01/04/19 14:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-15
Matrix: Solid
Percent Solids: 48.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1000	290	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,1,2,2-Tetrachloroethane	ND		1000	170	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1000	520	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,1,2-Trichloroethane	ND		1000	220	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,1-Dichloroethane	ND		1000	320	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,1-Dichloroethene	ND		1000	360	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,2,4-Trichlorobenzene	ND		1000	400	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,2,4-Trimethylbenzene	**870**	**J**	1000	290	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,2-Dibromo-3-Chloropropane	ND		1000	520	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,2-Dichlorobenzene	ND		1000	270	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,2-Dichloroethane	ND		1000	430	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,2-Dichloropropane	ND		1000	170	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,3,5-Trimethylbenzene	ND		1000	320	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,3-Dichlorobenzene	ND		1000	280	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,4-Dichlorobenzene	ND		1000	150	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
2-Butanone (MEK)	ND		5200	3100	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
2-Hexanone	ND		5200	2100	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
4-Isopropyltoluene	ND		1000	350	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
4-Methyl-2-pentanone (MIBK)	ND		5200	340	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Acetone	ND		5200	4300	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Benzene	ND		1000	200	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Bromoform	ND	*	1000	520	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Bromomethane	ND		1000	230	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Carbon disulfide	ND		1000	480	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Carbon tetrachloride	ND		1000	270	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Chlorobenzene	ND		1000	140	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Dibromochloromethane	ND		1000	510	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Chloroethane	ND		1000	220	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Chloroform	ND		1000	720	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Chloromethane	ND		1000	250	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
cis-1,2-Dichloroethene	ND		1000	290	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Cyclohexane	ND		1000	230	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Bromodichloromethane	ND		1000	210	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Dichlorodifluoromethane	ND		1000	460	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Ethylbenzene	ND		1000	300	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
1,2-Dibromoethane	ND		1000	180	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Isopropylbenzene	ND		1000	160	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Methyl acetate	**800**	**J**	5200	500	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Methyl tert-butyl ether	ND		1000	400	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Methylcyclohexane	ND		1000	490	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Methylene Chloride	**1000**		1000	210	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
m,p-Xylene	ND		2100	580	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
n-Butylbenzene	**1100**		1000	310	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
N-Propylbenzene	ND		1000	270	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
o-Xylene	ND		1000	140	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
sec-Butylbenzene	ND		1000	390	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Tetrachloroethene	ND		1000	140	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Toluene	ND		1000	280	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
trans-1,2-Dichloroethene	ND		1000	250	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4

Client Sample ID: FD-1
Date Collected: 01/04/19 14:00
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-15
Matrix: Solid
Percent Solids: 48.1

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		1000	100	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Trichloroethene	ND		1000	290	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Trichlorofluoromethane	ND		1000	490	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Vinyl chloride	ND		1000	350	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Xylenes, Total	ND		2100	580	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
cis-1,3-Dichloropropene	ND		1000	250	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
Styrene	ND		1000	250	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4
tert-Butylbenzene	ND		1000	290	ug/Kg	☼	01/11/19 13:55	01/14/19 18:05	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*53 - 146*	*01/11/19 13:55*	*01/14/19 18:05*	*4*
4-Bromofluorobenzene (Surr)	*103*		*49 - 148*	*01/11/19 13:55*	*01/14/19 18:05*	*4*
Toluene-d8 (Surr)	*99*		*50 - 149*	*01/11/19 13:55*	*01/14/19 18:05*	*4*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		99000	15000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Acenaphthylene	ND		99000	13000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Anthracene	ND		99000	24000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Benzo[a]anthracene	ND		99000	9900	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Benzo[a]pyrene	ND		99000	15000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Benzo[b]fluoranthene	ND		99000	16000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Benzo[g,h,i]perylene	ND		99000	10000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Benzo[k]fluoranthene	ND		99000	13000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Chrysene	ND		99000	22000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Dibenz(a,h)anthracene	ND		99000	17000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Fluoranthene	ND		99000	10000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Fluorene	ND		99000	12000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Indeno[1,2,3-cd]pyrene	ND		99000	12000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Naphthalene	ND		99000	13000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Pyrene	ND		99000	12000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10
Phenanthrene	ND		99000	15000	ug/Kg	☼	01/10/19 14:39	01/14/19 22:06	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*0*	*X*	*54 - 120*	*01/10/19 14:39*	*01/14/19 22:06*	*10*
2-Fluorobiphenyl	*0*	*X*	*60 - 120*	*01/10/19 14:39*	*01/14/19 22:06*	*10*
2-Fluorophenol (Surr)	*0*	*X*	*52 - 120*	*01/10/19 14:39*	*01/14/19 22:06*	*10*
Phenol-d5 (Surr)	*0*	*X*	*54 - 120*	*01/10/19 14:39*	*01/14/19 22:06*	*10*
p-Terphenyl-d14 (Surr)	*0*	*X*	*65 - 121*	*01/10/19 14:39*	*01/14/19 22:06*	*10*
Nitrobenzene-d5 (Surr)	*0*	*X*	*53 - 120*	*01/10/19 14:39*	*01/14/19 22:06*	*10*

Client Sample ID: SB-1W
Date Collected: 01/04/19 16:15
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-16
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		2.0	1.6	ug/L			01/11/19 01:12	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.42	ug/L			01/11/19 01:12	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62	ug/L			01/11/19 01:12	2
1,1,2-Trichloroethane	ND		2.0	0.46	ug/L			01/11/19 01:12	2
1,1-Dichloroethane	ND		2.0	0.76	ug/L			01/11/19 01:12	2
1,1-Dichloroethene	ND		2.0	0.58	ug/L			01/11/19 01:12	2
1,2,4-Trichlorobenzene	ND		2.0	0.82	ug/L			01/11/19 01:12	2
1,2,4-Trimethylbenzene	ND		2.0	1.5	ug/L			01/11/19 01:12	2
1,2-Dibromo-3-Chloropropane	ND		2.0	0.78	ug/L			01/11/19 01:12	2
1,2-Dichlorobenzene	ND		2.0	1.6	ug/L			01/11/19 01:12	2
1,2-Dichloroethane	ND		2.0	0.42	ug/L			01/11/19 01:12	2
1,2-Dichloropropane	ND		2.0	1.4	ug/L			01/11/19 01:12	2
1,3,5-Trimethylbenzene	ND		2.0	1.5	ug/L			01/11/19 01:12	2
1,3-Dichlorobenzene	ND		2.0	1.6	ug/L			01/11/19 01:12	2
1,4-Dichlorobenzene	ND		2.0	1.7	ug/L			01/11/19 01:12	2
2-Butanone (MEK)	ND		20	2.6	ug/L			01/11/19 01:12	2
2-Hexanone	ND		10	2.5	ug/L			01/11/19 01:12	2
4-Isopropyltoluene	ND		2.0	0.62	ug/L			01/11/19 01:12	2
4-Methyl-2-pentanone (MIBK)	ND		10	4.2	ug/L			01/11/19 01:12	2
Acetone	**11**	**J**	20	6.0	ug/L			01/11/19 01:12	2
Benzene	ND		2.0	0.82	ug/L			01/11/19 01:12	2
Bromoform	ND		2.0	0.52	ug/L			01/11/19 01:12	2
Bromomethane	ND		2.0	1.4	ug/L			01/11/19 01:12	2
Carbon disulfide	ND		2.0	0.38	ug/L			01/11/19 01:12	2
Carbon tetrachloride	ND		2.0	0.54	ug/L			01/11/19 01:12	2
Chlorobenzene	ND		2.0	1.5	ug/L			01/11/19 01:12	2
Dibromochloromethane	ND		2.0	0.64	ug/L			01/11/19 01:12	2
Chloroethane	ND		2.0	0.64	ug/L			01/11/19 01:12	2
Chloroform	ND		2.0	0.68	ug/L			01/11/19 01:12	2
Chloromethane	ND		2.0	0.70	ug/L			01/11/19 01:12	2
cis-1,2-Dichloroethene	ND		2.0	1.6	ug/L			01/11/19 01:12	2
Cyclohexane	ND		2.0	0.36	ug/L			01/11/19 01:12	2
Bromodichloromethane	ND		2.0	0.78	ug/L			01/11/19 01:12	2
Dichlorodifluoromethane	ND		2.0	1.4	ug/L			01/11/19 01:12	2
Ethylbenzene	ND		2.0	1.5	ug/L			01/11/19 01:12	2
1,2-Dibromoethane	ND		2.0	1.5	ug/L			01/11/19 01:12	2
Isopropylbenzene	ND		2.0	1.6	ug/L			01/11/19 01:12	2
Methyl acetate	ND		5.0	2.6	ug/L			01/11/19 01:12	2
Methyl tert-butyl ether	ND		2.0	0.32	ug/L			01/11/19 01:12	2
Methylcyclohexane	ND		2.0	0.32	ug/L			01/11/19 01:12	2
Methylene Chloride	**0.96**	**J**	2.0	0.88	ug/L			01/11/19 01:12	2
m,p-Xylene	ND		4.0	1.3	ug/L			01/11/19 01:12	2
n-Butylbenzene	ND		2.0	1.3	ug/L			01/11/19 01:12	2
N-Propylbenzene	ND		2.0	1.4	ug/L			01/11/19 01:12	2
o-Xylene	ND		2.0	1.5	ug/L			01/11/19 01:12	2
sec-Butylbenzene	ND		2.0	1.5	ug/L			01/11/19 01:12	2
Tetrachloroethene	ND		2.0	0.72	ug/L			01/11/19 01:12	2
Toluene	ND		2.0	1.0	ug/L			01/11/19 01:12	2
trans-1,2-Dichloroethene	ND		2.0	1.8	ug/L			01/11/19 01:12	2

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: SB-1W
Date Collected: 01/04/19 16:15
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-16
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		2.0	0.74	ug/L			01/11/19 01:12	2
Trichloroethene	ND		2.0	0.92	ug/L			01/11/19 01:12	2
Trichlorofluoromethane	ND		2.0	1.8	ug/L			01/11/19 01:12	2
Vinyl chloride	ND		2.0	1.8	ug/L			01/11/19 01:12	2
Xylenes, Total	ND		4.0	1.3	ug/L			01/11/19 01:12	2
cis-1,3-Dichloropropene	ND		2.0	0.72	ug/L			01/11/19 01:12	2
Styrene	ND		2.0	1.5	ug/L			01/11/19 01:12	2
tert-Butylbenzene	ND		2.0	1.6	ug/L			01/11/19 01:12	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*01/11/19 01:12*	*2*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*01/11/19 01:12*	*2*
Toluene-d8 (Surr)	*102*		*80 - 120*		*01/11/19 01:12*	*2*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: SB-4W
Date Collected: 01/04/19 16:30
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-17
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			01/11/19 01:39	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			01/11/19 01:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			01/11/19 01:39	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			01/11/19 01:39	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			01/11/19 01:39	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			01/11/19 01:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			01/11/19 01:39	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			01/11/19 01:39	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			01/11/19 01:39	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			01/11/19 01:39	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			01/11/19 01:39	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			01/11/19 01:39	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			01/11/19 01:39	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			01/11/19 01:39	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			01/11/19 01:39	1
2-Butanone (MEK)	ND		10	1.3	ug/L			01/11/19 01:39	1
2-Hexanone	ND		5.0	1.2	ug/L			01/11/19 01:39	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			01/11/19 01:39	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			01/11/19 01:39	1
Acetone	**3.8**	**J**	10	3.0	ug/L			01/11/19 01:39	1
Benzene	ND		1.0	0.41	ug/L			01/11/19 01:39	1
Bromoform	ND		1.0	0.26	ug/L			01/11/19 01:39	1
Bromomethane	ND		1.0	0.69	ug/L			01/11/19 01:39	1
Carbon disulfide	ND		1.0	0.19	ug/L			01/11/19 01:39	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			01/11/19 01:39	1
Chlorobenzene	ND		1.0	0.75	ug/L			01/11/19 01:39	1
Dibromochloromethane	ND		1.0	0.32	ug/L			01/11/19 01:39	1
Chloroethane	ND		1.0	0.32	ug/L			01/11/19 01:39	1
Chloroform	ND		1.0	0.34	ug/L			01/11/19 01:39	1
Chloromethane	ND		1.0	0.35	ug/L			01/11/19 01:39	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			01/11/19 01:39	1
Cyclohexane	ND		1.0	0.18	ug/L			01/11/19 01:39	1
Bromodichloromethane	ND		1.0	0.39	ug/L			01/11/19 01:39	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			01/11/19 01:39	1
Ethylbenzene	ND		1.0	0.74	ug/L			01/11/19 01:39	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			01/11/19 01:39	1
Isopropylbenzene	ND		1.0	0.79	ug/L			01/11/19 01:39	1
Methyl acetate	ND		2.5	1.3	ug/L			01/11/19 01:39	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			01/11/19 01:39	1
Methylcyclohexane	ND		1.0	0.16	ug/L			01/11/19 01:39	1
Methylene Chloride	ND		1.0	0.44	ug/L			01/11/19 01:39	1
m,p-Xylene	ND		2.0	0.66	ug/L			01/11/19 01:39	1
n-Butylbenzene	ND		1.0	0.64	ug/L			01/11/19 01:39	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/11/19 01:39	1
o-Xylene	ND		1.0	0.76	ug/L			01/11/19 01:39	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			01/11/19 01:39	1
Tetrachloroethene	ND		1.0	0.36	ug/L			01/11/19 01:39	1
Toluene	ND		1.0	0.51	ug/L			01/11/19 01:39	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			01/11/19 01:39	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: SB-4W
Date Collected: 01/04/19 16:30
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-17
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			01/11/19 01:39	1
Trichloroethene	ND		1.0	0.46	ug/L			01/11/19 01:39	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			01/11/19 01:39	1
Vinyl chloride	ND		1.0	0.90	ug/L			01/11/19 01:39	1
Xylenes, Total	ND		2.0	0.66	ug/L			01/11/19 01:39	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			01/11/19 01:39	1
Styrene	ND		1.0	0.73	ug/L			01/11/19 01:39	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			01/11/19 01:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*01/11/19 01:39*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*01/11/19 01:39*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*01/11/19 01:39*	*1*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: SB-7W
Date Collected: 01/04/19 16:45
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-18
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			01/11/19 02:06	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			01/11/19 02:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			01/11/19 02:06	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			01/11/19 02:06	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			01/11/19 02:06	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			01/11/19 02:06	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			01/11/19 02:06	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			01/11/19 02:06	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			01/11/19 02:06	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			01/11/19 02:06	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			01/11/19 02:06	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			01/11/19 02:06	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			01/11/19 02:06	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			01/11/19 02:06	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			01/11/19 02:06	1
2-Butanone (MEK)	ND		10	1.3	ug/L			01/11/19 02:06	1
2-Hexanone	ND		5.0	1.2	ug/L			01/11/19 02:06	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			01/11/19 02:06	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			01/11/19 02:06	1
Acetone	**8.9**	**J**	10	3.0	ug/L			01/11/19 02:06	1
Benzene	ND		1.0	0.41	ug/L			01/11/19 02:06	1
Bromoform	ND		1.0	0.26	ug/L			01/11/19 02:06	1
Bromomethane	ND		1.0	0.69	ug/L			01/11/19 02:06	1
Carbon disulfide	**0.46**	**J B**	1.0	0.19	ug/L			01/11/19 02:06	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			01/11/19 02:06	1
Chlorobenzene	ND		1.0	0.75	ug/L			01/11/19 02:06	1
Dibromochloromethane	ND		1.0	0.32	ug/L			01/11/19 02:06	1
Chloroethane	ND		1.0	0.32	ug/L			01/11/19 02:06	1
Chloroform	ND		1.0	0.34	ug/L			01/11/19 02:06	1
Chloromethane	ND		1.0	0.35	ug/L			01/11/19 02:06	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			01/11/19 02:06	1
Cyclohexane	ND		1.0	0.18	ug/L			01/11/19 02:06	1
Bromodichloromethane	ND		1.0	0.39	ug/L			01/11/19 02:06	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			01/11/19 02:06	1
Ethylbenzene	ND		1.0	0.74	ug/L			01/11/19 02:06	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			01/11/19 02:06	1
Isopropylbenzene	ND		1.0	0.79	ug/L			01/11/19 02:06	1
Methyl acetate	ND		2.5	1.3	ug/L			01/11/19 02:06	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			01/11/19 02:06	1
Methylcyclohexane	**0.37**	**J**	1.0	0.16	ug/L			01/11/19 02:06	1
Methylene Chloride	ND		1.0	0.44	ug/L			01/11/19 02:06	1
m,p-Xylene	ND		2.0	0.66	ug/L			01/11/19 02:06	1
n-Butylbenzene	ND		1.0	0.64	ug/L			01/11/19 02:06	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/11/19 02:06	1
o-Xylene	ND		1.0	0.76	ug/L			01/11/19 02:06	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			01/11/19 02:06	1
Tetrachloroethene	ND		1.0	0.36	ug/L			01/11/19 02:06	1
Toluene	ND		1.0	0.51	ug/L			01/11/19 02:06	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			01/11/19 02:06	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: SB-7W
Date Collected: 01/04/19 16:45
Date Received: 01/07/19 16:45

Lab Sample ID: 480-147629-18
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			01/11/19 02:06	1
Trichloroethene	ND		1.0	0.46	ug/L			01/11/19 02:06	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			01/11/19 02:06	1
Vinyl chloride	ND		1.0	0.90	ug/L			01/11/19 02:06	1
Xylenes, Total	ND		2.0	0.66	ug/L			01/11/19 02:06	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			01/11/19 02:06	1
Styrene	ND		1.0	0.73	ug/L			01/11/19 02:06	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			01/11/19 02:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*01/11/19 02:06*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*01/11/19 02:06*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*01/11/19 02:06*	*1*

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		DCA	BFB	TOL
Lab Sample ID	Client Sample ID	(53-146)	(49-148)	(50-149)
480-147629-3	TP-3 (6-8 FT)	107	105	100
480-147629-3 - DL	TP-3 (6-8 FT)	108	107	101
480-147629-4	TP-4 (4-6 FT)	105	103	101
480-147629-4 MS	TP-4 (4-6 FT)	105	105	100
480-147629-4 MSD	TP-4 (4-6 FT)	109	103	102
480-147629-15	FD-1	107	103	99
LCS 480-454737/1-A	Lab Control Sample	107	110	100
MB 480-454737/2-A	Method Blank	104	105	100

Surrogate Legend

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

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)
480-147629-7	TP-13 (8.5-9.5 FT)	101	74	74
LCS 480-454910/1-A	Lab Control Sample	99	100	102
MB 480-454910/2-A	Method Blank	101	100	100

