APPENDIX A

ENGINEERING

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List of Acronyms

1D	1 Dimensional
2D	2 Dimensional
AEP	Annual Exceedance Probability
BC	Boundary Condition
CFS	Cubic Feet per Second
DEM	Digital Elevation Model
DS	Downstream
EIS	Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FIS	Flood Insurance Study
GIS	Geographic Information System
GRR	General Reevaluation Report
HTRW	Hazardous Toxic Radioactive Waste
LOB	Left Overbank
MSL	Mean Sea Level
NAA	No Action Alternative
NAVD	North American Vertical Datum
NGVD	National Geodetic Vertical Datum
NLCD	National Land Cover Database
NSBLD	New Savannah Bluff Lock and Dam
PDT	Project Delivery Team
PED	Planning, Engineering, and Design
PI	Periodic Inspection
ROB	Right Overbank
SHEP	Savannah Harbor Expansion Project
SPT	Standard Penetration Test
US	Upstream
USACE	US Army Corps of Engineers
WIIN	Water Infrastructure Improvements for the Nation Act
WSE	Water Surface Elevation

1. General

The Savannah River Below Augusta (SRBA) Training Wall Disposition Study was authorized by Section 216 of the Flood Control Act of 1970. The purpose of the study is to determine whether the SRBA Training Wall and associated structures should be removed and undergo disposal. The study's focus is on whether federal interest exists to retain the project for its authorized purpose, based on an evaluation and comparison of the benefits, costs, and impacts (positive and negative) of continued operation, maintenance, repair, replacement, and rehabilitation, or lack thereof.

The Disposition Study is linked to the existing New Savannah Bluff Lock and Dam (NSBLD). The Savannah Harbor Expansion Project (SHEP) includes a mitigation feature to provide a fish passage at the New Savannah Bluff Lock and Dam (NSBLD) to address adverse impacts to shortnose and Atlantic Sturgeon. The mitigation feature ensures compliance with the Endangered Species Act. The plan approved in the 2012 SHEP GRR and Final EIS was for construction and operation of a fish bypass around the South Carolina side of the NSBLD. In 2014, Savannah District performed a Periodic Assessment and Inspection of the lock and dam which revealed significant deterioration of the lock and dam, including structural issues. As a result, in May 2014 the Corps closed the lock indefinitely due to safety concerns. In addition, the Corps determined that the condition of the structure could adversely impact the function of the fish bypass around the lock and dam. Savannah District included additional activities in the FY2017 SHEP cost estimate update that would provide structural repairs to reduce the risk of a catastrophic failure of the dam and to ensure proper hydraulic operation of the fish passage.

This report documents the hydraulic analysis used to evaluate alternatives for modification of the Training Wall structure.

1.1. History and Background

The proposed study is focused on an approximately 1.5 mile long Training Wall and associated structures located on the Savannah River at Augusta, GA between River Mile 198 and River Mile 200 as shown in Figure ***1***. Annual reports of the Chief of Engineers from the late-1880s to mid-1930s reference numerous wing dams, training walls, pile dikes and other features the Corps constructed to aid with navigation through the shallow areas of the Savannah River in the Augusta, Georgia area. Low training walls constructed of wood pilings, wire cribbing and layers of corded wood and rock helped prevent formation of sandbars, while wing dams and pile dikes constructed of brush fascines and loaded with gravel and stone were used to prevent erosion along the riverbanks.

By 1980, commercial navigation on the river had virtually ceased, and channel maintenance was discontinued. The last maintenance dredging as part of the SRBA project was completed in October 1979, and the decision made to curtail dredging in May 1981. The last maintenance activity for debris and obstruction removal (snagging) was completed in December 1980, and the decision made to curtail snagging in August 1981. The current study will determine whether or not there is a continued Federal

interest in the Training Wall and associated structures, or whether it should be removed and undergo disposal.

Sediment has accumulated behind the Training Wall. Figure ***2***the Training Wall profile along with the top of the sediment adjacent to the structure.

1.2. Pertinent Data

The Training Wall extends from (From Lat 33°28'47.65"N, Long 81°57'44.02"W to Lat 33°28'12.64"N, Long 81°56'22.06"W941064). All elevations are reported in feet NAVD88 consistency with gage data. To convert from NAVD88 to NGVD29 at the Project Location, add 0.78 feet to the NAVD88 elevation.

Training Wall:	
Total Length, feet	7800
Width, ft	6
Pile Dikes (9):	
Length, feet	300
Height	6
Sediment:	
Top Elevation, maximum feet	110
Volume (approximate), CY	270,000

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Figure 1. Disposition Study Area Map