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)
480-147629-16	SB-1W	103	105	102
480-147629-17	SB-4W	101	102	103
480-147629-18	SB-7W	100	99	99
LCS 480-454631/5	Lab Control Sample	104	98	100
MB 480-454631/7	Method Blank	104	98	98

Surrogate Legend

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

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

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)	(65-121)	(53-120)
480-147629-1	TP-2 (2-4 FT)	95	95	82	80	103	81
480-147629-1 - DL	TP-2 (2-4 FT)	104	95	92	89	119	76
480-147629-1 MS	TP-2 (2-4 FT)	106	96	75	78	102	82
480-147629-1 MSD	TP-2 (2-4 FT)	104	93	76	79	106	83
480-147629-3	TP-3 (6-8 FT)	114	95	73	78	97	90
480-147629-5	TP-7 (3-5 FT)	108	94	72	78	107	84
480-147629-6	TP-11 (2-4 FT)	100	97	78	86	101	84
480-147629-8	TP-16 (2-3 FT)	98	93	75	77	106	80
480-147629-9	SB-1 (.25-2 FT)	66	87	81	79	90	78
480-147629-10	SB-2 (.25-2 FT)	116	99	73	81	106	90
480-147629-11	SB-4 (.25-1.5 FT)	117	95	74	80	102	89
480-147629-11 - DL	SB-4 (.25-1.5 FT)	101	95	83	87	110	87
480-147629-12	SB-5 (.5-1 FT)	130 X	86	88	73	94	90
480-147629-13	SB-7 (0-1.5 FT)	105	89	89	69	95	81
480-147629-15	FD-1	0 X	0 X	0 X	0 X	0 X	0 X
LCS 480-454574/2-A	Lab Control Sample	113	94	72	79	105	83
MB 480-454574/1-A	Method Blank	101	97	80	85	112	89

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: 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)
480-147629-14	TR-1 (.5-1 FT)	91	111
LCS 480-454399/2-A	Lab Control Sample	146	187 X
MB 480-454399/1-A	Method Blank	101	133

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

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

Lab Sample ID: MB 480-454631/7
Matrix: Water
Analysis Batch: 454631

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			01/10/19 22:11	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			01/10/19 22:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			01/10/19 22:11	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			01/10/19 22:11	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			01/10/19 22:11	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			01/10/19 22:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			01/10/19 22:11	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			01/10/19 22:11	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			01/10/19 22:11	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			01/10/19 22:11	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			01/10/19 22:11	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			01/10/19 22:11	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			01/10/19 22:11	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			01/10/19 22:11	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			01/10/19 22:11	1
2-Hexanone	ND		5.0	1.2	ug/L			01/10/19 22:11	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			01/10/19 22:11	1
Acetone	ND		10	3.0	ug/L			01/10/19 22:11	1
Benzene	ND		1.0	0.41	ug/L			01/10/19 22:11	1
Bromoform	ND		1.0	0.26	ug/L			01/10/19 22:11	1
Bromomethane	ND		1.0	0.69	ug/L			01/10/19 22:11	1
Carbon disulfide	0.202	J	1.0	0.19	ug/L			01/10/19 22:11	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			01/10/19 22:11	1
Chlorobenzene	ND		1.0	0.75	ug/L			01/10/19 22:11	1
Dibromochloromethane	ND		1.0	0.32	ug/L			01/10/19 22:11	1
Chloroethane	ND		1.0	0.32	ug/L			01/10/19 22:11	1
Chloroform	ND		1.0	0.34	ug/L			01/10/19 22:11	1
Chloromethane	ND		1.0	0.35	ug/L			01/10/19 22:11	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			01/10/19 22:11	1
Cyclohexane	ND		1.0	0.18	ug/L			01/10/19 22:11	1
Bromodichloromethane	ND		1.0	0.39	ug/L			01/10/19 22:11	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			01/10/19 22:11	1
Ethylbenzene	ND		1.0	0.74	ug/L			01/10/19 22:11	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			01/10/19 22:11	1
2-Butanone (MEK)	ND		10	1.3	ug/L			01/10/19 22:11	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			01/10/19 22:11	1
Isopropylbenzene	ND		1.0	0.79	ug/L			01/10/19 22:11	1
Methyl acetate	ND		2.5	1.3	ug/L			01/10/19 22:11	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			01/10/19 22:11	1
Methylcyclohexane	ND		1.0	0.16	ug/L			01/10/19 22:11	1
Methylene Chloride	ND		1.0	0.44	ug/L			01/10/19 22:11	1
m,p-Xylene	ND		2.0	0.66	ug/L			01/10/19 22:11	1
n-Butylbenzene	ND		1.0	0.64	ug/L			01/10/19 22:11	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/19 22:11	1
o-Xylene	ND		1.0	0.76	ug/L			01/10/19 22:11	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			01/10/19 22:11	1
Tetrachloroethene	ND		1.0	0.36	ug/L			01/10/19 22:11	1
Toluene	ND		1.0	0.51	ug/L			01/10/19 22:11	1

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

Lab Sample ID: MB 480-454631/7
Matrix: Water
Analysis Batch: 454631

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			01/10/19 22:11	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			01/10/19 22:11	1
Trichloroethene	ND		1.0	0.46	ug/L			01/10/19 22:11	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			01/10/19 22:11	1
Vinyl chloride	ND		1.0	0.90	ug/L			01/10/19 22:11	1
Xylenes, Total	ND		2.0	0.66	ug/L			01/10/19 22:11	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			01/10/19 22:11	1
Styrene	ND		1.0	0.73	ug/L			01/10/19 22:11	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			01/10/19 22:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*01/10/19 22:11*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*01/10/19 22:11*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*01/10/19 22:11*	*1*

Lab Sample ID: LCS 480-454631/5
Matrix: Water
Analysis Batch: 454631

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	28.1		ug/L		113	73 - 126
1,1,2,2-Tetrachloroethane	25.0	28.9		ug/L		116	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	29.6		ug/L		118	61 - 148
1,1,2-Trichloroethane	25.0	25.9		ug/L		104	76 - 122
1,1-Dichloroethane	25.0	27.1		ug/L		109	77 - 120
1,1-Dichloroethene	25.0	28.0		ug/L		112	66 - 127
1,2,4-Trichlorobenzene	25.0	28.2		ug/L		113	79 - 122
1,2,4-Trimethylbenzene	25.0	28.6		ug/L		114	76 - 121
1,2-Dibromo-3-Chloropropane	25.0	31.4		ug/L		126	56 - 134
1,2-Dichlorobenzene	25.0	27.7		ug/L		111	80 - 124
1,2-Dichloroethane	25.0	26.6		ug/L		106	75 - 120
1,2-Dichloropropane	25.0	25.6		ug/L		103	76 - 120
1,3,5-Trimethylbenzene	25.0	28.7		ug/L		115	77 - 121
1,3-Dichlorobenzene	25.0	26.5		ug/L		106	77 - 120
1,4-Dichlorobenzene	25.0	25.9		ug/L		104	80 - 120
2-Hexanone	125	133		ug/L		106	65 - 127
4-Isopropyltoluene	25.0	28.8		ug/L		115	73 - 120
Acetone	125	157		ug/L		125	56 - 142
Benzene	25.0	26.8		ug/L		107	71 - 124
Bromoform	25.0	29.6		ug/L		118	61 - 132
Bromomethane	25.0	26.9		ug/L		108	55 - 144
Carbon disulfide	25.0	27.1		ug/L		109	59 - 134
Carbon tetrachloride	25.0	29.2		ug/L		117	72 - 134
Chlorobenzene	25.0	25.4		ug/L		102	80 - 120
Dibromochloromethane	25.0	29.7		ug/L		119	75 - 125
Chloroethane	25.0	26.9		ug/L		108	69 - 136
Chloroform	25.0	26.9		ug/L		108	73 - 127

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

Lab Sample ID: LCS 480-454631/5
Matrix: Water
Analysis Batch: 454631

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	25.0	26.3		ug/L		105	68 - 124
cis-1,2-Dichloroethene	25.0	26.9		ug/L		108	74 - 124
Cyclohexane	25.0	29.2		ug/L		117	59 - 135
Bromodichloromethane	25.0	28.4		ug/L		114	80 - 122
Dichlorodifluoromethane	25.0	24.4		ug/L		98	59 - 135
Ethylbenzene	25.0	26.4		ug/L		106	77 - 123
1,2-Dibromoethane	25.0	26.8		ug/L		107	77 - 120
2-Butanone (MEK)	125	140		ug/L		112	57 - 140
4-Methyl-2-pentanone (MIBK)	125	139		ug/L		111	71 - 125
Isopropylbenzene	25.0	28.2		ug/L		113	77 - 122
Methyl acetate	50.0	53.7		ug/L		107	74 - 133
Methyl tert-butyl ether	25.0	29.0		ug/L		116	77 - 120
Methylcyclohexane	25.0	29.0		ug/L		116	68 - 134
Methylene Chloride	25.0	28.4		ug/L		113	75 - 124
m,p-Xylene	25.0	26.4		ug/L		106	76 - 122
n-Butylbenzene	25.0	28.4		ug/L		114	71 - 128
N-Propylbenzene	25.0	27.8		ug/L		111	75 - 127
o-Xylene	25.0	26.0		ug/L		104	76 - 122
sec-Butylbenzene	25.0	28.5		ug/L		114	74 - 127
Tetrachloroethene	25.0	27.1		ug/L		108	74 - 122
Toluene	25.0	26.2		ug/L		105	80 - 122
trans-1,2-Dichloroethene	25.0	28.1		ug/L		112	73 - 127
trans-1,3-Dichloropropene	25.0	27.4		ug/L		110	80 - 120
Trichloroethene	25.0	26.3		ug/L		105	74 - 123
Trichlorofluoromethane	25.0	26.8		ug/L		107	62 - 150
Vinyl chloride	25.0	26.2		ug/L		105	65 - 133
cis-1,3-Dichloropropene	25.0	27.2		ug/L		109	74 - 124
Styrene	25.0	26.3		ug/L		105	80 - 120
tert-Butylbenzene	25.0	28.6		ug/L		114	75 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*

Lab Sample ID: MB 480-454737/2-A
Matrix: Solid
Analysis Batch: 454857

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 454737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	28	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,1,2,2-Tetrachloroethane	ND		100	16	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		100	50	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,1,2-Trichloroethane	ND		100	21	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,1-Dichloroethane	ND		100	31	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,1-Dichloroethene	ND		100	35	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,2,4-Trichlorobenzene	ND		100	38	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,2,4-Trimethylbenzene	ND		100	28	ug/Kg		01/11/19 13:55	01/14/19 11:31	1

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

Lab Sample ID: MB 480-454737/2-A
Matrix: Solid
Analysis Batch: 454857

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 454737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		100	50	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,2-Dichlorobenzene	ND		100	26	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,2-Dichloroethane	ND		100	41	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,2-Dichloropropane	ND		100	16	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,3,5-Trimethylbenzene	ND		100	30	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,3-Dichlorobenzene	ND		100	27	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,4-Dichlorobenzene	ND		100	14	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
2-Hexanone	ND		500	210	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
4-Isopropyltoluene	ND		100	34	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Acetone	ND		500	410	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Benzene	ND		100	19	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Bromoform	ND		100	50	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Bromomethane	ND		100	22	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Carbon disulfide	ND		100	46	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Carbon tetrachloride	ND		100	26	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Chlorobenzene	ND		100	13	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Dibromochloromethane	ND		100	48	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Chloroethane	ND		100	21	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Chloroform	ND		100	69	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Chloromethane	ND		100	24	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
cis-1,2-Dichloroethene	ND		100	28	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Cyclohexane	ND		100	22	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Bromodichloromethane	ND		100	20	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Dichlorodifluoromethane	ND		100	44	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Ethylbenzene	ND		100	29	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
1,2-Dibromoethane	ND		100	18	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
2-Butanone (MEK)	ND		500	300	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
4-Methyl-2-pentanone (MIBK)	ND		500	32	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Isopropylbenzene	ND		100	15	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Methyl acetate	ND		500	48	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Methyl tert-butyl ether	ND		100	38	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Methylcyclohexane	ND		100	47	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Methylene Chloride	ND		100	20	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
m,p-Xylene	ND		200	55	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
n-Butylbenzene	ND		100	29	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
N-Propylbenzene	ND		100	26	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
o-Xylene	21.5	J	100	13	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
sec-Butylbenzene	ND		100	37	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Tetrachloroethene	ND		100	13	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Toluene	ND		100	27	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
trans-1,2-Dichloroethene	ND		100	24	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
trans-1,3-Dichloropropene	ND		100	9.8	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Trichloroethene	ND		100	28	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Trichlorofluoromethane	ND		100	47	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Vinyl chloride	ND		100	34	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Xylenes, Total	ND		200	55	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
cis-1,3-Dichloropropene	ND		100	24	ug/Kg		01/11/19 13:55	01/14/19 11:31	1
Styrene	ND		100	24	ug/Kg		01/11/19 13:55	01/14/19 11:31	1

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

Lab Sample ID: MB 480-454737/2-A
Matrix: Solid
Analysis Batch: 454857

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 454737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	ND		100	28	ug/Kg		01/11/19 13:55	01/14/19 11:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*53 - 146*	*01/11/19 13:55*	*01/14/19 11:31*	*1*
Toluene-d8 (Surr)	*100*		*50 - 149*	*01/11/19 13:55*	*01/14/19 11:31*	*1*
4-Bromofluorobenzene (Surr)	*105*		*49 - 148*	*01/11/19 13:55*	*01/14/19 11:31*	*1*

Lab Sample ID: LCS 480-454737/1-A
Matrix: Solid
Analysis Batch: 454857

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 454737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2500	2950		ug/Kg		118	68 - 130
1,1,2,2-Tetrachloroethane	2500	2490		ug/Kg		100	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	2500	2680		ug/Kg		107	10 - 179
1,1,2-Trichloroethane	2500	2550		ug/Kg		102	80 - 120
1,1-Dichloroethane	2500	2740		ug/Kg		110	78 - 121
1,1-Dichloroethene	2500	2540		ug/Kg		102	48 - 133
1,2,4-Trichlorobenzene	2500	2520		ug/Kg		101	70 - 140
1,2,4-Trimethylbenzene	2500	2690		ug/Kg		107	77 - 127
1,2-Dibromo-3-Chloropropane	2500	2450		ug/Kg		98	56 - 122
1,2-Dichlorobenzene	2500	2620		ug/Kg		105	78 - 125
1,2-Dichloroethane	2500	2740		ug/Kg		110	74 - 127
1,2-Dichloropropane	2500	2800		ug/Kg		112	80 - 120
1,3,5-Trimethylbenzene	2500	2680		ug/Kg		107	79 - 120
1,3-Dichlorobenzene	2500	2640		ug/Kg		106	80 - 120
1,4-Dichlorobenzene	2500	2660		ug/Kg		106	80 - 120
2-Hexanone	12500	13200		ug/Kg		106	59 - 127
4-Isopropyltoluene	2500	2860		ug/Kg		114	80 - 120
Acetone	12500	13100		ug/Kg		105	47 - 141
Benzene	2500	2660		ug/Kg		106	77 - 125
Bromoform	2500	3440	*	ug/Kg		137	48 - 125
Bromomethane	2500	2620		ug/Kg		105	39 - 149
Carbon disulfide	2500	2460		ug/Kg		98	40 - 136
Carbon tetrachloride	2500	3090		ug/Kg		124	54 - 135
Chlorobenzene	2500	2740		ug/Kg		110	76 - 126
Dibromochloromethane	2500	2920		ug/Kg		117	64 - 120
Chloroethane	2500	2720		ug/Kg		109	23 - 150
Chloroform	2500	2630		ug/Kg		105	78 - 120
Chloromethane	2500	2380		ug/Kg		95	61 - 124
cis-1,2-Dichloroethene	2500	2640		ug/Kg		105	79 - 124
Cyclohexane	2500	2950		ug/Kg		118	49 - 129
Bromodichloromethane	2500	2940		ug/Kg		118	71 - 121
Dichlorodifluoromethane	2500	2660		ug/Kg		106	10 - 150
Ethylbenzene	2500	2720		ug/Kg		109	78 - 124
1,2-Dibromoethane	2500	2610		ug/Kg		104	80 - 120
2-Butanone (MEK)	12500	12800		ug/Kg		103	54 - 149

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

Lab Sample ID: LCS 480-454737/1-A
Matrix: Solid
Analysis Batch: 454857

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 454737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Methyl-2-pentanone (MIBK)	12500	12800		ug/Kg		103	74 - 120
Isopropylbenzene	2500	2690		ug/Kg		108	76 - 120
Methyl acetate	5000	5510		ug/Kg		110	71 - 123
Methyl tert-butyl ether	2500	2540		ug/Kg		102	67 - 137
Methylcyclohexane	2500	2970		ug/Kg		119	50 - 130
Methylene Chloride	2500	2740		ug/Kg		110	75 - 118
m,p-Xylene	2500	2810		ug/Kg		112	77 - 125
n-Butylbenzene	2500	2850		ug/Kg		114	80 - 120
N-Propylbenzene	2500	2770		ug/Kg		111	76 - 120
o-Xylene	2500	2820	B	ug/Kg		113	80 - 124
sec-Butylbenzene	2500	2760		ug/Kg		110	79 - 120
Tetrachloroethene	2500	2720		ug/Kg		109	73 - 133
Toluene	2500	2610		ug/Kg		105	75 - 124
trans-1,2-Dichloroethene	2500	2640		ug/Kg		106	74 - 129
trans-1,3-Dichloropropene	2500	2810		ug/Kg		112	73 - 120
Trichloroethene	2500	2680		ug/Kg		107	75 - 131
Trichlorofluoromethane	2500	2580		ug/Kg		103	29 - 158
Vinyl chloride	2500	2360		ug/Kg		94	59 - 124
cis-1,3-Dichloropropene	2500	2890		ug/Kg		115	75 - 121
Styrene	2500	2860		ug/Kg		114	80 - 120
tert-Butylbenzene	2500	2710		ug/Kg		108	78 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*53 - 146*
Toluene-d8 (Surr)	*100*		*50 - 149*
4-Bromofluorobenzene (Surr)	*110*		*49 - 148*

Lab Sample ID: 480-147629-4 MS
Matrix: Solid
Analysis Batch: 454857

Client Sample ID: TP-4 (4-6 FT)
Prep Type: Total/NA
Prep Batch: 454737

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND		2800	3170		ug/Kg	☼	113	64 - 142
1,1,2,2-Tetrachloroethane	ND		2800	3230		ug/Kg	☼	116	56 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2800	3060		ug/Kg	☼	109	64 - 154
1,1,2-Trichloroethane	ND		2800	3020		ug/Kg	☼	108	63 - 133
1,1-Dichloroethane	ND		2800	2840		ug/Kg	☼	102	64 - 135
1,1-Dichloroethene	ND		2800	2770		ug/Kg	☼	99	62 - 145
1,2,4-Trichlorobenzene	ND		2800	2830		ug/Kg	☼	101	56 - 145
1,2,4-Trimethylbenzene	ND		2800	2970		ug/Kg	☼	106	67 - 139
1,2-Dibromo-3-Chloropropane	ND		2800	2760		ug/Kg	☼	99	40 - 122
1,2-Dichlorobenzene	ND		2800	2900		ug/Kg	☼	104	68 - 133
1,2-Dichloroethane	ND		2800	2940		ug/Kg	☼	105	62 - 135
1,2-Dichloropropane	ND		2800	2820		ug/Kg	☼	101	67 - 139
1,3,5-Trimethylbenzene	ND		2800	2960		ug/Kg	☼	106	67 - 142
1,3-Dichlorobenzene	ND		2800	2900		ug/Kg	☼	104	68 - 136
1,4-Dichlorobenzene	ND		2800	2800		ug/Kg	☼	100	69 - 136

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

Lab Sample ID: 480-147629-4 MS
Matrix: Solid
Analysis Batch: 454857

Client Sample ID: TP-4 (4-6 FT)
Prep Type: Total/NA
Prep Batch: 454737

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Hexanone	ND		14000	16100		ug/Kg	☼	115	44 - 130
4-Isopropyltoluene	ND		2800	3100		ug/Kg	☼	111	67 - 143
Acetone	ND		14000	16300		ug/Kg	☼	117	32 - 136
Benzene	ND		2800	2840		ug/Kg	☼	101	68 - 137
Bromoform	ND	*	2800	3420		ug/Kg	☼	122	43 - 134
Bromomethane	ND		2800	3190		ug/Kg	☼	114	38 - 137
Carbon disulfide	ND		2800	2540		ug/Kg	☼	91	52 - 139
Carbon tetrachloride	ND		2800	3200		ug/Kg	☼	114	60 - 150
Chlorobenzene	ND		2800	3060		ug/Kg	☼	109	67 - 136
Dibromochloromethane	ND		2800	2850		ug/Kg	☼	102	57 - 137
Chloroethane	ND		2800	3250		ug/Kg	☼	116	34 - 140
Chloroform	ND		2800	2790		ug/Kg	☼	100	64 - 133
Chloromethane	ND		2800	2970		ug/Kg	☼	106	47 - 143
cis-1,2-Dichloroethene	ND		2800	2750		ug/Kg	☼	98	65 - 137
Cyclohexane	ND		2800	3220		ug/Kg	☼	115	63 - 149
Bromodichloromethane	ND		2800	2980		ug/Kg	☼	107	62 - 136
Dichlorodifluoromethane	ND		2800	3420		ug/Kg	☼	122	26 - 150
Ethylbenzene	ND		2800	2930		ug/Kg	☼	105	67 - 136
1,2-Dibromoethane	ND		2800	3040		ug/Kg	☼	109	65 - 133
2-Butanone (MEK)	ND		14000	15000		ug/Kg	☼	107	46 - 132
4-Methyl-2-pentanone (MIBK)	ND		14000	15100		ug/Kg	☼	108	49 - 125
Isopropylbenzene	ND		2800	2930		ug/Kg	☼	105	65 - 147
Methyl acetate	ND		5600	6010		ug/Kg	☼	107	50 - 124
Methyl tert-butyl ether	ND		2800	2820		ug/Kg	☼	101	60 - 130
Methylcyclohexane	ND		2800	3210		ug/Kg	☼	115	67 - 150
Methylene Chloride	ND	F2	2800	2900		ug/Kg	☼	104	63 - 138
m,p-Xylene	ND		2800	3060		ug/Kg	☼	109	68 - 138
n-Butylbenzene	ND		2800	3110		ug/Kg	☼	111	64 - 144
N-Propylbenzene	ND		2800	3020		ug/Kg	☼	108	64 - 144
o-Xylene	ND		2800	3000		ug/Kg	☼	107	67 - 135
sec-Butylbenzene	ND		2800	3090		ug/Kg	☼	110	66 - 145
Tetrachloroethene	ND		2800	2890		ug/Kg	☼	103	67 - 150
Toluene	ND		2800	2860		ug/Kg	☼	102	68 - 137
trans-1,2-Dichloroethene	ND		2800	2800		ug/Kg	☼	100	65 - 138
trans-1,3-Dichloropropene	ND		2800	2770		ug/Kg	☼	99	58 - 143
Trichloroethene	ND		2800	2870		ug/Kg	☼	103	69 - 143
Trichlorofluoromethane	ND		2800	3390		ug/Kg	☼	121	35 - 150
Vinyl chloride	ND		2800	3300		ug/Kg	☼	118	56 - 150
cis-1,3-Dichloropropene	ND		2800	2740		ug/Kg	☼	98	61 - 148
Styrene	ND		2800	2950		ug/Kg	☼	106	68 - 137
tert-Butylbenzene	ND		2800	3060		ug/Kg	☼	109	67 - 146

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*53 - 146*
Toluene-d8 (Surr)	*100*		*50 - 149*
4-Bromofluorobenzene (Surr)	*105*		*49 - 148*

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

Lab Sample ID: 480-147629-4 MSD
Matrix: Solid
Analysis Batch: 454857

Client Sample ID: TP-4 (4-6 FT)
Prep Type: Total/NA
Prep Batch: 454737

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		2800	3140		ug/Kg	☼	112	64 - 142	1	20
1,1,2,2-Tetrachloroethane	ND		2800	3010		ug/Kg	☼	108	56 - 128	7	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2800	3020		ug/Kg	☼	108	64 - 154	1	20
1,1,2-Trichloroethane	ND		2800	2930		ug/Kg	☼	105	63 - 133	3	20
1,1-Dichloroethane	ND		2800	3040		ug/Kg	☼	109	64 - 135	7	20
1,1-Dichloroethene	ND		2800	2980		ug/Kg	☼	107	62 - 145	8	20
1,2,4-Trichlorobenzene	ND		2800	2920		ug/Kg	☼	104	56 - 145	3	20
1,2,4-Trimethylbenzene	ND		2800	3050		ug/Kg	☼	109	67 - 139	3	20
1,2-Dibromo-3-Chloropropane	ND		2800	2970		ug/Kg	☼	106	40 - 122	7	20
1,2-Dichlorobenzene	ND		2800	2950		ug/Kg	☼	105	68 - 133	2	20
1,2-Dichloroethane	ND		2800	2930		ug/Kg	☼	105	62 - 135	0	20
1,2-Dichloropropane	ND		2800	2930		ug/Kg	☼	105	67 - 139	4	20
1,3,5-Trimethylbenzene	ND		2800	3000		ug/Kg	☼	107	67 - 142	1	20
1,3-Dichlorobenzene	ND		2800	3040		ug/Kg	☼	109	68 - 136	5	20
1,4-Dichlorobenzene	ND		2800	2980		ug/Kg	☼	106	69 - 136	6	20
2-Hexanone	ND		14000	16900		ug/Kg	☼	121	44 - 130	5	20
4-Isopropyltoluene	ND		2800	3110		ug/Kg	☼	111	67 - 143	0	20
Acetone	ND		14000	17100		ug/Kg	☼	123	32 - 136	5	20
Benzene	ND		2800	2980		ug/Kg	☼	107	68 - 137	5	20
Bromoform	ND	*	2800	3230		ug/Kg	☼	115	43 - 134	6	20
Bromomethane	ND		2800	3410		ug/Kg	☼	122	38 - 137	7	20
Carbon disulfide	ND		2800	2650		ug/Kg	☼	95	52 - 139	4	20
Carbon tetrachloride	ND		2800	3290		ug/Kg	☼	118	60 - 150	3	20
Chlorobenzene	ND		2800	3140		ug/Kg	☼	112	67 - 136	3	20
Dibromochloromethane	ND		2800	2880		ug/Kg	☼	103	57 - 137	1	20
Chloroethane	ND		2800	3400		ug/Kg	☼	122	34 - 140	4	20
Chloroform	ND		2800	2950		ug/Kg	☼	105	64 - 133	5	20
Chloromethane	ND		2800	3260		ug/Kg	☼	116	47 - 143	9	20
cis-1,2-Dichloroethene	ND		2800	2900		ug/Kg	☼	104	65 - 137	5	20
Cyclohexane	ND		2800	3240		ug/Kg	☼	116	63 - 149	1	20
Bromodichloromethane	ND		2800	3030		ug/Kg	☼	108	62 - 136	1	20
Dichlorodifluoromethane	ND		2800	3690		ug/Kg	☼	132	26 - 150	8	20
Ethylbenzene	ND		2800	3000		ug/Kg	☼	107	67 - 136	2	20
1,2-Dibromoethane	ND		2800	2880		ug/Kg	☼	103	65 - 133	5	20
2-Butanone (MEK)	ND		14000	15500		ug/Kg	☼	111	46 - 132	3	20
4-Methyl-2-pentanone (MIBK)	ND		14000	14800		ug/Kg	☼	106	49 - 125	2	20
Isopropylbenzene	ND		2800	3050		ug/Kg	☼	109	65 - 147	4	20
Methyl acetate	ND		5600	6360		ug/Kg	☼	114	50 - 124	6	20
Methyl tert-butyl ether	ND		2800	3010		ug/Kg	☼	107	60 - 130	6	20
Methylcyclohexane	ND		2800	3250		ug/Kg	☼	116	67 - 150	1	20
Methylene Chloride	ND	F2	2800	3080		ug/Kg	☼	110	63 - 138	6	20
m,p-Xylene	ND		2800	3040		ug/Kg	☼	109	68 - 138	1	20
n-Butylbenzene	ND		2800	3200		ug/Kg	☼	114	64 - 144	3	20
N-Propylbenzene	ND		2800	3030		ug/Kg	☼	108	64 - 144	0	20
o-Xylene	ND		2800	3150		ug/Kg	☼	113	67 - 135	5	20
sec-Butylbenzene	ND		2800	3210		ug/Kg	☼	115	66 - 145	4	20
Tetrachloroethene	ND		2800	3080		ug/Kg	☼	110	67 - 150	6	20

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

Lab Sample ID: 480-147629-4 MSD
Matrix: Solid
Analysis Batch: 454857

Client Sample ID: TP-4 (4-6 FT)
Prep Type: Total/NA
Prep Batch: 454737

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	ND		2800	2860		ug/Kg	☼	102	68 - 137	0	20
trans-1,2-Dichloroethene	ND		2800	2980		ug/Kg	☼	107	65 - 138	6	20
trans-1,3-Dichloropropene	ND		2800	2780		ug/Kg	☼	99	58 - 143	0	20
Trichloroethene	ND		2800	3130		ug/Kg	☼	112	69 - 143	8	20
Trichlorofluoromethane	ND		2800	3410		ug/Kg	☼	122	35 - 150	0	20
Vinyl chloride	ND		2800	3160		ug/Kg	☼	113	56 - 150	4	20
cis-1,3-Dichloropropene	ND		2800	2810		ug/Kg	☼	100	61 - 148	2	20
Styrene	ND		2800	3010		ug/Kg	☼	108	68 - 137	2	20
tert-Butylbenzene	ND		2800	3280		ug/Kg	☼	117	67 - 146	7	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*53 - 146*
Toluene-d8 (Surr)	*102*		*50 - 149*
4-Bromofluorobenzene (Surr)	*103*		*49 - 148*

Lab Sample ID: MB 480-454910/2-A
Matrix: Solid
Analysis Batch: 454900

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 454910

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.3	0.45	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,1,2,2-Tetrachloroethane	ND		6.3	1.0	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.3	1.4	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,1,2-Trichloroethane	ND		6.3	0.81	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,1-Dichloroethane	ND		6.3	0.76	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,1-Dichloroethene	ND		6.3	0.77	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,2,4-Trichlorobenzene	ND		6.3	0.38	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,2,4-Trimethylbenzene	ND		6.3	1.2	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,2-Dibromo-3-Chloropropane	ND		6.3	3.1	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,2-Dichlorobenzene	ND		6.3	0.49	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,2-Dichloroethane	ND		6.3	0.31	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,2-Dichloropropane	ND		6.3	3.1	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,3,5-Trimethylbenzene	ND		6.3	0.40	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,3-Dichlorobenzene	ND		6.3	0.32	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,4-Dichlorobenzene	ND		6.3	0.88	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
2-Hexanone	ND		31	3.1	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
4-Isopropyltoluene	ND		6.3	0.50	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Acetone	ND		31	5.3	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Benzene	ND		6.3	0.31	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Bromoform	ND		6.3	3.1	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Bromomethane	ND		6.3	0.56	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Carbon disulfide	ND		6.3	3.1	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Carbon tetrachloride	ND		6.3	0.61	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Chlorobenzene	ND		6.3	0.83	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Dibromochloromethane	ND		6.3	0.80	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Chloroethane	ND		6.3	1.4	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Chloroform	ND		6.3	0.39	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Chloromethane	ND		6.3	0.38	ug/Kg		01/14/19 12:00	01/14/19 13:14	1

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

Lab Sample ID: MB 480-454910/2-A
Matrix: Solid
Analysis Batch: 454900

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 454910

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		6.3	0.80	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Cyclohexane	ND		6.3	0.88	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Bromodichloromethane	ND		6.3	0.84	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Dichlorodifluoromethane	ND		6.3	0.52	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Ethylbenzene	ND		6.3	0.43	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
1,2-Dibromoethane	ND		6.3	0.80	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
2-Butanone (MEK)	ND		31	2.3	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
4-Methyl-2-pentanone (MIBK)	ND		31	2.1	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Isopropylbenzene	ND		6.3	0.94	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Methyl acetate	ND		31	3.8	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Methyl tert-butyl ether	ND		6.3	0.61	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Methylcyclohexane	ND		6.3	0.95	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Methylene Chloride	ND		6.3	2.9	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
m,p-Xylene	ND		13	1.1	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
n-Butylbenzene	ND		6.3	0.54	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
N-Propylbenzene	ND		6.3	0.50	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
o-Xylene	ND		6.3	0.82	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
sec-Butylbenzene	ND		6.3	0.54	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Tetrachloroethene	ND		6.3	0.84	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Toluene	ND		6.3	0.47	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
trans-1,2-Dichloroethene	ND		6.3	0.65	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
trans-1,3-Dichloropropene	ND		6.3	2.8	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Trichloroethene	ND		6.3	1.4	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Trichlorofluoromethane	ND		6.3	0.59	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Vinyl chloride	ND		6.3	0.76	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Xylenes, Total	ND		13	1.1	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
cis-1,3-Dichloropropene	ND		6.3	0.90	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
Styrene	ND		6.3	0.31	ug/Kg		01/14/19 12:00	01/14/19 13:14	1
tert-Butylbenzene	ND		6.3	0.65	ug/Kg		01/14/19 12:00	01/14/19 13:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*01/14/19 12:00*	*01/14/19 13:14*	*1*
Toluene-d8 (Surr)	*100*		*71 - 125*	*01/14/19 12:00*	*01/14/19 13:14*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 126*	*01/14/19 12:00*	*01/14/19 13:14*	*1*

Lab Sample ID: LCS 480-454910/1-A
Matrix: Solid
Analysis Batch: 454900

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 454910

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	50.8		ug/Kg		102	77 - 121
1,1,2,2-Tetrachloroethane	50.0	51.8		ug/Kg		104	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroetha ne	50.0	51.4		ug/Kg		103	60 - 140
1,1,2-Trichloroethane	50.0	51.4		ug/Kg		103	78 - 122
1,1-Dichloroethane	50.0	50.5		ug/Kg		101	73 - 126
1,1-Dichloroethene	50.0	49.8		ug/Kg		100	59 - 125
1,2,4-Trichlorobenzene	50.0	51.1		ug/Kg		102	64 - 120

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

Lab Sample ID: LCS 480-454910/1-A
Matrix: Solid
Analysis Batch: 454900

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 454910

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimethylbenzene	50.0	50.5		ug/Kg		101	74 - 120
1,2-Dibromo-3-Chloropropane	50.0	53.6		ug/Kg		107	63 - 124
1,2-Dichlorobenzene	50.0	50.5		ug/Kg		101	75 - 120
1,2-Dichloroethane	50.0	50.7		ug/Kg		101	77 - 122
1,2-Dichloropropane	50.0	50.9		ug/Kg		102	75 - 124
1,3,5-Trimethylbenzene	50.0	50.2		ug/Kg		100	74 - 120
1,3-Dichlorobenzene	50.0	50.8		ug/Kg		102	74 - 120
1,4-Dichlorobenzene	50.0	50.6		ug/Kg		101	73 - 120
2-Hexanone	250	286		ug/Kg		115	59 - 130
4-Isopropyltoluene	50.0	50.5		ug/Kg		101	74 - 120
Acetone	250	289		ug/Kg		116	61 - 137
Benzene	50.0	50.6		ug/Kg		101	79 - 127
Bromoform	50.0	57.0		ug/Kg		114	68 - 126
Bromomethane	50.0	50.9		ug/Kg		102	37 - 149
Carbon disulfide	50.0	49.0		ug/Kg		98	64 - 131
Carbon tetrachloride	50.0	52.5		ug/Kg		105	75 - 135
Chlorobenzene	50.0	50.9		ug/Kg		102	76 - 124
Dibromochloromethane	50.0	54.9		ug/Kg		110	76 - 125
Chloroethane	50.0	44.3		ug/Kg		89	69 - 135
Chloroform	50.0	50.7		ug/Kg		101	80 - 120
Chloromethane	50.0	48.2		ug/Kg		96	63 - 127
cis-1,2-Dichloroethene	50.0	50.5		ug/Kg		101	81 - 120
Cyclohexane	50.0	49.7		ug/Kg		99	65 - 120
Bromodichloromethane	50.0	51.8		ug/Kg		104	80 - 122
Dichlorodifluoromethane	50.0	46.8		ug/Kg		94	57 - 142
Ethylbenzene	50.0	50.8		ug/Kg		102	80 - 120
1,2-Dibromoethane	50.0	52.9		ug/Kg		106	78 - 120
2-Butanone (MEK)	250	288		ug/Kg		115	70 - 134
4-Methyl-2-pentanone (MIBK)	250	277		ug/Kg		111	65 - 133
Isopropylbenzene	50.0	49.6		ug/Kg		99	72 - 120
Methyl acetate	100	110		ug/Kg		110	55 - 136
Methyl tert-butyl ether	50.0	52.8		ug/Kg		106	63 - 125
Methylcyclohexane	50.0	51.1		ug/Kg		102	60 - 140
Methylene Chloride	50.0	45.8		ug/Kg		92	61 - 127
m,p-Xylene	50.0	50.7		ug/Kg		101	70 - 130
n-Butylbenzene	50.0	50.2		ug/Kg		100	70 - 120
N-Propylbenzene	50.0	49.7		ug/Kg		99	70 - 130
o-Xylene	50.0	51.0		ug/Kg		102	70 - 130
sec-Butylbenzene	50.0	50.0		ug/Kg		100	74 - 120
Tetrachloroethene	50.0	51.4		ug/Kg		103	74 - 122
Toluene	50.0	50.4		ug/Kg		101	74 - 128
trans-1,2-Dichloroethene	50.0	51.4		ug/Kg		103	78 - 126
trans-1,3-Dichloropropene	50.0	52.2		ug/Kg		104	73 - 123
Trichloroethene	50.0	50.9		ug/Kg		102	77 - 129
Trichlorofluoromethane	50.0	48.1		ug/Kg		96	65 - 146
Vinyl chloride	50.0	48.7		ug/Kg		97	61 - 133
cis-1,3-Dichloropropene	50.0	52.4		ug/Kg		105	80 - 120
Styrene	50.0	51.0		ug/Kg		102	80 - 120