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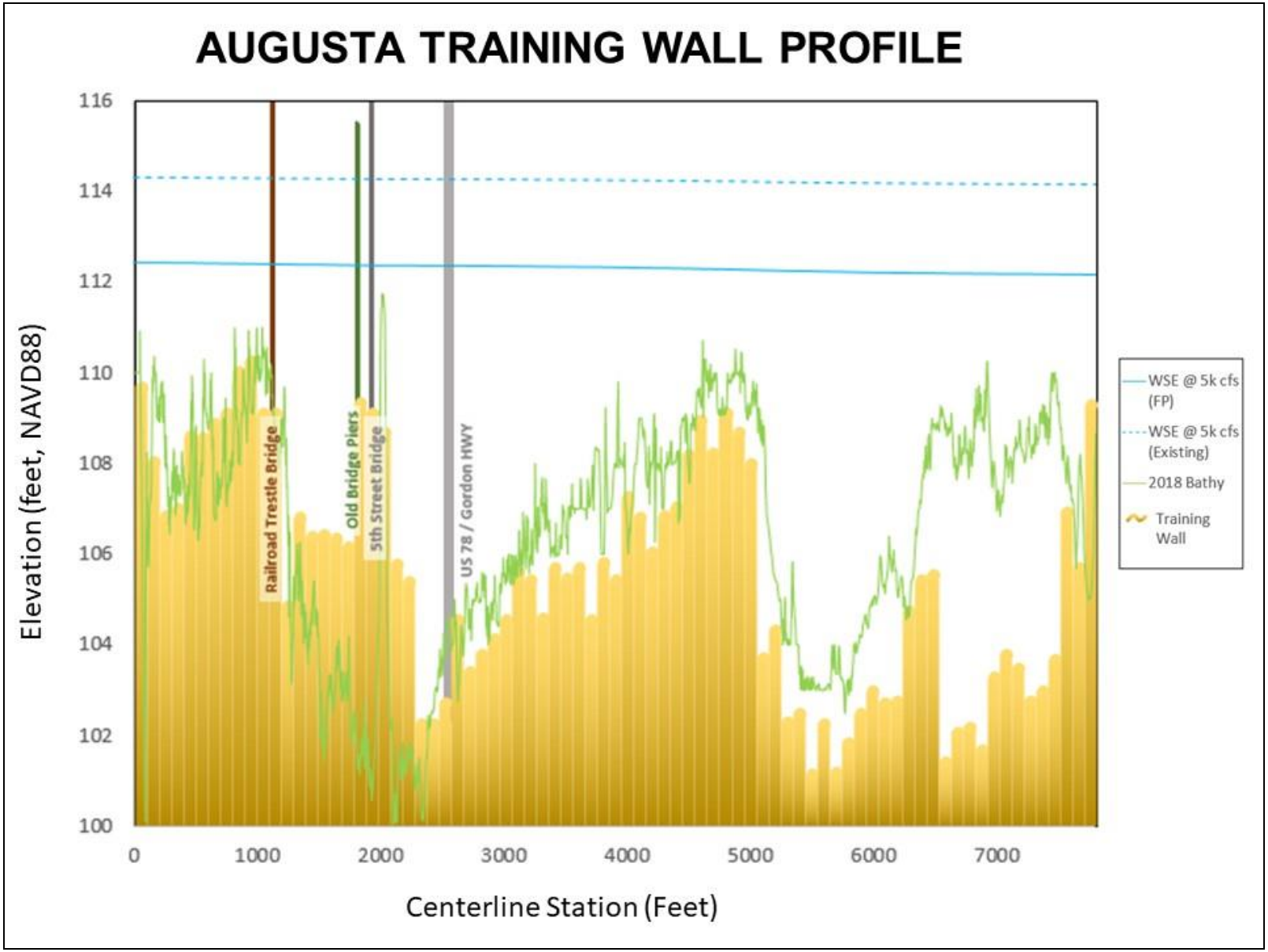

Figure 2. Profiles of the Training Wall

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2. Hydraulics

HEC-RAS was selected as the numerical model to determine likely changes to channel hydrodynamics as a result of any proposed modifications to the Training Wall and associated structure. HEC-RAS was selected because an existing model incorporating the proposed NSBL already existed. HEC-RAS also has the capability to simulate WSE, velocity, and shear stress around the areas of interests within the channel.

2.1. HEC-RAS 2D Model

During the 2019 PAAR, a 2D HEC-RAS model was developed to evaluate alternatives with adding Fish Passage and the removal of the NSBLD. The 2D model was built for the primary purpose of evaluating flooding impacts of the proposed alternatives, though other information can be extracted from the model results as well. Although several alternatives were evaluated, the PAAR recommended the Alternative 2-6D. Alternative 2-6D includes the removal of the NSBLD, replaced with a full-width fixed crest weir with a rock ramp sloping upstream form the existing NSBLD location and a flood plain bench to pass flows during high stage flood conditions. This configuration is the future without project condition (FWOP) described in the main report and used as the base model for all of the alternatives of this Disposition Study.

For the Disposition Study, the model was used to evaluate hydrodynamic impacts of removal of the Training Wall, pile dikes, and accumulated sediment. Discussion of the data sources and model development is presented below. Parameters were revised for the Disposition.

2.1.1. Terrain Data

LiDAR point cloud data were obtained for the study area from https://coast.noaa.gov/dataviewer/# and processed by the Savannah District GIS group. See section 3.1 for additional discussion of terrain data. The extents of the terrain model used for this project are presented in Figure ***3***.