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

Lab Sample ID: LCS 480-454910/1-A
Matrix: Solid
Analysis Batch: 454900

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 454910

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
tert-Butylbenzene			50.0	50.0		ug/Kg		100	73 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*
Toluene-d8 (Surr)	*100*		*71 - 125*
4-Bromofluorobenzene (Surr)	*102*		*72 - 126*

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

Lab Sample ID: MB 480-454574/1-A
Matrix: Solid
Analysis Batch: 454961

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 454574

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		170	25	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Acenaphthylene	ND		170	22	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Anthracene	ND		170	42	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Benzo[a]anthracene	ND		170	17	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Benzo[a]pyrene	ND		170	25	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Chrysene	ND		170	38	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Fluoranthene	ND		170	18	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Fluorene	ND		170	20	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Naphthalene	ND		170	22	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Pyrene	ND		170	20	ug/Kg		01/10/19 14:39	01/14/19 16:11	1
Phenanthrene	ND		170	25	ug/Kg		01/10/19 14:39	01/14/19 16:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*101*		*54 - 120*	*01/10/19 14:39*	*01/14/19 16:11*	*1*
2-Fluorobiphenyl	*97*		*60 - 120*	*01/10/19 14:39*	*01/14/19 16:11*	*1*
2-Fluorophenol (Surr)	*80*		*52 - 120*	*01/10/19 14:39*	*01/14/19 16:11*	*1*
Phenol-d5 (Surr)	*85*		*54 - 120*	*01/10/19 14:39*	*01/14/19 16:11*	*1*
p-Terphenyl-d14 (Surr)	*112*		*65 - 121*	*01/10/19 14:39*	*01/14/19 16:11*	*1*
Nitrobenzene-d5 (Surr)	*89*		*53 - 120*	*01/10/19 14:39*	*01/14/19 16:11*	*1*

Lab Sample ID: LCS 480-454574/2-A
Matrix: Solid
Analysis Batch: 454961

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 454574

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acenaphthene			1630	1460		ug/Kg		89	62 - 120		
Acenaphthylene			1630	1550		ug/Kg		95	58 - 121		
Anthracene			1630	1580		ug/Kg		97	62 - 120		

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

Lab Sample ID: LCS 480-454574/2-A
Matrix: Solid
Analysis Batch: 454961

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 454574

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	1630	1470		ug/Kg		90	65 - 120
Benzo[a]pyrene	1630	1550		ug/Kg		95	64 - 120
Benzo[b]fluoranthene	1630	1630		ug/Kg		100	64 - 120
Benzo[g,h,i]perylene	1630	1540		ug/Kg		94	45 - 145
Benzo[k]fluoranthene	1630	1510		ug/Kg		93	65 - 120
Chrysene	1630	1490		ug/Kg		92	64 - 120
Dibenz(a,h)anthracene	1630	1610		ug/Kg		99	54 - 132
Fluoranthene	1630	1560		ug/Kg		96	62 - 120
Fluorene	1630	1560		ug/Kg		96	63 - 120
Indeno[1,2,3-cd]pyrene	1630	1580		ug/Kg		97	56 - 134
Naphthalene	1630	1340		ug/Kg		82	55 - 120
Pyrene	1630	1620		ug/Kg		99	61 - 133
Phenanthrene	1630	1530		ug/Kg		94	60 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*113*		*54 - 120*
2-Fluorobiphenyl	*94*		*60 - 120*
2-Fluorophenol (Surr)	*72*		*52 - 120*
Phenol-d5 (Surr)	*79*		*54 - 120*
p-Terphenyl-d14 (Surr)	*105*		*65 - 121*
Nitrobenzene-d5 (Surr)	*83*		*53 - 120*

Lab Sample ID: 480-147629-1 MS
Matrix: Solid
Analysis Batch: 454961

Client Sample ID: TP-2 (2-4 FT)
Prep Type: Total/NA
Prep Batch: 454574

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	7200	F1 F2	2170	3150	F1	ug/Kg	☼	-187	60 - 120
Acenaphthylene	270	J	2170	2480		ug/Kg	☼	102	58 - 121
Anthracene	9800	F2	2170	4300	4	ug/Kg	☼	-252	62 - 120
Benzo[a]anthracene	12000	F2	2170	6160	4	ug/Kg	☼	-254	65 - 120
Benzo[a]pyrene	9600	F2	2170	5510	4	ug/Kg	☼	-189	64 - 120
Benzo[b]fluoranthene	13000	F2	2170	6540	4	ug/Kg	☼	-281	64 - 120
Benzo[g,h,i]perylene	6800	F1 F2	2170	4510	F1	ug/Kg	☼	-106	45 - 145
Benzo[k]fluoranthene	4300	F1 F2	2170	4030	F1	ug/Kg	☼	-14	65 - 120
Chrysene	11000	F2	2170	5660	4	ug/Kg	☼	-230	64 - 120
Dibenz(a,h)anthracene	1800	F1 F2	2170	3050		ug/Kg	☼	56	54 - 132
Fluoranthene	33000	F2	2170	11900	4	ug/Kg	☼	-978	62 - 120
Fluorene	6000	F1 F2	2170	3400	F1	ug/Kg	☼	-118	63 - 120
Indeno[1,2,3-cd]pyrene	6300	F1 F2	2170	4350	F1	ug/Kg	☼	-91	56 - 134
Naphthalene	4200	F1 F2	2170	2580	F1	ug/Kg	☼	-75	46 - 120
Pyrene	25000	F2	2170	9630	4	ug/Kg	☼	-697	61 - 133
Phenanthrene	40000	E F2	2170	12000	4	ug/Kg	☼	-1315	60 - 122

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*106*		*54 - 120*
2-Fluorobiphenyl	*96*		*60 - 120*

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

Lab Sample ID: 480-147629-1 MS
Matrix: Solid
Analysis Batch: 454961

Client Sample ID: TP-2 (2-4 FT)
Prep Type: Total/NA
Prep Batch: 454574

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorophenol (Surr)	*75*		*52 - 120*
Phenol-d5 (Surr)	*78*		*54 - 120*
p-Terphenyl-d14 (Surr)	*102*		*65 - 121*
Nitrobenzene-d5 (Surr)	*82*		*53 - 120*

Lab Sample ID: 480-147629-1 MSD
Matrix: Solid
Analysis Batch: 454961

Client Sample ID: TP-2 (2-4 FT)
Prep Type: Total/NA
Prep Batch: 454574

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	7200	F1 F2	2160	2180	F1 F2	ug/Kg	☼	-233	60 - 120	36	35
Acenaphthylene	270	J	2160	2090		ug/Kg	☼	85	58 - 121	17	18
Anthracene	9800	F2	2160	2480	4 F2	ug/Kg	☼	-337	62 - 120	54	15
Benzo[a]anthracene	12000	F2	2160	2770	4 F2	ug/Kg	☼	-412	65 - 120	76	15
Benzo[a]pyrene	9600	F2	2160	2770	4 F2	ug/Kg	☼	-317	64 - 120	66	15
Benzo[b]fluoranthene	13000	F2	2160	3300	4 F2	ug/Kg	☼	-433	64 - 120	66	15
Benzo[g,h,i]perylene	6800	F1 F2	2160	2710	F1 F2	ug/Kg	☼	-190	45 - 145	50	15
Benzo[k]fluoranthene	4300	F1 F2	2160	2210	F1 F2	ug/Kg	☼	-98	65 - 120	58	22
Chrysene	11000	F2	2160	2730	4 F2	ug/Kg	☼	-367	64 - 120	70	15
Dibenz(a,h)anthracene	1800	F1 F2	2160	2420	F1 F2	ug/Kg	☼	27	54 - 132	23	15
Fluoranthene	33000	F2	2160	3880	4 F2	ug/Kg	☼	-1354	62 - 120	102	15
Fluorene	6000	F1 F2	2160	2310	F1 F2	ug/Kg	☼	-169	63 - 120	38	15
Indeno[1,2,3-cd]pyrene	6300	F1 F2	2160	2720	F1 F2	ug/Kg	☼	-167	56 - 134	46	15
Naphthalene	4200	F1 F2	2160	1870	F1 F2	ug/Kg	☼	-109	46 - 120	32	29
Pyrene	25000	F2	2160	3620	4 F2	ug/Kg	☼	-979	61 - 133	91	35
Phenanthrene	40000	E F2	2160	3520	4 F2	ug/Kg	☼	-1712	60 - 122	109	15

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	*104*		*54 - 120*
2-Fluorobiphenyl	*93*		*60 - 120*
2-Fluorophenol (Surr)	*76*		*52 - 120*
Phenol-d5 (Surr)	*79*		*54 - 120*
p-Terphenyl-d14 (Surr)	*106*		*65 - 121*
Nitrobenzene-d5 (Surr)	*83*		*53 - 120*

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

Lab Sample ID: MB 480-454399/1-A
Matrix: Solid
Analysis Batch: 454528

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 454399

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.19	0.038	mg/Kg		01/09/19 14:25	01/10/19 13:36	1
PCB-1221	ND		0.19	0.038	mg/Kg		01/09/19 14:25	01/10/19 13:36	1
PCB-1232	ND		0.19	0.038	mg/Kg		01/09/19 14:25	01/10/19 13:36	1
PCB-1242	ND		0.19	0.038	mg/Kg		01/09/19 14:25	01/10/19 13:36	1
PCB-1248	ND		0.19	0.038	mg/Kg		01/09/19 14:25	01/10/19 13:36	1

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

Lab Sample ID: MB 480-454399/1-A
Matrix: Solid
Analysis Batch: 454528

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 454399

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1254	ND		0.19	0.090	mg/Kg		01/09/19 14:25	01/10/19 13:36	1
PCB-1260	ND		0.19	0.090	mg/Kg		01/09/19 14:25	01/10/19 13:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*101*		*60 - 154*	*01/09/19 14:25*	*01/10/19 13:36*	*1*
DCB Decachlorobiphenyl	*133*		*65 - 174*	*01/09/19 14:25*	*01/10/19 13:36*	*1*

Lab Sample ID: LCS 480-454399/2-A
Matrix: Solid
Analysis Batch: 454528

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 454399

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	2.21	3.13		mg/Kg		141	51 - 185
PCB-1260	2.21	3.20		mg/Kg		145	61 - 184

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*146*		*60 - 154*
DCB Decachlorobiphenyl	*187*	*X*	*65 - 174*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-454623/1-A
Matrix: Solid
Analysis Batch: 455034

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 454623

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0		mg/Kg		01/11/19 08:28	01/14/19 10:09	1
Barium	ND		0.51		mg/Kg		01/11/19 08:28	01/14/19 10:09	1
Cadmium	ND		0.20		mg/Kg		01/11/19 08:28	01/14/19 10:09	1
Chromium	ND		0.51		mg/Kg		01/11/19 08:28	01/14/19 10:09	1
Lead	ND		1.0		mg/Kg		01/11/19 08:28	01/14/19 10:09	1
Selenium	ND		4.1		mg/Kg		01/11/19 08:28	01/14/19 10:09	1
Silver	ND		0.61		mg/Kg		01/11/19 08:28	01/14/19 10:09	1

Lab Sample ID: LCSSRM 480-454623/2-A
Matrix: Solid
Analysis Batch: 455034

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 454623

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	171	143.8		mg/Kg		84.1	66.1 - 122.2
Barium	272	225.9		mg/Kg		83.1	71.7 - 119.5
Cadmium	225	180.3		mg/Kg		80.1	70.2 - 117.3
Chromium	144	120.3		mg/Kg		83.5	66.1 - 122.9
Lead	111	112.5		mg/Kg		101.3	71.0 - 128.8

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCSSRM 480-454623/2-A
Matrix: Solid
Analysis Batch: 455034

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 454623

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Selenium			206	171.2		mg/Kg		83.1	63.6 - 122.3		
Silver			45.5	37.95		mg/Kg		83.4	66.2 - 124.2		

Lab Sample ID: 480-147629-1 MS
Matrix: Solid
Analysis Batch: 455034

Client Sample ID: TP-2 (2-4 FT)
Prep Type: Total/NA
Prep Batch: 454623

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	6.4		53.0	56.95		mg/Kg	☼	95	75 - 125
Barium	633		53.0	376.6	4	mg/Kg	☼	-483	75 - 125
Cadmium	0.64		53.0	51.11		mg/Kg	☼	95	75 - 125
Chromium	13.0		53.0	61.72		mg/Kg	☼	92	75 - 125
Lead	300	F2	53.0	262.9	4	mg/Kg	☼	-71	75 - 125
Selenium	ND		53.0	51.49		mg/Kg	☼	97	75 - 125
Silver	ND		13.3	13.09		mg/Kg	☼	99	75 - 125

Lab Sample ID: 480-147629-1 MSD
Matrix: Solid
Analysis Batch: 455034

Client Sample ID: TP-2 (2-4 FT)
Prep Type: Total/NA
Prep Batch: 454623

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	6.4		51.5	57.67		mg/Kg	☼	100	75 - 125	1	20
Barium	633		51.5	428.5	4	mg/Kg	☼	-396	75 - 125	13	20
Cadmium	0.64		51.5	50.01		mg/Kg	☼	96	75 - 125	2	20
Chromium	13.0		51.5	59.88		mg/Kg	☼	91	75 - 125	3	20
Lead	300	F2	51.5	340.4	4 F2	mg/Kg	☼	78	75 - 125	26	20
Selenium	ND		51.5	50.68		mg/Kg	☼	98	75 - 125	2	20
Silver	ND		12.9	12.61		mg/Kg	☼	98	75 - 125	4	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-454580/1-A
Matrix: Solid
Analysis Batch: 454968

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 454580

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.019		mg/Kg		01/14/19 12:45	01/14/19 13:49	1

Lab Sample ID: LCSSRM 480-454580/2-A ^10
Matrix: Solid
Analysis Batch: 454968

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 454580

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			12.0	11.01		mg/Kg		91.7	57.3 - 133.3		

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

Lab Sample ID: 480-147629-2 MS
Matrix: Solid
Analysis Batch: 454968

Client Sample ID: TP-3 (1-2 FT)
Prep Type: Total/NA
Prep Batch: 454580

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	1.0	F1 F2	0.458	1.78	F1	mg/Kg	☼	166	80 - 120

Lab Sample ID: 480-147629-2 MSD
Matrix: Solid
Analysis Batch: 454968

Client Sample ID: TP-3 (1-2 FT)
Prep Type: Total/NA
Prep Batch: 454580

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	1.0	F1 F2	0.468	1.12	F1 F2	mg/Kg	☼	21	80 - 120	46	20

GC/MS VOA

Analysis Batch: 454631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-16	SB-1W	Total/NA	Water	8260C	
480-147629-17	SB-4W	Total/NA	Water	8260C	
480-147629-18	SB-7W	Total/NA	Water	8260C	
MB 480-454631/7	Method Blank	Total/NA	Water	8260C	
LCS 480-454631/5	Lab Control Sample	Total/NA	Water	8260C	

Prep Batch: 454737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-3	TP-3 (6-8 FT)	Total/NA	Solid	5035A_H	
480-147629-3 - DL	TP-3 (6-8 FT)	Total/NA	Solid	5035A_H	
480-147629-4	TP-4 (4-6 FT)	Total/NA	Solid	5035A_H	
480-147629-15	FD-1	Total/NA	Solid	5035A_H	
MB 480-454737/2-A	Method Blank	Total/NA	Solid	5035A_H	
LCS 480-454737/1-A	Lab Control Sample	Total/NA	Solid	5035A_H	
480-147629-4 MS	TP-4 (4-6 FT)	Total/NA	Solid	5035A_H	
480-147629-4 MSD	TP-4 (4-6 FT)	Total/NA	Solid	5035A_H	

Analysis Batch: 454857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-3	TP-3 (6-8 FT)	Total/NA	Solid	8260C	454737
480-147629-4	TP-4 (4-6 FT)	Total/NA	Solid	8260C	454737
480-147629-15	FD-1	Total/NA	Solid	8260C	454737
MB 480-454737/2-A	Method Blank	Total/NA	Solid	8260C	454737
LCS 480-454737/1-A	Lab Control Sample	Total/NA	Solid	8260C	454737
480-147629-4 MS	TP-4 (4-6 FT)	Total/NA	Solid	8260C	454737
480-147629-4 MSD	TP-4 (4-6 FT)	Total/NA	Solid	8260C	454737

Analysis Batch: 454900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-7	TP-13 (8.5-9.5 FT)	Total/NA	Solid	8260C	454910
MB 480-454910/2-A	Method Blank	Total/NA	Solid	8260C	454910
LCS 480-454910/1-A	Lab Control Sample	Total/NA	Solid	8260C	454910

Prep Batch: 454910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-7	TP-13 (8.5-9.5 FT)	Total/NA	Solid	5035A_L	
MB 480-454910/2-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-454910/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	

Analysis Batch: 455010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-3 - DL	TP-3 (6-8 FT)	Total/NA	Solid	8260C	454737

GC/MS Semi VOA

Prep Batch: 454574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-1 - DL	TP-2 (2-4 FT)	Total/NA	Solid	3550C	
480-147629-1	TP-2 (2-4 FT)	Total/NA	Solid	3550C	
480-147629-3	TP-3 (6-8 FT)	Total/NA	Solid	3550C	

GC/MS Semi VOA (Continued)