2.1.2. Model Geometry

2.1.2.1. **2D Mesh**

Two 2D flow areas were used to model the study area: one representing the Savannah River and overbanks (Savannah_R), and another representing the leveed area behind the Augusta Levee (Aug_levee_area). The effective FEMA 100-year flood inundation limits were used to determine the extents of the 2D flow areas generally, though smaller tributaries and fingers of inundation were not necessarily included in the mesh. The 2D flow area representing the leveed portions of downtown Augusta was created using a regular cell spacing of 500’ x 500’, with very little modification to the mesh beyond the regular cell spacing; breaklines were not used in the Aug_levee_area 2D flow area.

The Savannah River 2D area was created with a 250’ x 250’ regular cell spacing, with breaklines used to delineate hydraulically significant features such as elevated roadways. The mesh was further refined in the vicinity of NSBLD to accommodate the inclusion of a storage area (SA)/2D connection to represent the future fish passage structure. The dam itself is represented with a weir and gates, copied directly from the

FEMA effective model and validated against as-built drawings for the structure (all elevations were converted to NAVD 88). The 2D flow areas and model geometry used for this analysis are shown in

Table ***1***Figure ***4***.

2.1.2.2. **Augusta Levee**

The 2D flow areas were connected to one another using an SA/2D connection representing the Augusta levee. Levee crest station-elevation data were obtained from the most recent version of the O&M manual, which contains survey data from 2009.

2.1.2.3. **Landuse and Manning's n Values**

The National Land Cover Database (NLCD 2011) was obtained for the study area and used to inform manning's n values for the model geometry. The NLCD is a gridded dataset and used to compute flow in the channel's overbank areas. The purpose of the hydraulic model to evaluate hydrodynamic impacts of the Disposition Alternatives and does not compute any out of channel flow scenarios. As result this information is for information only. A manning's n value was assigned to each landuse category within the study area, based on several sources, as presented in

Table 1.

Table ***1*** is the same as that used in the 2019 PAAR.