Prep Batch: 454574 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-5	TP-7 (3-5 FT)	Total/NA	Solid	3550C	
480-147629-6	TP-11 (2-4 FT)	Total/NA	Solid	3550C	
480-147629-8	TP-16 (2-3 FT)	Total/NA	Solid	3550C	
480-147629-9	SB-1 (.25-2 FT)	Total/NA	Solid	3550C	
480-147629-10	SB-2 (.25-2 FT)	Total/NA	Solid	3550C	
480-147629-11 - DL	SB-4 (.25-1.5 FT)	Total/NA	Solid	3550C	
480-147629-11	SB-4 (.25-1.5 FT)	Total/NA	Solid	3550C	
480-147629-12	SB-5 (.5-1 FT)	Total/NA	Solid	3550C	
480-147629-13	SB-7 (0-1.5 FT)	Total/NA	Solid	3550C	
480-147629-15	FD-1	Total/NA	Solid	3550C	
MB 480-454574/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-454574/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-147629-1 MS	TP-2 (2-4 FT)	Total/NA	Solid	3550C	
480-147629-1 MSD	TP-2 (2-4 FT)	Total/NA	Solid	3550C	

Analysis Batch: 454961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-1	TP-2 (2-4 FT)	Total/NA	Solid	8270D	454574
480-147629-3	TP-3 (6-8 FT)	Total/NA	Solid	8270D	454574
480-147629-5	TP-7 (3-5 FT)	Total/NA	Solid	8270D	454574
480-147629-6	TP-11 (2-4 FT)	Total/NA	Solid	8270D	454574
480-147629-8	TP-16 (2-3 FT)	Total/NA	Solid	8270D	454574
480-147629-9	SB-1 (.25-2 FT)	Total/NA	Solid	8270D	454574
480-147629-10	SB-2 (.25-2 FT)	Total/NA	Solid	8270D	454574
480-147629-11	SB-4 (.25-1.5 FT)	Total/NA	Solid	8270D	454574
480-147629-12	SB-5 (.5-1 FT)	Total/NA	Solid	8270D	454574
480-147629-13	SB-7 (0-1.5 FT)	Total/NA	Solid	8270D	454574
480-147629-15	FD-1	Total/NA	Solid	8270D	454574
MB 480-454574/1-A	Method Blank	Total/NA	Solid	8270D	454574
LCS 480-454574/2-A	Lab Control Sample	Total/NA	Solid	8270D	454574
480-147629-1 MS	TP-2 (2-4 FT)	Total/NA	Solid	8270D	454574
480-147629-1 MSD	TP-2 (2-4 FT)	Total/NA	Solid	8270D	454574

Analysis Batch: 455117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-1 - DL	TP-2 (2-4 FT)	Total/NA	Solid	8270D	454574
480-147629-11 - DL	SB-4 (.25-1.5 FT)	Total/NA	Solid	8270D	454574

GC Semi VOA

Prep Batch: 454399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-14	TR-1 (.5-1 FT)	Total/NA	Solid	3550C	
MB 480-454399/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-454399/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 454528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-14	TR-1 (.5-1 FT)	Total/NA	Solid	8082A	454399
MB 480-454399/1-A	Method Blank	Total/NA	Solid	8082A	454399

GC Semi VOA (Continued)

Analysis Batch: 454528 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-454399/2-A	Lab Control Sample	Total/NA	Solid	8082A	454399

Metals

Prep Batch: 454580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-1	TP-2 (2-4 FT)	Total/NA	Solid	7471B	
480-147629-2	TP-3 (1-2 FT)	Total/NA	Solid	7471B	
480-147629-5	TP-7 (3-5 FT)	Total/NA	Solid	7471B	
480-147629-6	TP-11 (2-4 FT)	Total/NA	Solid	7471B	
480-147629-8	TP-16 (2-3 FT)	Total/NA	Solid	7471B	
480-147629-9	SB-1 (.25-2 FT)	Total/NA	Solid	7471B	
480-147629-10	SB-2 (.25-2 FT)	Total/NA	Solid	7471B	
480-147629-11	SB-4 (.25-1.5 FT)	Total/NA	Solid	7471B	
480-147629-12	SB-5 (.5-1 FT)	Total/NA	Solid	7471B	
480-147629-13	SB-7 (0-1.5 FT)	Total/NA	Solid	7471B	
MB 480-454580/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-454580/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	
480-147629-2 MS	TP-3 (1-2 FT)	Total/NA	Solid	7471B	
480-147629-2 MSD	TP-3 (1-2 FT)	Total/NA	Solid	7471B	

Prep Batch: 454623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-1	TP-2 (2-4 FT)	Total/NA	Solid	3050B	
480-147629-2	TP-3 (1-2 FT)	Total/NA	Solid	3050B	
480-147629-5	TP-7 (3-5 FT)	Total/NA	Solid	3050B	
480-147629-6	TP-11 (2-4 FT)	Total/NA	Solid	3050B	
480-147629-8	TP-16 (2-3 FT)	Total/NA	Solid	3050B	
480-147629-9	SB-1 (.25-2 FT)	Total/NA	Solid	3050B	
480-147629-10	SB-2 (.25-2 FT)	Total/NA	Solid	3050B	
480-147629-11	SB-4 (.25-1.5 FT)	Total/NA	Solid	3050B	
480-147629-12	SB-5 (.5-1 FT)	Total/NA	Solid	3050B	
480-147629-13	SB-7 (0-1.5 FT)	Total/NA	Solid	3050B	
MB 480-454623/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-454623/2-A	Lab Control Sample	Total/NA	Solid	3050B	
480-147629-1 MS	TP-2 (2-4 FT)	Total/NA	Solid	3050B	
480-147629-1 MSD	TP-2 (2-4 FT)	Total/NA	Solid	3050B	

Analysis Batch: 454968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-1	TP-2 (2-4 FT)	Total/NA	Solid	7471B	454580
480-147629-2	TP-3 (1-2 FT)	Total/NA	Solid	7471B	454580
480-147629-5	TP-7 (3-5 FT)	Total/NA	Solid	7471B	454580
480-147629-6	TP-11 (2-4 FT)	Total/NA	Solid	7471B	454580
480-147629-8	TP-16 (2-3 FT)	Total/NA	Solid	7471B	454580
480-147629-9	SB-1 (.25-2 FT)	Total/NA	Solid	7471B	454580
480-147629-10	SB-2 (.25-2 FT)	Total/NA	Solid	7471B	454580
480-147629-11	SB-4 (.25-1.5 FT)	Total/NA	Solid	7471B	454580
480-147629-12	SB-5 (.5-1 FT)	Total/NA	Solid	7471B	454580
480-147629-13	SB-7 (0-1.5 FT)	Total/NA	Solid	7471B	454580

Metals (Continued)

Analysis Batch: 454968 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-454580/1-A	Method Blank	Total/NA	Solid	7471B	454580
LCSSRM 480-454580/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	454580
480-147629-2 MS	TP-3 (1-2 FT)	Total/NA	Solid	7471B	454580
480-147629-2 MSD	TP-3 (1-2 FT)	Total/NA	Solid	7471B	454580

Analysis Batch: 455034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-1	TP-2 (2-4 FT)	Total/NA	Solid	6010C	454623
480-147629-2	TP-3 (1-2 FT)	Total/NA	Solid	6010C	454623
480-147629-5	TP-7 (3-5 FT)	Total/NA	Solid	6010C	454623
480-147629-6	TP-11 (2-4 FT)	Total/NA	Solid	6010C	454623
480-147629-8	TP-16 (2-3 FT)	Total/NA	Solid	6010C	454623
480-147629-10	SB-2 (.25-2 FT)	Total/NA	Solid	6010C	454623
480-147629-11	SB-4 (.25-1.5 FT)	Total/NA	Solid	6010C	454623
480-147629-12	SB-5 (.5-1 FT)	Total/NA	Solid	6010C	454623
480-147629-13	SB-7 (0-1.5 FT)	Total/NA	Solid	6010C	454623
MB 480-454623/1-A	Method Blank	Total/NA	Solid	6010C	454623
LCSSRM 480-454623/2-A	Lab Control Sample	Total/NA	Solid	6010C	454623
480-147629-1 MS	TP-2 (2-4 FT)	Total/NA	Solid	6010C	454623
480-147629-1 MSD	TP-2 (2-4 FT)	Total/NA	Solid	6010C	454623

Analysis Batch: 455132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-9	SB-1 (.25-2 FT)	Total/NA	Solid	6010C	454623

General Chemistry

Analysis Batch: 454758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-1	TP-2 (2-4 FT)	Total/NA	Solid	Moisture	
480-147629-2	TP-3 (1-2 FT)	Total/NA	Solid	Moisture	
480-147629-3	TP-3 (6-8 FT)	Total/NA	Solid	Moisture	
480-147629-4	TP-4 (4-6 FT)	Total/NA	Solid	Moisture	
480-147629-5	TP-7 (3-5 FT)	Total/NA	Solid	Moisture	
480-147629-6	TP-11 (2-4 FT)	Total/NA	Solid	Moisture	
480-147629-7	TP-13 (8.5-9.5 FT)	Total/NA	Solid	Moisture	
480-147629-8	TP-16 (2-3 FT)	Total/NA	Solid	Moisture	
480-147629-9	SB-1 (.25-2 FT)	Total/NA	Solid	Moisture	
480-147629-10	SB-2 (.25-2 FT)	Total/NA	Solid	Moisture	
480-147629-11	SB-4 (.25-1.5 FT)	Total/NA	Solid	Moisture	
480-147629-12	SB-5 (.5-1 FT)	Total/NA	Solid	Moisture	
480-147629-13	SB-7 (0-1.5 FT)	Total/NA	Solid	Moisture	
480-147629-15	FD-1	Total/NA	Solid	Moisture	
480-147629-1 MS	TP-2 (2-4 FT)	Total/NA	Solid	Moisture	
480-147629-1 MSD	TP-2 (2-4 FT)	Total/NA	Solid	Moisture	
480-147629-6 MS	TP-11 (2-4 FT)	Total/NA	Solid	Moisture	
480-147629-6 MSD	TP-11 (2-4 FT)	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 454884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-147629-14	TR-1 (.5-1 FT)	Total/NA	Solid	Moisture	

Client Sample ID: TP-2 (2-4 FT) — **Lab Sample ID: 480-147629-1**
Date Collected: 01/03/19 09:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: TP-2 (2-4 FT) — **Lab Sample ID: 480-147629-1**
Date Collected: 01/03/19 09:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45 — **Percent Solids: 76.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			454574	01/10/19 14:39	SGD	TAL BUF
Total/NA	Analysis	8270D		5	454961	01/14/19 17:53	DMR	TAL BUF
Total/NA	Prep	3550C	DL		454574	01/10/19 14:39	SGD	TAL BUF
Total/NA	Analysis	8270D	DL	20	455117	01/15/19 22:53	DMR	TAL BUF
Total/NA	Prep	3050B			454623	01/11/19 08:28	JMP	TAL BUF
Total/NA	Analysis	6010C		1	455034	01/14/19 10:17	LMH	TAL BUF
Total/NA	Prep	7471B			454580	01/14/19 12:45	BMB	TAL BUF
Total/NA	Analysis	7471B		1	454968	01/14/19 13:51	BMB	TAL BUF

Client Sample ID: TP-3 (1-2 FT) — **Lab Sample ID: 480-147629-2**
Date Collected: 01/03/19 09:45 — **Matrix: Solid**
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: TP-3 (1-2 FT) — **Lab Sample ID: 480-147629-2**
Date Collected: 01/03/19 09:45 — **Matrix: Solid**
Date Received: 01/07/19 16:45 — **Percent Solids: 72.8**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			454623	01/11/19 08:28	JMP	TAL BUF
Total/NA	Analysis	6010C		1	455034	01/14/19 10:36	LMH	TAL BUF
Total/NA	Prep	7471B			454580	01/14/19 12:45	BMB	TAL BUF
Total/NA	Analysis	7471B		1	454968	01/14/19 13:52	BMB	TAL BUF

Client Sample ID: TP-3 (6-8 FT) — **Lab Sample ID: 480-147629-3**
Date Collected: 01/03/19 10:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: TP-3 (6-8 FT)

Lab Sample ID: 480-147629-3

Date Collected: 01/03/19 10:00
Matrix: Solid
Date Received: 01/07/19 16:45
Percent Solids: 36.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_H			454737	01/11/19 13:55	OMI	TAL BUF
Total/NA	Analysis	8260C		4	454857	01/14/19 16:44	AMM	TAL BUF
Total/NA	Prep	5035A_H	DL		454737	01/11/19 13:55	OMI	TAL BUF
Total/NA	Analysis	8260C	DL	10	455010	01/15/19 17:50	AEM	TAL BUF
Total/NA	Prep	3550C			454574	01/10/19 14:39	SGD	TAL BUF
Total/NA	Analysis	8270D		5	454961	01/14/19 18:18	DMR	TAL BUF

Client Sample ID: TP-4 (4-6 FT)

Lab Sample ID: 480-147629-4

Date Collected: 01/03/19 11:00
Matrix: Solid
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: TP-4 (4-6 FT)

Lab Sample ID: 480-147629-4

Date Collected: 01/03/19 11:00
Matrix: Solid
Date Received: 01/07/19 16:45
Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_H			454737	01/11/19 13:55	OMI	TAL BUF
Total/NA	Analysis	8260C		4	454857	01/14/19 17:11	AMM	TAL BUF

Client Sample ID: TP-7 (3-5 FT)

Lab Sample ID: 480-147629-5

Date Collected: 01/03/19 13:00
Matrix: Solid
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: TP-7 (3-5 FT)

Lab Sample ID: 480-147629-5

Date Collected: 01/03/19 13:00
Matrix: Solid
Date Received: 01/07/19 16:45
Percent Solids: 82.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			454574	01/10/19 14:39	SGD	TAL BUF
Total/NA	Analysis	8270D		1	454961	01/14/19 18:44	DMR	TAL BUF
Total/NA	Prep	3050B			454623	01/11/19 08:28	JMP	TAL BUF
Total/NA	Analysis	6010C		1	455034	01/14/19 10:40	LMH	TAL BUF
Total/NA	Prep	7471B			454580	01/14/19 12:45	BMB	TAL BUF
Total/NA	Analysis	7471B		1	454968	01/14/19 14:09	BMB	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: TP-11 (2-4 FT)

Lab Sample ID: 480-147629-6

Date Collected: 01/04/19 08:30
Matrix: Solid
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: TP-11 (2-4 FT)

Lab Sample ID: 480-147629-6

Date Collected: 01/04/19 08:30
Matrix: Solid
Date Received: 01/07/19 16:45
Percent Solids: 81.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			454574	01/10/19 14:39	SGD	TAL BUF
Total/NA	Analysis	8270D		5	454961	01/14/19 19:09	DMR	TAL BUF
Total/NA	Prep	3050B			454623	01/11/19 08:28	JMP	TAL BUF
Total/NA	Analysis	6010C		1	455034	01/14/19 10:55	LMH	TAL BUF
Total/NA	Prep	7471B			454580	01/14/19 12:45	BMB	TAL BUF
Total/NA	Analysis	7471B		1	454968	01/14/19 13:58	BMB	TAL BUF

Client Sample ID: TP-13 (8.5-9.5 FT)

Lab Sample ID: 480-147629-7

Date Collected: 01/04/19 10:30
Matrix: Solid
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: TP-13 (8.5-9.5 FT)

Lab Sample ID: 480-147629-7

Date Collected: 01/04/19 10:30
Matrix: Solid
Date Received: 01/07/19 16:45
Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			454910	01/14/19 12:00	CDC	TAL BUF
Total/NA	Analysis	8260C		1	454900	01/14/19 13:52	AEM	TAL BUF

Client Sample ID: TP-16 (2-3 FT)

Lab Sample ID: 480-147629-8

Date Collected: 01/04/19 12:30
Matrix: Solid
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: TP-16 (2-3 FT)

Lab Sample ID: 480-147629-8

Date Collected: 01/04/19 12:30
Matrix: Solid
Date Received: 01/07/19 16:45
Percent Solids: 58.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			454574	01/10/19 14:39	SGD	TAL BUF

Client Sample ID: TP-16 (2-3 FT)

Lab Sample ID: 480-147629-8

Date Collected: 01/04/19 12:30
Matrix: Solid
Date Received: 01/07/19 16:45
Percent Solids: 58.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D		5	454961	01/14/19 19:34	DMR	TAL BUF
Total/NA	Prep	3050B			454623	01/11/19 08:28	JMP	TAL BUF
Total/NA	Analysis	6010C		1	455034	01/14/19 10:59	LMH	TAL BUF
Total/NA	Prep	7471B			454580	01/14/19 12:45	BMB	TAL BUF
Total/NA	Analysis	7471B		1	454968	01/14/19 13:59	BMB	TAL BUF

Client Sample ID: SB-1 (.25-2 FT)

Lab Sample ID: 480-147629-9

Date Collected: 01/04/19 08:00
Matrix: Solid
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: SB-1 (.25-2 FT)

Lab Sample ID: 480-147629-9

Date Collected: 01/04/19 08:00
Matrix: Solid
Date Received: 01/07/19 16:45
Percent Solids: 68.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			454574	01/10/19 14:39	SGD	TAL BUF
Total/NA	Analysis	8270D		10	454961	01/14/19 20:00	DMR	TAL BUF
Total/NA	Prep	3050B			454623	01/11/19 08:28	JMP	TAL BUF
Total/NA	Analysis	6010C		1	455132	01/15/19 12:34	LMH	TAL BUF
Total/NA	Prep	7471B			454580	01/14/19 12:45	BMB	TAL BUF
Total/NA	Analysis	7471B		1	454968	01/14/19 14:00	BMB	TAL BUF

Client Sample ID: SB-2 (.25-2 FT)

Lab Sample ID: 480-147629-10

Date Collected: 01/04/19 09:00
Matrix: Solid
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: SB-2 (.25-2 FT)

Lab Sample ID: 480-147629-10

Date Collected: 01/04/19 09:00
Matrix: Solid
Date Received: 01/07/19 16:45
Percent Solids: 78.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			454574	01/10/19 14:39	SGD	TAL BUF
Total/NA	Analysis	8270D		1	454961	01/14/19 20:25	DMR	TAL BUF
Total/NA	Prep	3050B			454623	01/11/19 08:28	JMP	TAL BUF
Total/NA	Analysis	6010C		1	455034	01/14/19 11:06	LMH	TAL BUF
Total/NA	Prep	7471B			454580	01/14/19 12:45	BMB	TAL BUF
Total/NA	Analysis	7471B		1	454968	01/14/19 14:04	BMB	TAL BUF