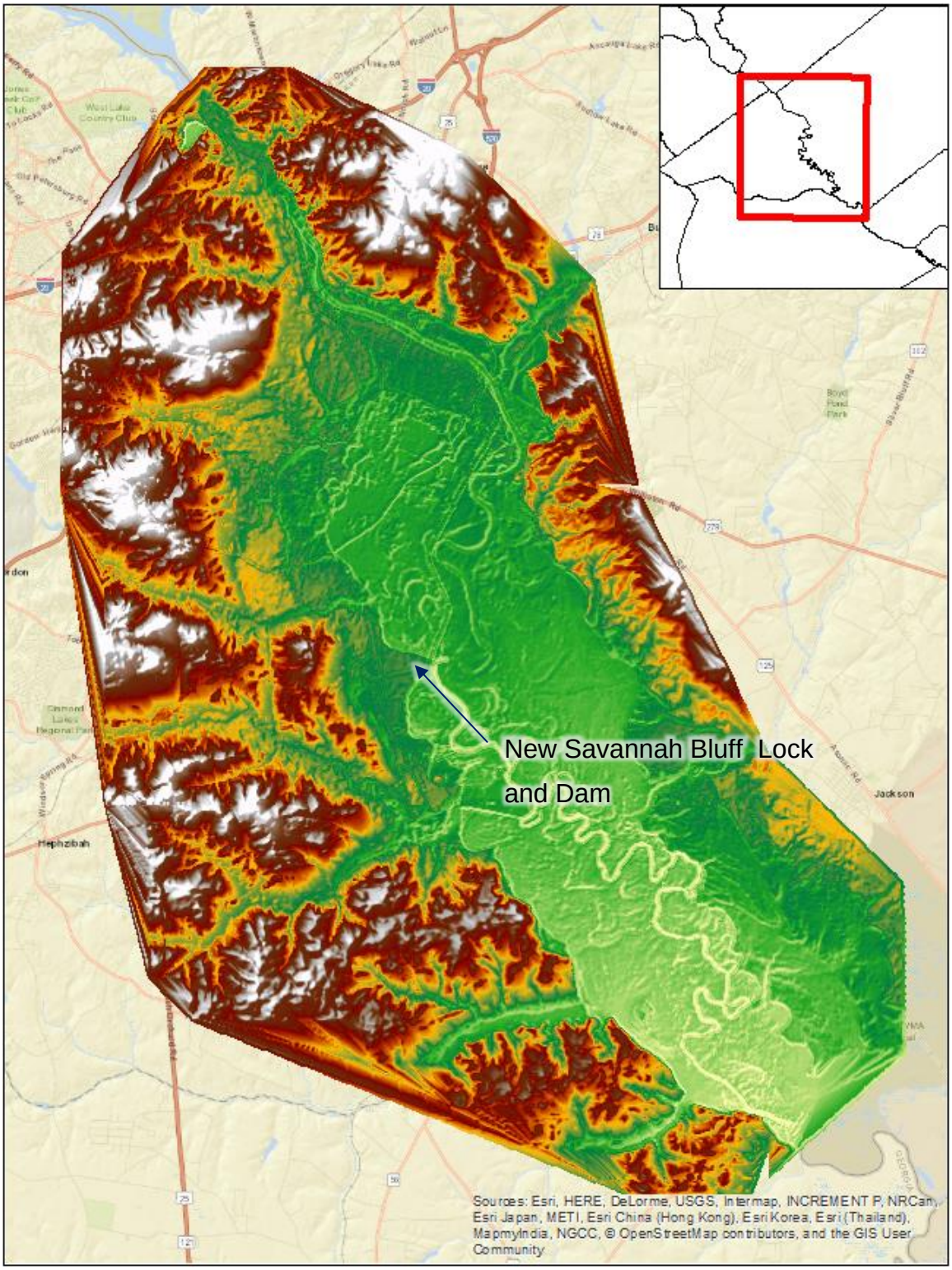

Figure 3 - Terrain Model Extents

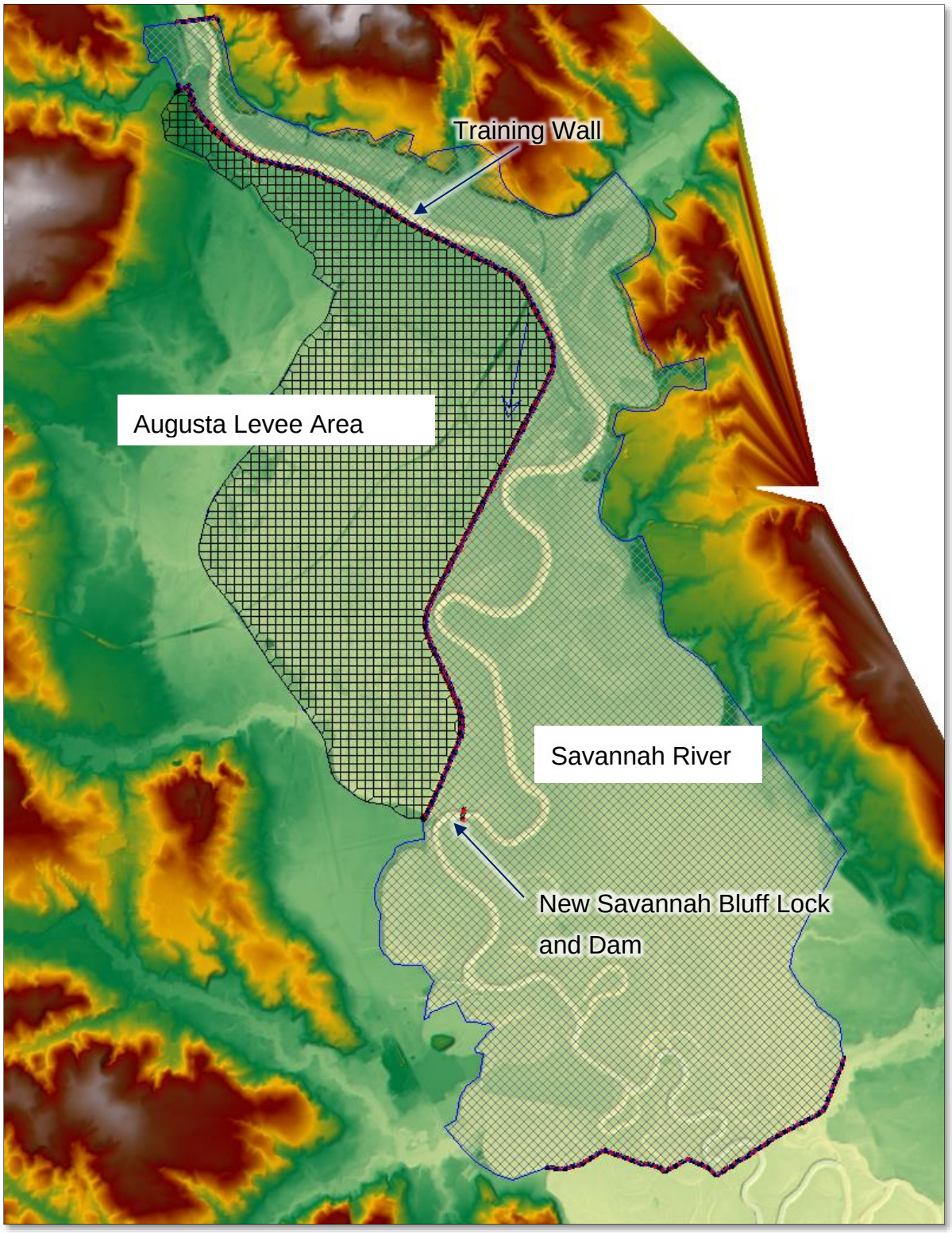

Figure 4 - 2D Model Schematic

Table 1 - Manning's n values by NLCD Landuse

NLCD Value	NLCD Classification	Manning's n	Source
-	default/no data	0.06	Default from HEC-RAS
31	barren land rock/sand/clay	0.03	\1 C.b.4
82	cultivated crops	0.035	\1 D-2.b.2
41	deciduous forest	0.12	\1 D-2.d.5
21	developed, open space	0.013	Jung et al.
22	developed, low intensity	0.05	Jung et al.
23	developed, medium intensity	0.075	Jung et al.
24	developed, high intensity	0.1	Jung et al.
95	emergent herbaceous wetlands	0.1	\1 D-1.a.8
42	evergreen forest	0.12	\1 D-2.d
71	grassland/herbaceous	0.03	\1 D-2.a.1
43	mixed forest	0.12	\1 D-2.d
11	open water	0.03	\1 D-3.a
81	pasture/hay	0.04	\1 D-2.b.3
52	shrub/scrub	0.05	\1 D-2.c
90	woody wetlands	0.1	\1 D-1.a.8
\1 *Open-Channel Hydraulics*, by Chow, 1959. Table 5-6			