Client Sample ID: SB-4 (.25-1.5 FT) — **Lab Sample ID: 480-147629-11**
Date Collected: 01/04/19 11:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: SB-4 (.25-1.5 FT) — **Lab Sample ID: 480-147629-11**
Date Collected: 01/04/19 11:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45 — **Percent Solids: 93.8**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			454574	01/10/19 14:39	SGD	TAL BUF
Total/NA	Analysis	8270D		1	454961	01/14/19 20:50	DMR	TAL BUF
Total/NA	Prep	3550C	DL		454574	01/10/19 14:39	SGD	TAL BUF
Total/NA	Analysis	8270D	DL	5	455117	01/15/19 23:18	DMR	TAL BUF
Total/NA	Prep	3050B			454623	01/11/19 08:28	JMP	TAL BUF
Total/NA	Analysis	6010C		1	455034	01/14/19 11:10	LMH	TAL BUF
Total/NA	Prep	7471B			454580	01/14/19 12:45	BMB	TAL BUF
Total/NA	Analysis	7471B		1	454968	01/14/19 14:05	BMB	TAL BUF

Client Sample ID: SB-5 (.5-1 FT) — **Lab Sample ID: 480-147629-12**
Date Collected: 01/04/19 13:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: SB-5 (.5-1 FT) — **Lab Sample ID: 480-147629-12**
Date Collected: 01/04/19 13:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45 — **Percent Solids: 76.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			454574	01/10/19 14:39	SGD	TAL BUF
Total/NA	Analysis	8270D		20	454961	01/14/19 21:16	DMR	TAL BUF
Total/NA	Prep	3050B			454623	01/11/19 08:28	JMP	TAL BUF
Total/NA	Analysis	6010C		1	455034	01/14/19 11:14	LMH	TAL BUF
Total/NA	Prep	7471B			454580	01/14/19 12:45	BMB	TAL BUF
Total/NA	Analysis	7471B		5	454968	01/14/19 14:22	BMB	TAL BUF

Client Sample ID: SB-7 (0-1.5 FT) — **Lab Sample ID: 480-147629-13**
Date Collected: 01/04/19 15:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: SB-7 (0-1.5 FT) — **Lab Sample ID: 480-147629-13**
Date Collected: 01/04/19 15:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45 — **Percent Solids: 71.0**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			454574	01/10/19 14:39	SGD	TAL BUF
Total/NA	Analysis	8270D		20	454961	01/14/19 21:41	DMR	TAL BUF
Total/NA	Prep	3050B			454623	01/11/19 08:28	JMP	TAL BUF
Total/NA	Analysis	6010C		1	455034	01/14/19 11:18	LMH	TAL BUF
Total/NA	Prep	7471B			454580	01/14/19 12:45	BMB	TAL BUF
Total/NA	Analysis	7471B		5	454968	01/14/19 14:26	BMB	TAL BUF

Client Sample ID: TR-1 (.5-1 FT) — **Lab Sample ID: 480-147629-14**
Date Collected: 01/04/19 16:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454884	01/14/19 09:53	KPK	TAL BUF

Client Sample ID: TR-1 (.5-1 FT) — **Lab Sample ID: 480-147629-14**
Date Collected: 01/04/19 16:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45 — **Percent Solids: 79.8**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			454399	01/09/19 14:25	SGD	TAL BUF
Total/NA	Analysis	8082A		1	454528	01/10/19 15:29	W1T	TAL BUF

Client Sample ID: FD-1 — **Lab Sample ID: 480-147629-15**
Date Collected: 01/04/19 14:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	454758	01/11/19 15:04	KPK	TAL BUF

Client Sample ID: FD-1 — **Lab Sample ID: 480-147629-15**
Date Collected: 01/04/19 14:00 — **Matrix: Solid**
Date Received: 01/07/19 16:45 — **Percent Solids: 48.1**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_H			454737	01/11/19 13:55	OMI	TAL BUF
Total/NA	Analysis	8260C		4	454857	01/14/19 18:05	AMM	TAL BUF
Total/NA	Prep	3550C			454574	01/10/19 14:39	SGD	TAL BUF
Total/NA	Analysis	8270D		10	454961	01/14/19 22:06	DMR	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Client Sample ID: SB-1W

Lab Sample ID: 480-147629-16

Date Collected: 01/04/19 16:15
Matrix: Water
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	454631	01/11/19 01:12	KMN	TAL BUF

Client Sample ID: SB-4W

Lab Sample ID: 480-147629-17

Date Collected: 01/04/19 16:30
Matrix: Water
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	454631	01/11/19 01:39	KMN	TAL BUF

Client Sample ID: SB-7W

Lab Sample ID: 480-147629-18

Date Collected: 01/04/19 16:45
Matrix: Water
Date Received: 01/07/19 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	454631	01/11/19 02:06	KMN	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

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 - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

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_H	Closed System 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 = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-147629-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-147629-1	TP-2 (2-4 FT)	Solid	01/03/19 09:00	01/07/19 16:45
480-147629-2	TP-3 (1-2 FT)	Solid	01/03/19 09:45	01/07/19 16:45
480-147629-3	TP-3 (6-8 FT)	Solid	01/03/19 10:00	01/07/19 16:45
480-147629-4	TP-4 (4-6 FT)	Solid	01/03/19 11:00	01/07/19 16:45
480-147629-5	TP-7 (3-5 FT)	Solid	01/03/19 13:00	01/07/19 16:45
480-147629-6	TP-11 (2-4 FT)	Solid	01/04/19 08:30	01/07/19 16:45
480-147629-7	TP-13 (8.5-9.5 FT)	Solid	01/04/19 10:30	01/07/19 16:45
480-147629-8	TP-16 (2-3 FT)	Solid	01/04/19 12:30	01/07/19 16:45
480-147629-9	SB-1 (.25-2 FT)	Solid	01/04/19 08:00	01/07/19 16:45
480-147629-10	SB-2 (.25-2 FT)	Solid	01/04/19 09:00	01/07/19 16:45
480-147629-11	SB-4 (.25-1.5 FT)	Solid	01/04/19 11:00	01/07/19 16:45
480-147629-12	SB-5 (.5-1 FT)	Solid	01/04/19 13:00	01/07/19 16:45
480-147629-13	SB-7 (0-1.5 FT)	Solid	01/04/19 15:00	01/07/19 16:45
480-147629-14	TR-1 (.5-1 FT)	Solid	01/04/19 16:00	01/07/19 16:45
480-147629-15	FD-1	Solid	01/04/19 14:00	01/07/19 16:45
480-147629-16	SB-1W	Water	01/04/19 16:15	01/07/19 16:45
480-147629-17	SB-4W	Water	01/04/19 16:30	01/07/19 16:45
480-147629-18	SB-7W	Water	01/04/19 16:45	01/07/19 16:45

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228
Phone: 716.691.2600 Fax: 716.691.7991

Chain of Custody Record

306105

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

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

Client Contact	Project Manager: Bryan Mayback	Site Contact: Nick Sured	Date: 1/7/19	COC No:
Company Name: Benchmark Env. Eng	Tel/Fax: 716-713-3437	Lab Contact: Brian Fisher	Carrier:	___ of ___ COCs
Address: 2558 Hamburg TPke	Analysis Turnaround Time			Sampler:
City/State/Zip: Buffalo, NY, 14218	☐ CALENDAR DAYS ☐ WORKING DAYS			ly:
Phone: 716-713-3437	TAT if different from Below ___			
Fax:	☐ 2 weeks			
Project Name: Louisiana Street Parcels	☐ 1 week			
Site: Louisiana Street Parcels	☐ 2 days			480-147629 COC
P O # B0305-018-001	☐ 1 day			19450

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+CP-51 VOC's	PAH's	RCRA metals	PCB's	Sample Specific Notes:
TP-2 (2-4 Ft)	1/3/19	9:00	G	Soil	3				X	X		
TP-3 (1-2 Ft)	1/3/19	9:45	G	Soil	1					X		
TP-3 (6-8 Ft)	1/3/19	10:00	G	Soil	2			X	X			
TP-4 (4-6 Ft)	1/3/19	11:00	G	Soil	1			X				
TP-7 (3-5 Ft)	1/3/19	13:00	G	Soil	1				X	X		
TP-11 (2-4 Ft)	1/4/19	8:30	G	Soil	3				X	X		
TP-13 (8.5-9.5 Ft)	1/4/19	10:30	G	Soil	1			X				
TP-16 (2-3 Ft)	1/4/19	12:30	G	Soil	2				X	X		
SB-1 (.25-2 Ft)	1/4/19	8:00	G	Soil	2				X	X		
SB-2 (.25-2 Ft)	1/4/19	9:00	G	Soil	2				X	X		
SB-4 (.25-1.5 Ft)	1/4/19	11:00	G	Soil	2				X	X		
SB-5 (.5-1 Ft)	1/4/19	13:00	G	Soil	1				X	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:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: 3.0 Corr'd:		Therm ID No.: #1
Relinquished by: [signature]	Company: BMTK	Date/Time: 1/7/19 16:45	Received by: [signature]	Company: TAB	Date/Time: 1/7/19 1645
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Buffalo
10 Hazelwood Drive

Amherst, NY 14228
Phone: 716.691.2600 Fax: 716.691.7991

Chain of Custody Record 306106

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

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

Client Contact	Project Manager: Same	Site Contact: Necessary	Date: 11/7/19	COC No:
Company Name:	Tel/Fax:	Lab Contact: Brian Mayhew	Carrier:	____ of ____ COCs
Address: SAME	Analysis Turnaround Time			Sampler:
City/State/Zip:	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name:	☐ 1 week			
Site: SAME	☐ 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)	TCL TCP-SI VOC's	PAH's	RCRA metals	PCB's	TCL TCP-SI VOC's	Sample Specific Notes:
SB-7 (0-1.5 Ft)	11/4/19	15:00	G	Soil	1				X	X			
TR-1 (.5-1 Ft)		16:00	G	Soil	1						X		
FD-1		14:00	G	Soil	2			X	X				
SB-1W		16:15	G	Water	3							X	
SB-4W		16:30	G	Water	3							X	
SB-7W		16:45	G	Water	3							X	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____								1	1	1	1	3	

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:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 3.0 Corr'd:____ | Therm ID No.: #1

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	BMTC	11/7/19 16:45	[signature]	VTAS	11/7/19 1645
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: 480-147629-1

Login Number: 147629

List Source: TestAmerica 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.	False	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-149130-1
Client Project/Site: Benchmark - 225 Louisiana St. site

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

Attn: Bryan Mayback

Authorized for release by:
2/27/2019 11:28:06 AM

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

Table of Contents

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.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Job ID: 480-149130-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-149130-1

Comments
No additional comments.

Receipt
The samples were received on 2/15/2019 2:14 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7º C.

GC/MS Semi VOA
Method(s) 8270D: The following sample was diluted due to the nature of the sample matrix: TP-8 (1-2) (480-149130-1). Elevated reporting limits (RLs) are provided.

Method(s) 8270D: The following samples was diluted due to color and appearance: TP-12(1-2) (480-149130-4), TP-14(1-2) (480-149130-5) and TP-17(2-3) (480-149130-6). Elevated reporting limits (RL) are provided.

Method(s) 8270D: The following samples were diluted due to the nature of the sample matrix: TP-14(1-2) (480-149130-5) and TP-17(2-3) (480-149130-6). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) 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
Method(s) 3550C: Due to the matrix, the following samples could not be concentrated to the final method required volume: TP-18(.5-1.5) (480-149130-3), TP-14(1-2) (480-149130-5) and TP-17(2-3) (480-149130-6). The reporting limits (RLs) are elevated proportionately.

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

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-149130-1

Client Sample ID: TP-8 (1-2) — Lab Sample ID: 480-149130-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	760	J	1200	180	ug/Kg	5	☼	8270D	Total/NA
Acenaphthylene	390	J	1200	160	ug/Kg	5	☼	8270D	Total/NA
Anthracene	1700		1200	300	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]anthracene	3900		1200	120	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	3300		1200	180	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	4000		1200	190	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	2100		1200	130	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	1800		1200	160	ug/Kg	5	☼	8270D	Total/NA
Chrysene	3400		1200	270	ug/Kg	5	☼	8270D	Total/NA
Dibenz(a,h)anthracene	660	J	1200	220	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	8400		1200	130	ug/Kg	5	☼	8270D	Total/NA
Fluorene	780	J	1200	140	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	1800		1200	150	ug/Kg	5	☼	8270D	Total/NA
Naphthalene	400	J	1200	160	ug/Kg	5	☼	8270D	Total/NA
Pyrene	7400		1200	140	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	6100		1200	180	ug/Kg	5	☼	8270D	Total/NA
Arsenic	11.2		2.9		mg/Kg	1	☼	6010C	Total/NA
Barium	81.3		0.72		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.34		0.29		mg/Kg	1	☼	6010C	Total/NA
Chromium	14.4		0.73		mg/Kg	1	☼	6010C	Total/NA
Lead	1080		1.5		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.42		0.029		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: TP-9(1.5-2) — Lab Sample ID: 480-149130-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	90	J	270	27	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	89	J	270	40	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	100	J	270	43	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	74	J	270	29	ug/Kg	1	☼	8270D	Total/NA
Chrysene	120	J	270	61	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	140	J	270	29	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	57	J	270	34	ug/Kg	1	☼	8270D	Total/NA
Pyrene	120	J	270	32	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	120	J	270	40	ug/Kg	1	☼	8270D	Total/NA
Arsenic	21.7		3.5		mg/Kg	1	☼	6010C	Total/NA
Barium	117		0.79		mg/Kg	1	☼	6010C	Total/NA
Chromium	16.1		0.88		mg/Kg	1	☼	6010C	Total/NA
Lead	215		1.8		mg/Kg	1	☼	6010C	Total/NA
Mercury	3.2		0.16		mg/Kg	5	☼	7471B	Total/NA

Client Sample ID: TP-18(.5-1.5) — Lab Sample ID: 480-149130-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	1300		1300	130	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	1300		1300	200	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	1800		1300	210	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	960	J	1300	140	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	620	J	1300	170	ug/Kg	1	☼	8270D	Total/NA
Chrysene	1500		1300	300	ug/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TP-18(.5-1.5) (Continued) — Lab Sample ID: 480-149130-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dibenz(a,h)anthracene	310	J	1300	240	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	2600		1300	140	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	800	J	1300	170	ug/Kg	1	☼	8270D	Total/NA
Pyrene	2400		1300	160	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	1400		1300	200	ug/Kg	1	☼	8270D	Total/NA
Arsenic	14.7		2.7		mg/Kg	1	☼	6010C	Total/NA
Barium	169		0.67		mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.1		0.27		mg/Kg	1	☼	6010C	Total/NA
Chromium	57.7		0.68		mg/Kg	1	☼	6010C	Total/NA
Lead	323		1.4		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.28	F1	0.026		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: TP-12(1-2) — Lab Sample ID: 480-149130-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	110	J	930	93	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	150	J	930	150	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	110	J	930	99	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	210	J	930	99	ug/Kg	5	☼	8270D	Total/NA
Pyrene	180	J	930	110	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	180	J	930	140	ug/Kg	5	☼	8270D	Total/NA
Arsenic	3.9		2.2		mg/Kg	1	☼	6010C	Total/NA
Barium	63.9		0.57		mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.6		0.22		mg/Kg	1	☼	6010C	Total/NA
Chromium	5.6		0.56		mg/Kg	1	☼	6010C	Total/NA
Lead	5.3		1.1		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.19		0.023		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: TP-14(1-2) — Lab Sample ID: 480-149130-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	1200	J	12000	1200	ug/Kg	10	☼	8270D	Total/NA
Arsenic	15.6		2.5		mg/Kg	1	☼	6010C	Total/NA
Barium	151		0.58		mg/Kg	1	☼	6010C	Total/NA
Chromium	10.2		0.63		mg/Kg	1	☼	6010C	Total/NA
Lead	77.0		1.3		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.055		0.022		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: TP-17(2-3) — Lab Sample ID: 480-149130-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	15.9		2.6		mg/Kg	1	☼	6010C	Total/NA
Barium	186		0.68		mg/Kg	1	☼	6010C	Total/NA
Cadmium	2.2		0.26		mg/Kg	1	☼	6010C	Total/NA
Chromium	14.7		0.66		mg/Kg	1	☼	6010C	Total/NA
Lead	563		1.3		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.27		0.026		mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TP-8 (1-2)
Date Collected: 02/14/19 09:00
Date Received: 02/15/19 14:14

Lab Sample ID: 480-149130-1
Matrix: Solid
Percent Solids: 68.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	760	J	1200	180	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Acenaphthylene	390	J	1200	160	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Anthracene	1700		1200	300	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Benzo[a]anthracene	3900		1200	120	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Benzo[a]pyrene	3300		1200	180	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Benzo[b]fluoranthene	4000		1200	190	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Benzo[g,h,i]perylene	2100		1200	130	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Benzo[k]fluoranthene	1800		1200	160	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Chrysene	3400		1200	270	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Dibenz(a,h)anthracene	660	J	1200	220	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Fluoranthene	8400		1200	130	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Fluorene	780	J	1200	140	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Indeno[1,2,3-cd]pyrene	1800		1200	150	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Naphthalene	400	J	1200	160	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Pyrene	7400		1200	140	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5
Phenanthrene	6100		1200	180	ug/Kg	☼	02/18/19 14:36	02/19/19 20:53	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*87*		*54 - 120*	*02/18/19 14:36*	*02/19/19 20:53*	*5*
2-Fluorobiphenyl	*94*		*60 - 120*	*02/18/19 14:36*	*02/19/19 20:53*	*5*
2-Fluorophenol (Surr)	*75*		*52 - 120*	*02/18/19 14:36*	*02/19/19 20:53*	*5*
Phenol-d5 (Surr)	*80*		*54 - 120*	*02/18/19 14:36*	*02/19/19 20:53*	*5*
p-Terphenyl-d14 (Surr)	*110*		*65 - 121*	*02/18/19 14:36*	*02/19/19 20:53*	*5*
Nitrobenzene-d5 (Surr)	*80*		*53 - 120*	*02/18/19 14:36*	*02/19/19 20:53*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11.2		2.9		mg/Kg	☼	02/18/19 06:50	02/19/19 19:27	1
Barium	81.3		0.72		mg/Kg	☼	02/23/19 07:31	02/26/19 13:27	1
Cadmium	0.34		0.29		mg/Kg	☼	02/18/19 06:50	02/19/19 19:27	1
Chromium	14.4		0.73		mg/Kg	☼	02/18/19 06:50	02/19/19 19:27	1
Lead	1080		1.5		mg/Kg	☼	02/18/19 06:50	02/19/19 19:27	1
Selenium	ND		5.8		mg/Kg	☼	02/18/19 06:50	02/19/19 19:27	1
Silver	ND		0.87		mg/Kg	☼	02/18/19 06:50	02/19/19 19:27	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.42		0.029		mg/Kg	☼	02/18/19 13:30	02/18/19 16:04	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-149130-1

Client Sample ID: TP-9(1.5-2)
Date Collected: 02/14/19 09:30
Date Received: 02/15/19 14:14