The NLCD landuse data described above were associated with the model geometry, and manning's n values assigned to the various landuse types within the footprint of the 2D flow area. Manning's n polygon regions were further used to refine roughness values for the channel portions of the mesh, to better match values used in the effective FEMA model. A polygon with an n value of 0.033 was used to describe the channel from NSBLD to the CSX railroad bridge eight miles upstream. A polygon with an n values of 0.031 was used for the channel portion of the model upstream of the CSX railroad bridge. While the Manning's n values adopted were originally developed for the effective FEMA model, the Manning's n values in Table 5 were validated in the 2D flow domain to ensure modeled river stages matched observed gage data for several stage gages throughout the basin (namely the USGS Gage at Jefferson Bridge, USGS 02196670) as well as at the NSBLD gage, USGS 02197000). The 2D HEC-RAS model was technically reviewed by both David Ford Consulting Engineers as well as by the Hydrologic Engineering Center (HEC), USACE. See

Table ***1*** for the n values that were associated with the various landuse categories within the study region.

2.1.2.4. **Boundary Condition (BC) Lines**

One boundary condition line was used at the upstream side to define inflow to the system. Three boundary condition lines were used on the downstream end for the left overbank (LOB), channel, and right overbank (ROB) flow to allow flow to leave the system. The BC lines can be seen on the upper and lower extents of the HEC-RAS 2D model in Figure ***4***. The slope of the channel and overbank areas were used to estimate

a normal depth slope at the location of the BC lines and normal depth slope was used as the boundary condition type. The model extends several miles downstream from NSBLD, such that any inaccuracies in the normal slope estimates should not impact calculations in the area of interest.

2.1.3. Flow Data

The 2D environment in HEC-RAS is inherently unsteady, in that properties of flow (e.g. depth) vary with time. The focus of the analysis was not on how flow properties vary in time, but on how they vary as a result of changes to the Training Wall structure. Various constant flow hydrographs were used to evaluate changes to water surface elevations in the main river channel and depths in the overbank areas as a result of the inclusion of a fish passage structure. A range of flows for normal conditions (5,000 to 8,000cfs) and the channel capacity condition at the Training Wall's location (25,000 cfs) were evaluated using the hydraulic model. The magnitude of the constant flow hydrographs used in this analysis are presented in Table ***2*** below. These flows were applied as a constant inflow hydrograph at the upstream boundary condition line described in section 2.1.2.4.

Table 2 - Modeled Flow Conditions in 2D Screening

Event	Flow (cfs)	Description
AVERAGE LOW	5,000	25% percentile mean daily flow
AVERAGE HIGH	8,000	66% percentile mean daily flow
CAPACITY	25,000	Channel capacity at the Training Wall's location

Average low and average high mean daily flows were obtained from a statistical analysis of the daily flow data at USGS gage 02197000. The average high value of 8,000 cfs was also used in the basis of design for the 2014 SHEP Fish Passage Mitigation Feature discussed elsewhere in this report. The results of the statistical analysis showing the non-exceedance probability for various flow levels at NSBLD are shown in Figure ***5*** below. The non-exceedance probability, for average daily flows, means that for a certain percentage of time over the observed period of record, mean daily flow values do not exceed that threshold value. For example, over the period of record flow in the river did not exceed 5,000 cfs 25 percent of the time.

Daily non-exceedance flows differ from annual exceedance probability (return interval) flows in that annual exceedance probability is calculated using the highest peak flow that occurs every year in the period of record and not the daily flow values. This provides the probability of a large flow event occurring in any given year. For example, 1% AEP (100-yr) flow has a 1 percent chance of occurring in any given and does not mean that the flow is exceeded 1 percent of the time. Daily non-exceedance and annual exceedance probability measure two different aspects of flow in the river, but both can be used to evaluate changes to the river for with-project alternatives.

The 2-year flow used in the analysis roughly corresponds to the bank-full discharge of the Savannah River near Augusta, though some low lying areas may experience flooding at lower flow levels.

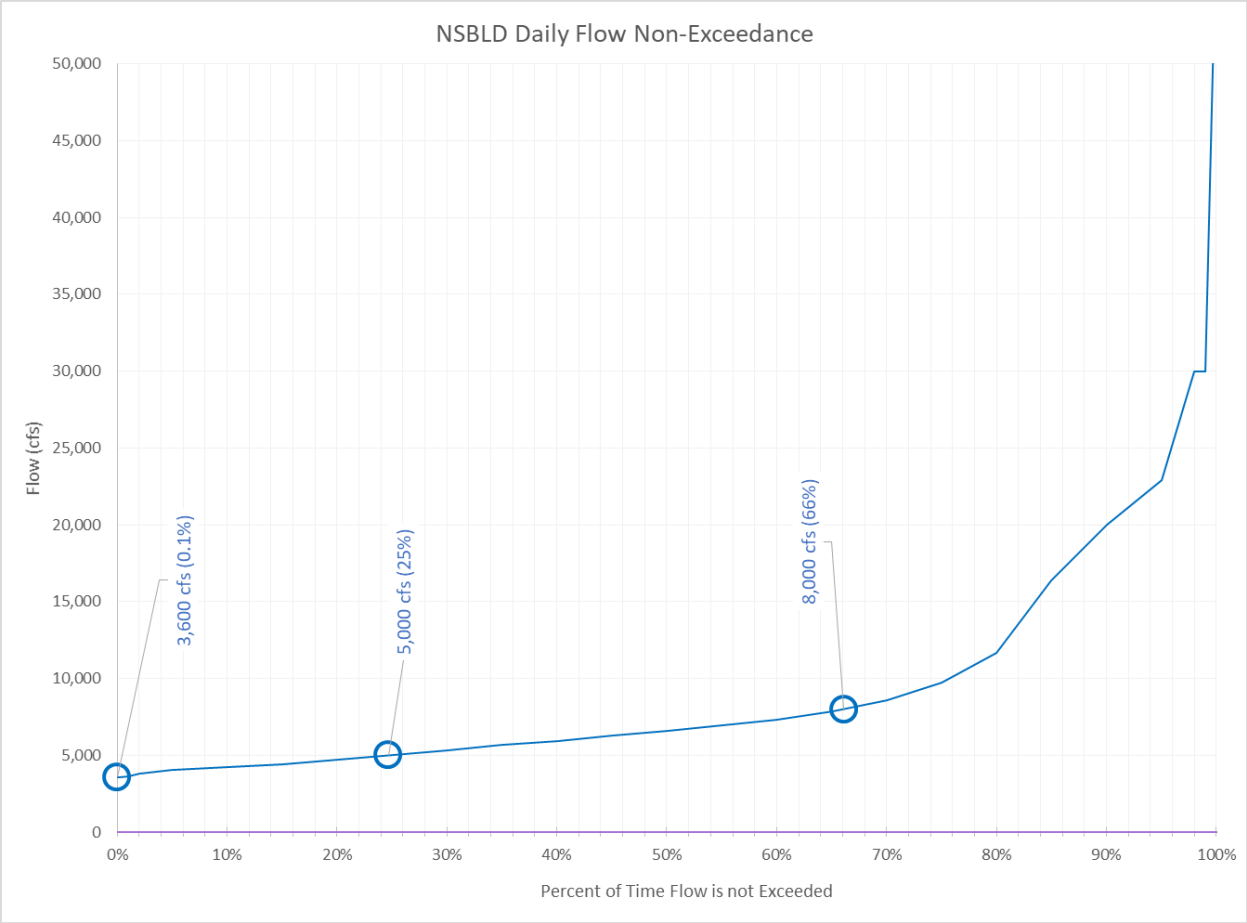

Figure 5 - Flow Non-Exceedance at New Savannah Bluff Lock and Dam

For the purposes of this report and in the following sections, all discussion of “normal pool” or “normal flow conditions” correspond to the conditions within the pool for a flow of 5,000cfs. There is a range of flow conditions and pool elevations that would be considered “normal”, but the 5,000cfs level is representative of what might be seen on an average day and provides a stable point against which changes to the pool can be evaluated for all alternatives.

2.2. Disposition Alternatives and Results

Any modifications to the structure of New Savannah Bluff Lock and Dam are likely to have an impact on water surface elevations within the pool of the Savannah River upstream of the existing lock and dam. Of primary interest are impacts to flooding, navigation, recreation, and water supply due to changes in pool elevations.

During the 2019 PAAR, a total of eighteen alternatives were evaluated with the 2D HEC-RAS model. However the study’s recommendation includes the construction of a fixed crest weir with a rock ramp that would slope upstream from the existing dam location and a low-lying floodplain bench in the right overbank to provide additional flow conveyance. The lock and dam would be removed, including the foundation down to elevation 91.2 NAVD 88. The weir would be 500 feet in width with an average crest elevation of 108.2 feet NAVD 88 (109.0 NGVD 29). A floodplain bench approximately

275 feet in width would be excavated down to elevation 110 NAVD 88 (approximately 2.8ft higher than the adjacent rock-ramp terrace) on the Georgia side of the existing dam location. The bench would ease the passage of flood waters past that point in the river. The bench was modeled as grass-lined in the HEC-RAS model to provide a hydraulically efficient flow area; though paving may be required to prevent erosion. A schematic of the general site configuration and terrain model used for this alternative can be found in Figure ***6*** below.