Lab Sample ID: 480-149130-2
Matrix: Solid
Percent Solids: 61.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		270	40	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Acenaphthylene	ND		270	35	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Anthracene	ND		270	67	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Benzo[a]anthracene	**90**	**J**	270	27	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Benzo[a]pyrene	**89**	**J**	270	40	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Benzo[b]fluoranthene	**100**	**J**	270	43	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Benzo[g,h,i]perylene	**74**	**J**	270	29	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Benzo[k]fluoranthene	ND		270	35	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Chrysene	**120**	**J**	270	61	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Dibenz(a,h)anthracene	ND		270	48	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Fluoranthene	**140**	**J**	270	29	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Fluorene	ND		270	32	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Indeno[1,2,3-cd]pyrene	**57**	**J**	270	34	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Naphthalene	ND		270	35	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Pyrene	**120**	**J**	270	32	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1
Phenanthrene	**120**	**J**	270	40	ug/Kg	☼	02/18/19 14:36	02/19/19 21:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*90*		*54 - 120*	*02/18/19 14:36*	*02/19/19 21:21*	*1*
2-Fluorobiphenyl	*94*		*60 - 120*	*02/18/19 14:36*	*02/19/19 21:21*	*1*
2-Fluorophenol (Surr)	*76*		*52 - 120*	*02/18/19 14:36*	*02/19/19 21:21*	*1*
Phenol-d5 (Surr)	*80*		*54 - 120*	*02/18/19 14:36*	*02/19/19 21:21*	*1*
p-Terphenyl-d14 (Surr)	*105*		*65 - 121*	*02/18/19 14:36*	*02/19/19 21:21*	*1*
Nitrobenzene-d5 (Surr)	*81*		*53 - 120*	*02/18/19 14:36*	*02/19/19 21:21*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**21.7**		3.5		mg/Kg	☼	02/18/19 06:50	02/19/19 19:30	1
Barium	**117**		0.79		mg/Kg	☼	02/23/19 07:31	02/26/19 13:31	1
Cadmium	ND		0.35		mg/Kg	☼	02/18/19 06:50	02/19/19 19:30	1
Chromium	**16.1**		0.88		mg/Kg	☼	02/18/19 06:50	02/19/19 19:30	1
Lead	**215**		1.8		mg/Kg	☼	02/18/19 06:50	02/19/19 19:30	1
Selenium	ND		7.0		mg/Kg	☼	02/18/19 06:50	02/19/19 19:30	1
Silver	ND		1.1		mg/Kg	☼	02/18/19 06:50	02/19/19 19:30	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**3.2**		0.16		mg/Kg	☼	02/18/19 13:30	02/18/19 16:19	5

Client Sample ID: TP-18(.5-1.5)

Date Collected: 02/14/19 10:30
Date Received: 02/15/19 14:14

Lab Sample ID: 480-149130-3

Matrix: Solid
Percent Solids: 75.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1300	200	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Acenaphthylene	ND		1300	170	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Anthracene	ND		1300	330	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Benzo[a]anthracene	**1300**		1300	130	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Benzo[a]pyrene	**1300**		1300	200	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Benzo[b]fluoranthene	**1800**		1300	210	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Benzo[g,h,i]perylene	**960**	**J**	1300	140	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Benzo[k]fluoranthene	**620**	**J**	1300	170	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Chrysene	**1500**		1300	300	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Dibenz(a,h)anthracene	**310**	**J**	1300	240	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Fluoranthene	**2600**		1300	140	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Fluorene	ND		1300	160	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Indeno[1,2,3-cd]pyrene	**800**	**J**	1300	170	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Naphthalene	ND		1300	170	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Pyrene	**2400**		1300	160	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1
Phenanthrene	**1400**		1300	200	ug/Kg	☼	02/18/19 14:36	02/20/19 13:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*74*		*54 - 120*	*02/18/19 14:36*	*02/20/19 13:58*	*1*
2-Fluorobiphenyl	*100*		*60 - 120*	*02/18/19 14:36*	*02/20/19 13:58*	*1*
2-Fluorophenol (Surr)	*75*		*52 - 120*	*02/18/19 14:36*	*02/20/19 13:58*	*1*
Phenol-d5 (Surr)	*86*		*54 - 120*	*02/18/19 14:36*	*02/20/19 13:58*	*1*
p-Terphenyl-d14 (Surr)	*118*		*65 - 121*	*02/18/19 14:36*	*02/20/19 13:58*	*1*
Nitrobenzene-d5 (Surr)	*83*		*53 - 120*	*02/18/19 14:36*	*02/20/19 13:58*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**14.7**		2.7		mg/Kg	☼	02/18/19 06:50	02/19/19 19:34	1
Barium	**169**		0.67		mg/Kg	☼	02/23/19 07:31	02/26/19 13:35	1
Cadmium	**1.1**		0.27		mg/Kg	☼	02/18/19 06:50	02/19/19 19:34	1
Chromium	**57.7**		0.68		mg/Kg	☼	02/18/19 06:50	02/19/19 19:34	1
Lead	**323**		1.4		mg/Kg	☼	02/18/19 06:50	02/19/19 19:34	1
Selenium	ND		5.5		mg/Kg	☼	02/18/19 06:50	02/19/19 19:34	1
Silver	ND		0.82		mg/Kg	☼	02/18/19 06:50	02/19/19 19:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.28**	**F1**	0.026		mg/Kg	☼	02/18/19 13:30	02/18/19 16:10	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-149130-1

Client Sample ID: TP-12(1-2)
Date Collected: 02/14/19 11:00
Date Received: 02/15/19 14:14

Lab Sample ID: 480-149130-4
Matrix: Solid
Percent Solids: 88.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		930	140	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Acenaphthylene	ND		930	120	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Anthracene	ND		930	230	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Benzo[a]anthracene	**110**	**J**	930	93	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Benzo[a]pyrene	ND		930	140	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Benzo[b]fluoranthene	**150**	**J**	930	150	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Benzo[g,h,i]perylene	**110**	**J**	930	99	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Benzo[k]fluoranthene	ND		930	120	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Chrysene	ND		930	210	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Dibenz(a,h)anthracene	ND		930	160	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Fluoranthene	**210**	**J**	930	99	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Fluorene	ND		930	110	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Indeno[1,2,3-cd]pyrene	ND		930	120	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Naphthalene	ND		930	120	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Pyrene	**180**	**J**	930	110	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5
Phenanthrene	**180**	**J**	930	140	ug/Kg	☼	02/18/19 14:36	02/20/19 14:27	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*73*		*54 - 120*	*02/18/19 14:36*	*02/20/19 14:27*	*5*
2-Fluorobiphenyl	*94*		*60 - 120*	*02/18/19 14:36*	*02/20/19 14:27*	*5*
2-Fluorophenol (Surr)	*73*		*52 - 120*	*02/18/19 14:36*	*02/20/19 14:27*	*5*
Phenol-d5 (Surr)	*80*		*54 - 120*	*02/18/19 14:36*	*02/20/19 14:27*	*5*
p-Terphenyl-d14 (Surr)	*107*		*65 - 121*	*02/18/19 14:36*	*02/20/19 14:27*	*5*
Nitrobenzene-d5 (Surr)	*75*		*53 - 120*	*02/18/19 14:36*	*02/20/19 14:27*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.9**		2.2		mg/Kg	☼	02/18/19 06:50	02/19/19 19:38	1
Barium	**63.9**		0.57		mg/Kg	☼	02/23/19 07:31	02/26/19 13:39	1
Cadmium	**1.6**		0.22		mg/Kg	☼	02/18/19 06:50	02/19/19 19:38	1
Chromium	**5.6**		0.56		mg/Kg	☼	02/18/19 06:50	02/19/19 19:38	1
Lead	**5.3**		1.1		mg/Kg	☼	02/18/19 06:50	02/19/19 19:38	1
Selenium	ND		4.4		mg/Kg	☼	02/18/19 06:50	02/19/19 19:38	1
Silver	ND		0.67		mg/Kg	☼	02/18/19 06:50	02/19/19 19:38	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.19**		0.023		mg/Kg	☼	02/18/19 13:30	02/18/19 16:15	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-149130-1

Client Sample ID: TP-14(1-2)
Date Collected: 02/14/19 12:00
Date Received: 02/15/19 14:14

Lab Sample ID: 480-149130-5
Matrix: Solid
Percent Solids: 85.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		12000	1700	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Acenaphthylene	ND		12000	1500	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Anthracene	ND		12000	2900	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Benzo[a]anthracene	ND		12000	1200	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Benzo[a]pyrene	ND		12000	1700	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Benzo[b]fluoranthene	ND		12000	1900	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Benzo[g,h,i]perylene	ND		12000	1200	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Benzo[k]fluoranthene	ND		12000	1500	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Chrysene	ND		12000	2600	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Dibenz(a,h)anthracene	ND		12000	2100	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Fluoranthene	**1200**	**J**	12000	1200	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Fluorene	ND		12000	1400	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Indeno[1,2,3-cd]pyrene	ND		12000	1500	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Naphthalene	ND		12000	1500	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Pyrene	ND		12000	1400	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10
Phenanthrene	ND		12000	1700	ug/Kg	☼	02/18/19 14:36	02/20/19 14:55	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*0*	*X*	*54 - 120*	*02/18/19 14:36*	*02/20/19 14:55*	*10*
2-Fluorobiphenyl	*58*	*X*	*60 - 120*	*02/18/19 14:36*	*02/20/19 14:55*	*10*
2-Fluorophenol (Surr)	*42*	*X*	*52 - 120*	*02/18/19 14:36*	*02/20/19 14:55*	*10*
Phenol-d5 (Surr)	*53*	*X*	*54 - 120*	*02/18/19 14:36*	*02/20/19 14:55*	*10*
p-Terphenyl-d14 (Surr)	*61*	*X*	*65 - 121*	*02/18/19 14:36*	*02/20/19 14:55*	*10*
Nitrobenzene-d5 (Surr)	*43*	*X*	*53 - 120*	*02/18/19 14:36*	*02/20/19 14:55*	*10*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**15.6**		2.5		mg/Kg	☼	02/18/19 06:50	02/19/19 19:41	1
Barium	**151**		0.58		mg/Kg	☼	02/23/19 07:31	02/26/19 13:43	1
Cadmium	ND		0.25		mg/Kg	☼	02/18/19 06:50	02/19/19 19:41	1
Chromium	**10.2**		0.63		mg/Kg	☼	02/18/19 06:50	02/19/19 19:41	1
Lead	**77.0**		1.3		mg/Kg	☼	02/18/19 06:50	02/19/19 19:41	1
Selenium	ND		5.1		mg/Kg	☼	02/18/19 06:50	02/19/19 19:41	1
Silver	ND		0.76		mg/Kg	☼	02/18/19 06:50	02/19/19 19:41	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.055**		0.022		mg/Kg	☼	02/18/19 13:30	02/18/19 16:16	1

Client Sample ID: TP-17(2-3)

Date Collected: 02/14/19 12:30
Date Received: 02/15/19 14:14

Lab Sample ID: 480-149130-6

Matrix: Solid
Percent Solids: 72.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		47000	6900	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Acenaphthylene	ND		47000	6100	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Anthracene	ND		47000	12000	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Benzo[a]anthracene	ND		47000	4700	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Benzo[a]pyrene	ND		47000	6900	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Benzo[b]fluoranthene	ND		47000	7400	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Benzo[g,h,i]perylene	ND		47000	5000	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Benzo[k]fluoranthene	ND		47000	6100	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Chrysene	ND		47000	10000	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Dibenz(a,h)anthracene	ND		47000	8300	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Fluoranthene	ND		47000	5000	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Fluorene	ND		47000	5500	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Indeno[1,2,3-cd]pyrene	ND		47000	5800	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Naphthalene	ND		47000	6100	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Pyrene	ND		47000	5500	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20
Phenanthrene	ND		47000	6900	ug/Kg	☼	02/18/19 14:36	02/20/19 15:24	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*0*	*X*	*54 - 120*	*02/18/19 14:36*	*02/20/19 15:24*	*20*
2-Fluorobiphenyl	*74*		*60 - 120*	*02/18/19 14:36*	*02/20/19 15:24*	*20*
2-Fluorophenol (Surr)	*0*	*X*	*52 - 120*	*02/18/19 14:36*	*02/20/19 15:24*	*20*
Phenol-d5 (Surr)	*57*		*54 - 120*	*02/18/19 14:36*	*02/20/19 15:24*	*20*
p-Terphenyl-d14 (Surr)	*88*		*65 - 121*	*02/18/19 14:36*	*02/20/19 15:24*	*20*
Nitrobenzene-d5 (Surr)	*53*		*53 - 120*	*02/18/19 14:36*	*02/20/19 15:24*	*20*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**15.9**		2.6		mg/Kg	☼	02/18/19 06:50	02/19/19 19:45	1
Barium	**186**		0.68		mg/Kg	☼	02/23/19 07:31	02/26/19 13:47	1
Cadmium	**2.2**		0.26		mg/Kg	☼	02/18/19 06:50	02/19/19 19:45	1
Chromium	**14.7**		0.66		mg/Kg	☼	02/18/19 06:50	02/19/19 19:45	1
Lead	**563**		1.3		mg/Kg	☼	02/18/19 06:50	02/19/19 19:45	1
Selenium	ND		5.2		mg/Kg	☼	02/18/19 06:50	02/19/19 19:45	1
Silver	ND		0.79		mg/Kg	☼	02/18/19 06:50	02/19/19 19:45	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.27**		0.026		mg/Kg	☼	02/18/19 13:30	02/18/19 16:17	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-149130-1

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)	(65-121)	(53-120)		
480-149130-1	TP-8 (1-2)	87	94	75	80	110	80		
480-149130-2	TP-9(1.5-2)	90	94	76	80	105	81		
480-149130-3	TP-18(.5-1.5)	74	100	75	86	118	83		
480-149130-4	TP-12(1-2)	73	94	73	80	107	75		
480-149130-5	TP-14(1-2)	0 X	58 X	42 X	53 X	61 X	43 X		
480-149130-6	TP-17(2-3)	0 X	74	0 X	57	88	53		
LCS 480-459552/2-A	Lab Control Sample	95	93	76	79	109	85		
MB 480-459552/1-A	Method Blank	67	96	80	83	113	83		

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 480-459552/1-A
Matrix: Solid
Analysis Batch: 459686

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 459552

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		170	25	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Acenaphthylene	ND		170	22	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Anthracene	ND		170	42	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Benzo[a]anthracene	ND		170	17	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Benzo[a]pyrene	ND		170	25	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Chrysene	ND		170	38	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Fluoranthene	ND		170	18	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Fluorene	ND		170	20	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Naphthalene	ND		170	22	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Pyrene	ND		170	20	ug/Kg		02/18/19 14:36	02/19/19 14:29	1
Phenanthrene	ND		170	25	ug/Kg		02/18/19 14:36	02/19/19 14:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*67*		*54 - 120*	*02/18/19 14:36*	*02/19/19 14:29*	*1*
2-Fluorobiphenyl	*96*		*60 - 120*	*02/18/19 14:36*	*02/19/19 14:29*	*1*
2-Fluorophenol (Surr)	*80*		*52 - 120*	*02/18/19 14:36*	*02/19/19 14:29*	*1*
Phenol-d5 (Surr)	*83*		*54 - 120*	*02/18/19 14:36*	*02/19/19 14:29*	*1*
p-Terphenyl-d14 (Surr)	*113*		*65 - 121*	*02/18/19 14:36*	*02/19/19 14:29*	*1*
Nitrobenzene-d5 (Surr)	*83*		*53 - 120*	*02/18/19 14:36*	*02/19/19 14:29*	*1*

Lab Sample ID: LCS 480-459552/2-A
Matrix: Solid
Analysis Batch: 459686

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 459552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	1660	1490		ug/Kg		90	62 - 120
Acenaphthylene	1660	1590		ug/Kg		96	58 - 121
Anthracene	1660	1640		ug/Kg		98	62 - 120
Benzo[a]anthracene	1660	1570		ug/Kg		95	65 - 120
Benzo[a]pyrene	1660	1680		ug/Kg		101	64 - 120
Benzo[b]fluoranthene	1660	1750		ug/Kg		105	64 - 120
Benzo[g,h,i]perylene	1660	1580		ug/Kg		95	45 - 145
Benzo[k]fluoranthene	1660	1640		ug/Kg		99	65 - 120
Chrysene	1660	1590		ug/Kg		95	64 - 120
Dibenz(a,h)anthracene	1660	1590		ug/Kg		95	54 - 132
Fluoranthene	1660	1650		ug/Kg		99	62 - 120
Fluorene	1660	1600		ug/Kg		96	63 - 120
Indeno[1,2,3-cd]pyrene	1660	1600		ug/Kg		96	56 - 134
Naphthalene	1660	1440		ug/Kg		87	55 - 120
Pyrene	1660	1650		ug/Kg		99	61 - 133
Phenanthrene	1660	1570		ug/Kg		95	60 - 120

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

Lab Sample ID: LCS 480-459552/2-A
Matrix: Solid
Analysis Batch: 459686

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 459552

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*95*		*54 - 120*
2-Fluorobiphenyl	*93*		*60 - 120*
2-Fluorophenol (Surr)	*76*		*52 - 120*
Phenol-d5 (Surr)	*79*		*54 - 120*
p-Terphenyl-d14 (Surr)	*109*		*65 - 121*
Nitrobenzene-d5 (Surr)	*85*		*53 - 120*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-459514/1-A
Matrix: Solid
Analysis Batch: 459783

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 459514

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0		mg/Kg		02/18/19 06:50	02/19/19 17:54	1
Barium	ND		0.50		mg/Kg		02/18/19 06:50	02/19/19 17:54	1
Cadmium	ND		0.20		mg/Kg		02/18/19 06:50	02/19/19 17:54	1
Chromium	ND		0.50		mg/Kg		02/18/19 06:50	02/19/19 17:54	1
Lead	ND		1.0		mg/Kg		02/18/19 06:50	02/19/19 17:54	1
Selenium	ND		4.0		mg/Kg		02/18/19 06:50	02/19/19 17:54	1
Silver	ND		0.60		mg/Kg		02/18/19 06:50	02/19/19 17:54	1

Lab Sample ID: LCSSRM 480-459514/2-A
Matrix: Solid
Analysis Batch: 459783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 459514

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	171	115.7		mg/Kg		67.6	66.1 - 122.2
Cadmium	225	158.0		mg/Kg		70.2	70.2 - 117.3
Chromium	144	97.18		mg/Kg		67.5	66.1 - 122.9
Lead	111	87.20		mg/Kg		78.6	71.0 - 128.8
Selenium	206	146.6		mg/Kg		71.1	63.6 - 122.3
Silver	45.5	31.04		mg/Kg		68.2	66.2 - 124.2