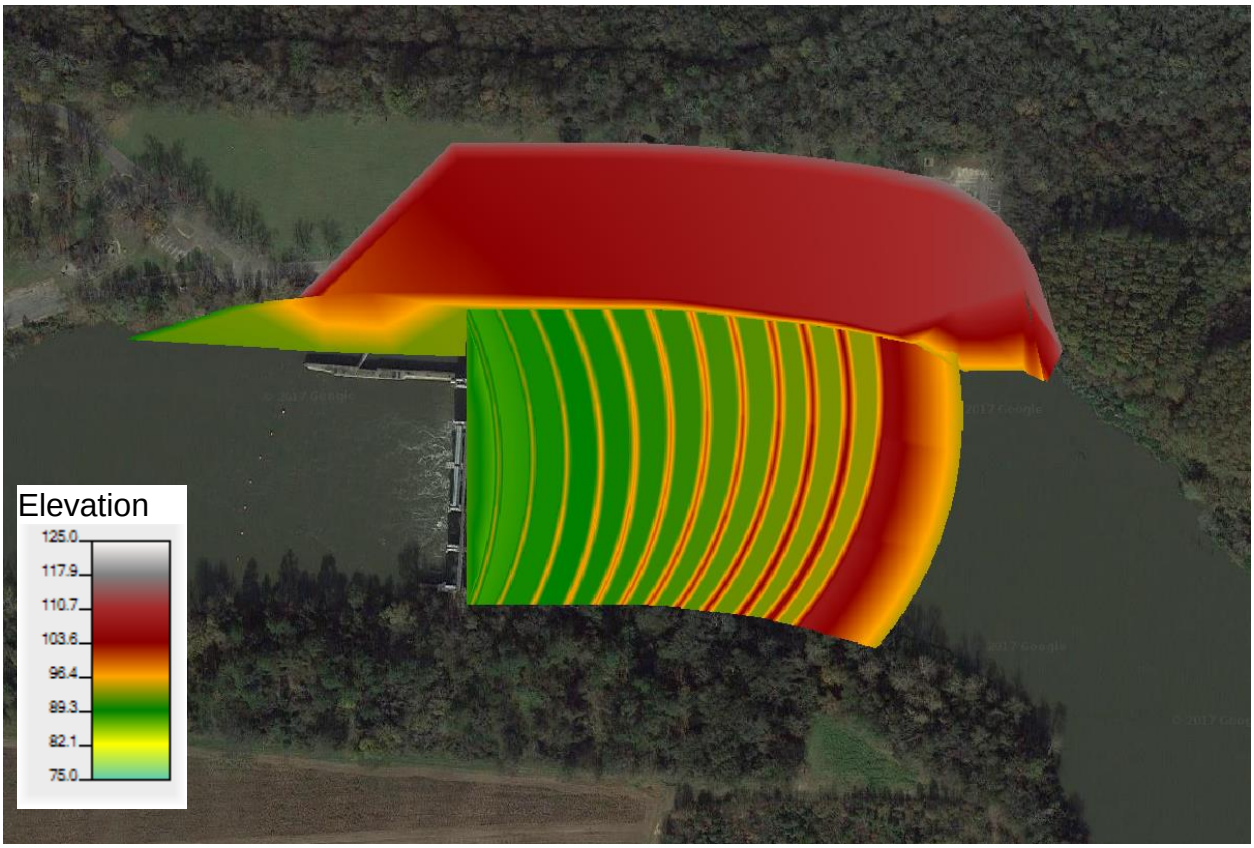

Figure 6 - Layout of proposed Fish Passage Structure to replace NSBL&D

2.2.1. Alternatives

Three alternatives were evaluated during this Disposition Study as shown in Table ***3***. All alternatives in this disposition includes the future without project condition (FWOP) in which the NSBLD is removed and replaced with a fixed-crest weir fish passage structure. Each alternative used the same modeling configuration for the Fish Passage Structure as illustrated in Figure 6.

Table 3 – Disposition Alternatives for 2D Analysis

Alternative No.	Alternative Description
1	No Action: Retain Training Wall with additional buoys and signs. NBSLD removed with Fish Passage in place.
2	Removal of the Training Wall and associated structures.
3	Removal of the Training Wall, associated structures and the sediment behind the training to elevation of 108 ft. NAVD88.

The study's third alternative includes the removal of the Training Wall and a portion of the sediment behind the wall to an elevation of 108' NAVD88. However, the hydraulic model was not used to evaluate this alternative. Any removal of sediment would likely reduce the impacts of Alternative 2. Therefore, simulating this alternative with the hydraulic model was not needed.

2.2.2. Calibration

The model was calibrated by modifiying the Manning's n-values within the channel. The purpose of the calibration was to determine the appropriate Manning's n-values to make computed water surface elevations match observed water surface elevations at USGS Gages. Calibration details are summarized in Table ***4***.