Lab Sample ID: MB 480-460197/1-A
Matrix: Solid
Analysis Batch: 460603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 460197

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		0.51		mg/Kg		02/23/19 07:31	02/26/19 11:50	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCSSRM 480-460197/2-A
Matrix: Solid
Analysis Batch: 460603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 460197

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	272	219.6		mg/Kg		80.7	71.7 - 119.5

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-459529/1-A
Matrix: Solid
Analysis Batch: 459571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 459529

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.019		mg/Kg		02/18/19 13:30	02/18/19 15:53	1

Lab Sample ID: LCSSRM 480-459529/2-A ^10
Matrix: Solid
Analysis Batch: 459571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 459529

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	12.0	10.31		mg/Kg		85.9	57.3 - 133.3

Lab Sample ID: 480-149130-3 MS
Matrix: Solid
Analysis Batch: 459571

Client Sample ID: TP-18(.5-1.5)
Prep Type: Total/NA
Prep Batch: 459529

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.28	F1	0.411	0.826	F1	mg/Kg	☼	133	80 - 120

Lab Sample ID: 480-149130-3 MSD
Matrix: Solid
Analysis Batch: 459571

Client Sample ID: TP-18(.5-1.5)
Prep Type: Total/NA
Prep Batch: 459529

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.28	F1	0.404	0.836	F1	mg/Kg	☼	138	80 - 120	1	20

GC/MS Semi VOA

Prep Batch: 459552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-149130-1	TP-8 (1-2)	Total/NA	Solid	3550C	
480-149130-2	TP-9(1.5-2)	Total/NA	Solid	3550C	
480-149130-3	TP-18(.5-1.5)	Total/NA	Solid	3550C	
480-149130-4	TP-12(1-2)	Total/NA	Solid	3550C	
480-149130-5	TP-14(1-2)	Total/NA	Solid	3550C	
480-149130-6	TP-17(2-3)	Total/NA	Solid	3550C	
MB 480-459552/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-459552/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 459686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-149130-1	TP-8 (1-2)	Total/NA	Solid	8270D	459552
480-149130-2	TP-9(1.5-2)	Total/NA	Solid	8270D	459552
MB 480-459552/1-A	Method Blank	Total/NA	Solid	8270D	459552
LCS 480-459552/2-A	Lab Control Sample	Total/NA	Solid	8270D	459552

Analysis Batch: 459859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-149130-3	TP-18(.5-1.5)	Total/NA	Solid	8270D	459552
480-149130-4	TP-12(1-2)	Total/NA	Solid	8270D	459552
480-149130-5	TP-14(1-2)	Total/NA	Solid	8270D	459552
480-149130-6	TP-17(2-3)	Total/NA	Solid	8270D	459552

Metals

Prep Batch: 459514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-149130-1	TP-8 (1-2)	Total/NA	Solid	3050B	
480-149130-2	TP-9(1.5-2)	Total/NA	Solid	3050B	
480-149130-3	TP-18(.5-1.5)	Total/NA	Solid	3050B	
480-149130-4	TP-12(1-2)	Total/NA	Solid	3050B	
480-149130-5	TP-14(1-2)	Total/NA	Solid	3050B	
480-149130-6	TP-17(2-3)	Total/NA	Solid	3050B	
MB 480-459514/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-459514/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 459529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-149130-1	TP-8 (1-2)	Total/NA	Solid	7471B	
480-149130-2	TP-9(1.5-2)	Total/NA	Solid	7471B	
480-149130-3	TP-18(.5-1.5)	Total/NA	Solid	7471B	
480-149130-4	TP-12(1-2)	Total/NA	Solid	7471B	
480-149130-5	TP-14(1-2)	Total/NA	Solid	7471B	
480-149130-6	TP-17(2-3)	Total/NA	Solid	7471B	
MB 480-459529/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-459529/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	
480-149130-3 MS	TP-18(.5-1.5)	Total/NA	Solid	7471B	
480-149130-3 MSD	TP-18(.5-1.5)	Total/NA	Solid	7471B	

Metals (Continued)

Analysis Batch: 459571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-149130-1	TP-8 (1-2)	Total/NA	Solid	7471B	459529
480-149130-2	TP-9(1.5-2)	Total/NA	Solid	7471B	459529
480-149130-3	TP-18(.5-1.5)	Total/NA	Solid	7471B	459529
480-149130-4	TP-12(1-2)	Total/NA	Solid	7471B	459529
480-149130-5	TP-14(1-2)	Total/NA	Solid	7471B	459529
480-149130-6	TP-17(2-3)	Total/NA	Solid	7471B	459529
MB 480-459529/1-A	Method Blank	Total/NA	Solid	7471B	459529
LCSSRM 480-459529/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	459529
480-149130-3 MS	TP-18(.5-1.5)	Total/NA	Solid	7471B	459529
480-149130-3 MSD	TP-18(.5-1.5)	Total/NA	Solid	7471B	459529

Analysis Batch: 459783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-149130-1	TP-8 (1-2)	Total/NA	Solid	6010C	459514
480-149130-2	TP-9(1.5-2)	Total/NA	Solid	6010C	459514
480-149130-3	TP-18(.5-1.5)	Total/NA	Solid	6010C	459514
480-149130-4	TP-12(1-2)	Total/NA	Solid	6010C	459514
480-149130-5	TP-14(1-2)	Total/NA	Solid	6010C	459514
480-149130-6	TP-17(2-3)	Total/NA	Solid	6010C	459514
MB 480-459514/1-A	Method Blank	Total/NA	Solid	6010C	459514
LCSSRM 480-459514/2-A	Lab Control Sample	Total/NA	Solid	6010C	459514

Prep Batch: 460197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-149130-1	TP-8 (1-2)	Total/NA	Solid	3050B	
480-149130-2	TP-9(1.5-2)	Total/NA	Solid	3050B	
480-149130-3	TP-18(.5-1.5)	Total/NA	Solid	3050B	
480-149130-4	TP-12(1-2)	Total/NA	Solid	3050B	
480-149130-5	TP-14(1-2)	Total/NA	Solid	3050B	
480-149130-6	TP-17(2-3)	Total/NA	Solid	3050B	
MB 480-460197/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-460197/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 460603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-149130-1	TP-8 (1-2)	Total/NA	Solid	6010C	460197
480-149130-2	TP-9(1.5-2)	Total/NA	Solid	6010C	460197
480-149130-3	TP-18(.5-1.5)	Total/NA	Solid	6010C	460197
480-149130-4	TP-12(1-2)	Total/NA	Solid	6010C	460197
480-149130-5	TP-14(1-2)	Total/NA	Solid	6010C	460197
480-149130-6	TP-17(2-3)	Total/NA	Solid	6010C	460197
MB 480-460197/1-A	Method Blank	Total/NA	Solid	6010C	460197
LCSSRM 480-460197/2-A	Lab Control Sample	Total/NA	Solid	6010C	460197

General Chemistry

Analysis Batch: 459392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-149130-1	TP-8 (1-2)	Total/NA	Solid	Moisture	
480-149130-2	TP-9(1.5-2)	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 459392 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-149130-3	TP-18(.5-1.5)	Total/NA	Solid	Moisture	
480-149130-4	TP-12(1-2)	Total/NA	Solid	Moisture	
480-149130-5	TP-14(1-2)	Total/NA	Solid	Moisture	
480-149130-6	TP-17(2-3)	Total/NA	Solid	Moisture	

Client Sample ID: TP-8 (1-2) — **Lab Sample ID: 480-149130-1**
Date Collected: 02/14/19 09:00 — **Matrix: Solid**
Date Received: 02/15/19 14:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	459392	02/16/19 10:29	MDH	TAL BUF

Client Sample ID: TP-8 (1-2) — **Lab Sample ID: 480-149130-1**
Date Collected: 02/14/19 09:00 — **Matrix: Solid**
Date Received: 02/15/19 14:14 — **Percent Solids: 68.6**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			459552	02/18/19 14:36	ATG	TAL BUF
Total/NA	Analysis	8270D		5	459686	02/19/19 20:53	PJQ	TAL BUF
Total/NA	Prep	3050B			460197	02/23/19 07:31	JMP	TAL BUF
Total/NA	Analysis	6010C		1	460603	02/26/19 13:27	LMH	TAL BUF
Total/NA	Prep	3050B			459514	02/18/19 06:50	MV	TAL BUF
Total/NA	Analysis	6010C		1	459783	02/19/19 19:27	AMH	TAL BUF
Total/NA	Prep	7471B			459529	02/18/19 13:30	BMB	TAL BUF
Total/NA	Analysis	7471B		1	459571	02/18/19 16:04	BMB	TAL BUF

Client Sample ID: TP-9(1.5-2) — **Lab Sample ID: 480-149130-2**
Date Collected: 02/14/19 09:30 — **Matrix: Solid**
Date Received: 02/15/19 14:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	459392	02/16/19 10:29	MDH	TAL BUF

Client Sample ID: TP-9(1.5-2) — **Lab Sample ID: 480-149130-2**
Date Collected: 02/14/19 09:30 — **Matrix: Solid**
Date Received: 02/15/19 14:14 — **Percent Solids: 61.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			459552	02/18/19 14:36	ATG	TAL BUF
Total/NA	Analysis	8270D		1	459686	02/19/19 21:21	PJQ	TAL BUF
Total/NA	Prep	3050B			460197	02/23/19 07:31	JMP	TAL BUF
Total/NA	Analysis	6010C		1	460603	02/26/19 13:31	LMH	TAL BUF
Total/NA	Prep	3050B			459514	02/18/19 06:50	MV	TAL BUF
Total/NA	Analysis	6010C		1	459783	02/19/19 19:30	AMH	TAL BUF
Total/NA	Prep	7471B			459529	02/18/19 13:30	BMB	TAL BUF
Total/NA	Analysis	7471B		5	459571	02/18/19 16:19	BMB	TAL BUF

Client Sample ID: TP-18(.5-1.5) — **Lab Sample ID: 480-149130-3**
Date Collected: 02/14/19 10:30 — **Matrix: Solid**
Date Received: 02/15/19 14:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	459392	02/16/19 10:29	MDH	TAL BUF

Client Sample ID: TP-18(.5-1.5) — **Lab Sample ID: 480-149130-3**
Date Collected: 02/14/19 10:30 — **Matrix: Solid**
Date Received: 02/15/19 14:14 — **Percent Solids: 75.1**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			459552	02/18/19 14:36	ATG	TAL BUF
Total/NA	Analysis	8270D		1	459859	02/20/19 13:58	PJQ	TAL BUF
Total/NA	Prep	3050B			460197	02/23/19 07:31	JMP	TAL BUF
Total/NA	Analysis	6010C		1	460603	02/26/19 13:35	LMH	TAL BUF
Total/NA	Prep	3050B			459514	02/18/19 06:50	MV	TAL BUF
Total/NA	Analysis	6010C		1	459783	02/19/19 19:34	AMH	TAL BUF
Total/NA	Prep	7471B			459529	02/18/19 13:30	BMB	TAL BUF
Total/NA	Analysis	7471B		1	459571	02/18/19 16:10	BMB	TAL BUF

Client Sample ID: TP-12(1-2) — **Lab Sample ID: 480-149130-4**
Date Collected: 02/14/19 11:00 — **Matrix: Solid**
Date Received: 02/15/19 14:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	459392	02/16/19 10:29	MDH	TAL BUF

Client Sample ID: TP-12(1-2) — **Lab Sample ID: 480-149130-4**
Date Collected: 02/14/19 11:00 — **Matrix: Solid**
Date Received: 02/15/19 14:14 — **Percent Solids: 88.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			459552	02/18/19 14:36	ATG	TAL BUF
Total/NA	Analysis	8270D		5	459859	02/20/19 14:27	PJQ	TAL BUF
Total/NA	Prep	3050B			460197	02/23/19 07:31	JMP	TAL BUF
Total/NA	Analysis	6010C		1	460603	02/26/19 13:39	LMH	TAL BUF
Total/NA	Prep	3050B			459514	02/18/19 06:50	MV	TAL BUF
Total/NA	Analysis	6010C		1	459783	02/19/19 19:38	AMH	TAL BUF
Total/NA	Prep	7471B			459529	02/18/19 13:30	BMB	TAL BUF
Total/NA	Analysis	7471B		1	459571	02/18/19 16:15	BMB	TAL BUF

Client Sample ID: TP-14(1-2) — **Lab Sample ID: 480-149130-5**
Date Collected: 02/14/19 12:00 — **Matrix: Solid**
Date Received: 02/15/19 14:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	459392	02/16/19 10:29	MDH	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-149130-1

Client Sample ID: TP-14(1-2)

Lab Sample ID: 480-149130-5

Date Collected: 02/14/19 12:00
Matrix: Solid
Date Received: 02/15/19 14:14
Percent Solids: 85.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			459552	02/18/19 14:36	ATG	TAL BUF
Total/NA	Analysis	8270D		10	459859	02/20/19 14:55	PJQ	TAL BUF
Total/NA	Prep	3050B			460197	02/23/19 07:31	JMP	TAL BUF
Total/NA	Analysis	6010C		1	460603	02/26/19 13:43	LMH	TAL BUF
Total/NA	Prep	3050B			459514	02/18/19 06:50	MV	TAL BUF
Total/NA	Analysis	6010C		1	459783	02/19/19 19:41	AMH	TAL BUF
Total/NA	Prep	7471B			459529	02/18/19 13:30	BMB	TAL BUF
Total/NA	Analysis	7471B		1	459571	02/18/19 16:16	BMB	TAL BUF

Client Sample ID: TP-17(2-3)

Lab Sample ID: 480-149130-6

Date Collected: 02/14/19 12:30
Matrix: Solid
Date Received: 02/15/19 14:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	459392	02/16/19 10:29	MDH	TAL BUF

Client Sample ID: TP-17(2-3)

Lab Sample ID: 480-149130-6

Date Collected: 02/14/19 12:30
Matrix: Solid
Date Received: 02/15/19 14:14
Percent Solids: 72.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			459552	02/18/19 14:36	ATG	TAL BUF
Total/NA	Analysis	8270D		20	459859	02/20/19 15:24	PJQ	TAL BUF
Total/NA	Prep	3050B			460197	02/23/19 07:31	JMP	TAL BUF
Total/NA	Analysis	6010C		1	460603	02/26/19 13:47	LMH	TAL BUF
Total/NA	Prep	3050B			459514	02/18/19 06:50	MV	TAL BUF
Total/NA	Analysis	6010C		1	459783	02/19/19 19:45	AMH	TAL BUF
Total/NA	Prep	7471B			459529	02/18/19 13:30	BMB	TAL BUF
Total/NA	Analysis	7471B		1	459571	02/18/19 16:17	BMB	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
TestAmerica Job ID: 480-149130-1
Project/Site: Benchmark - 225 Louisiana St. site

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

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 - 225 Louisiana St. site

TestAmerica Job ID: 480-149130-1

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

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 225 Louisiana St. site

TestAmerica Job ID: 480-149130-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-149130-1	TP-8 (1-2)	Solid	02/14/19 09:00	02/15/19 14:14
480-149130-2	TP-9(1.5-2)	Solid	02/14/19 09:30	02/15/19 14:14
480-149130-3	TP-18(.5-1.5)	Solid	02/14/19 10:30	02/15/19 14:14
480-149130-4	TP-12(1-2)	Solid	02/14/19 11:00	02/15/19 14:14
480-149130-5	TP-14(1-2)	Solid	02/14/19 12:00	02/15/19 14:14
480-149130-6	TP-17(2-3)	Solid	02/14/19 12:30	02/15/19 14:14

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Nick Surace	Lab PM: Fischer, Brian J	Carrier Tracking No(s):	COC No: 480-125897-28544.1
Client Contact: Bryan Mayback	Phone: 716-713-3437	E-Mail: brian.fischer@testamericainc.com		Page: Page 1 of 1
Company: Benchmark Env. Eng. & Science, PLLC				Job #:

Address: 2558 Hamburg Turnpike	Due Date Requested:
City: Lackawanna	TAT Requested (days):
State, Zip: NY, 14218	
Phone:	PO #: B0305-018-021
Email: bmayback@turnkeyllc.com	WO #:
Project Name: Benchmark - [redacted] Louisiana St. site	Project #: 48019450
Site:	SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, 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)

480-149130 Chain of Custody

Sample Identification	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)	6010C, 7471B	8270D - PAH/CP-51 (STARS) List	Total Num	Special Instructions/Note:
			Preservation Code:				N	N		
TP-8 (1-2 FT)	2/14/19	9:00	6	Solid			X	X	2	
TP-9 (1.5-2 FT)		9:30		Solid			X	X	2	
TP-18 (.5-1.5 FT)		10:30		Solid			X	X	2	
TP-12 (1-2 FT)		11:00		Solid			X	X	2	
TP-14 (1-2 FT)		12:00		Solid			X	X	2	
TP-17 (2-3 FT)		12:30		Solid			X	X	2	
				Solid						
				Solid						
				Solid						
				Solid						

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 2/14/19 15:00	Company: BTTK	Received by:	Date/Time: 2-15-19/ 1315	Company: TAL
Relinquished by:	Date/Time: 2-15-19 / 1414	Company: TAL	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: 1.7 #1

Ver: 08/04/2016

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228
Phone: 716.691.2600 Fax: 716.691.7991

Chain of Custody Record

304512

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

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

Client Contact	Project Manager: Bison Maybee	Site Contact: Nick Surey	Date: 2/14/19	COC No:
Company Name: Benchmark Env. Engineering	Tel/Fax:	Lab Contact: Brian Fischer	Carrier:	____ of ____ COCs
Address: 2558 Hamburg Pike	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			Lab Sampling:
Project Name: Louisiana Street Site	☐ 1 week			
Site:	☐ 2 days			Job / SDG No.:
PO # B0305-018-021	☐ 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)	PAH's	RCRA Metals	Sample Specific Notes:
TP-7 (2-3 Ft)	2/14/19	8:30	G	Soil	2					On Hold
TP-10 (1-2 Ft)	↓	10:00	↓	↓	2					On Hold
TP-13 (.5-1 Ft)	↓	11:30	↓	↓	2					On Hold
								1	1	

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:

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

	Company:	Date/Time:		Company:	Date/Time:
Relinquished by:	BMK	2/14/19 15:00	Received by:	TAL	2-15-19/1315
Relinquished by:	TAL	2-15-19/1414	Received by:		
Relinquished by:			Received in Laboratory by:		

1.7 #1

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-149130-1

Login Number: 149130

List Source: TestAmerica Buffalo

List Number: 1

Creator: Harper, Marcus D

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.	N/A	
Chlorine Residual checked.	N/A	