Table 4. Plans used during Model Calibration

Plan	Description
Cal_Oct2017	Calibration run using the modified terrain with mesh between NSBLD and Upstream BC. Simulation Period Oct 01-Nov 01, 2017. Calibration used data from USGS Gages: • Gage 02196670, Savannah River at Jefferson("5th Street Bridge") • Gage 02196999, Savannah River Upstream of NSBLD
Cal_Mar2019	Calibration run using modified terrain between NSBLD and Upstream BC. Simulation Period March 01-Apr 01, 2019. Calibration using data from USGS Gages: • Gage 02196670, Savannah River at Jefferson("5th Street Bridge") • Gage 02196999, Savannah River Upstream of NSBLD
Cal_Jul2019	Calibration run using modified terrain between NSBLD and Upstream BC. Simulation Period Jul 01-Aug 01, 2019. Calibration using data from USGS Gages: • Gage 02196670 Savannah River at Jefferson("5th Street Bridge") • Gage 02196999 Savannah River Upstream of NSBLD.

Simulations were performed for the aforementioned plans using various manning's n-values for the channel: 0.02, 0.025, and 0.030.

Figure **7**. compares the stage produced by the model for various Manning's n-values to the stage measured at the 5th Street Gage (02196670). The stages were produced from the discharges recorded at Gage 02197000 during the month of October 2017. The Manning's n value of 0.02 produced stage closest to the measured values at 5th Street Gage.

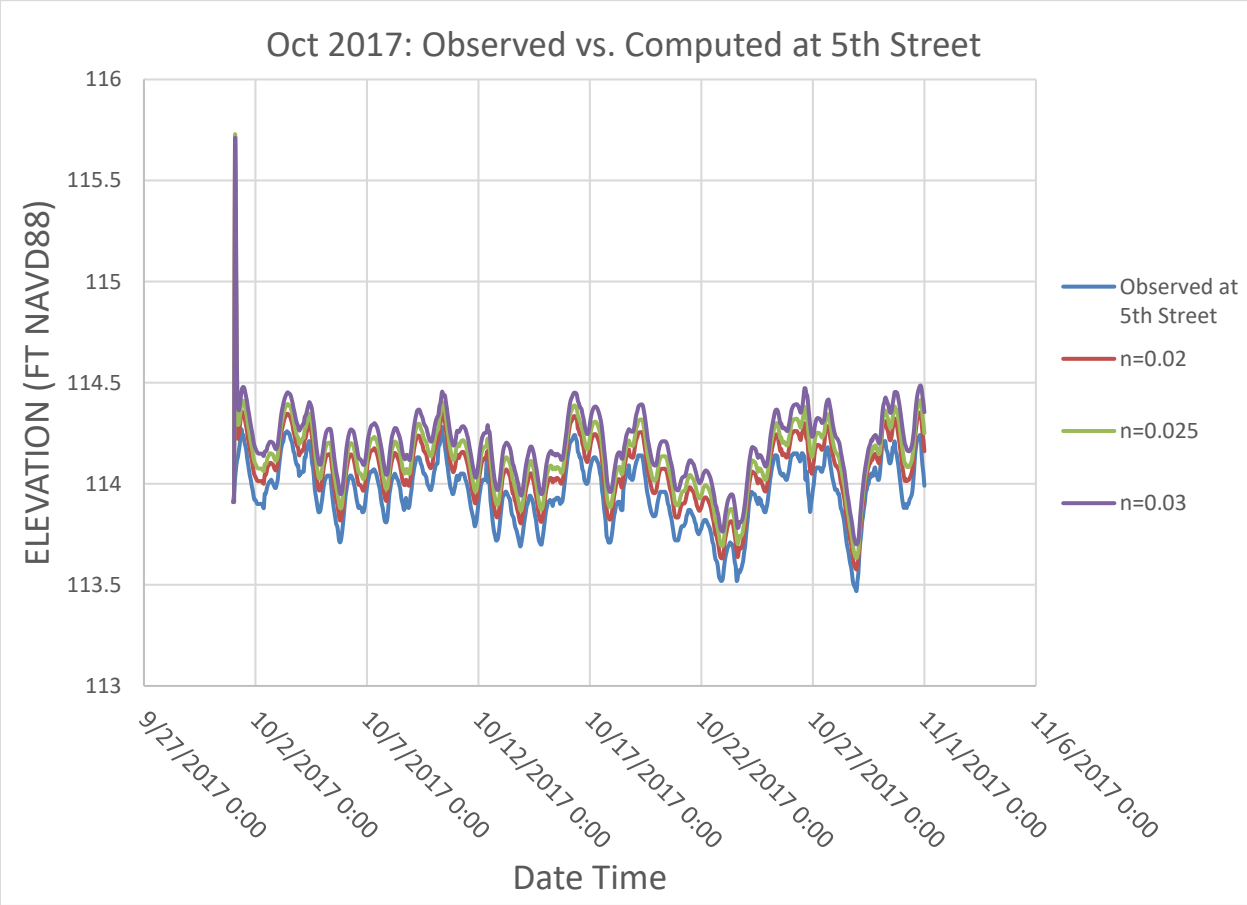

Figure 7. Calibration to October 2017

Figure ***8*** compares the stage produced by the model for various Manning's n-values to the stage measured at the 5th Street Gage (02196670). The stages were produced from the discharges recorded at Gage 02197000 during the month of March 2019. The Manning's n value of 0.025 produced stages closest to the measured values at 5th Street Gage. Note: the Gage did not record stages between March 25 and 27. As a result the plot suddenly decreases March 25 and then increases March 27.

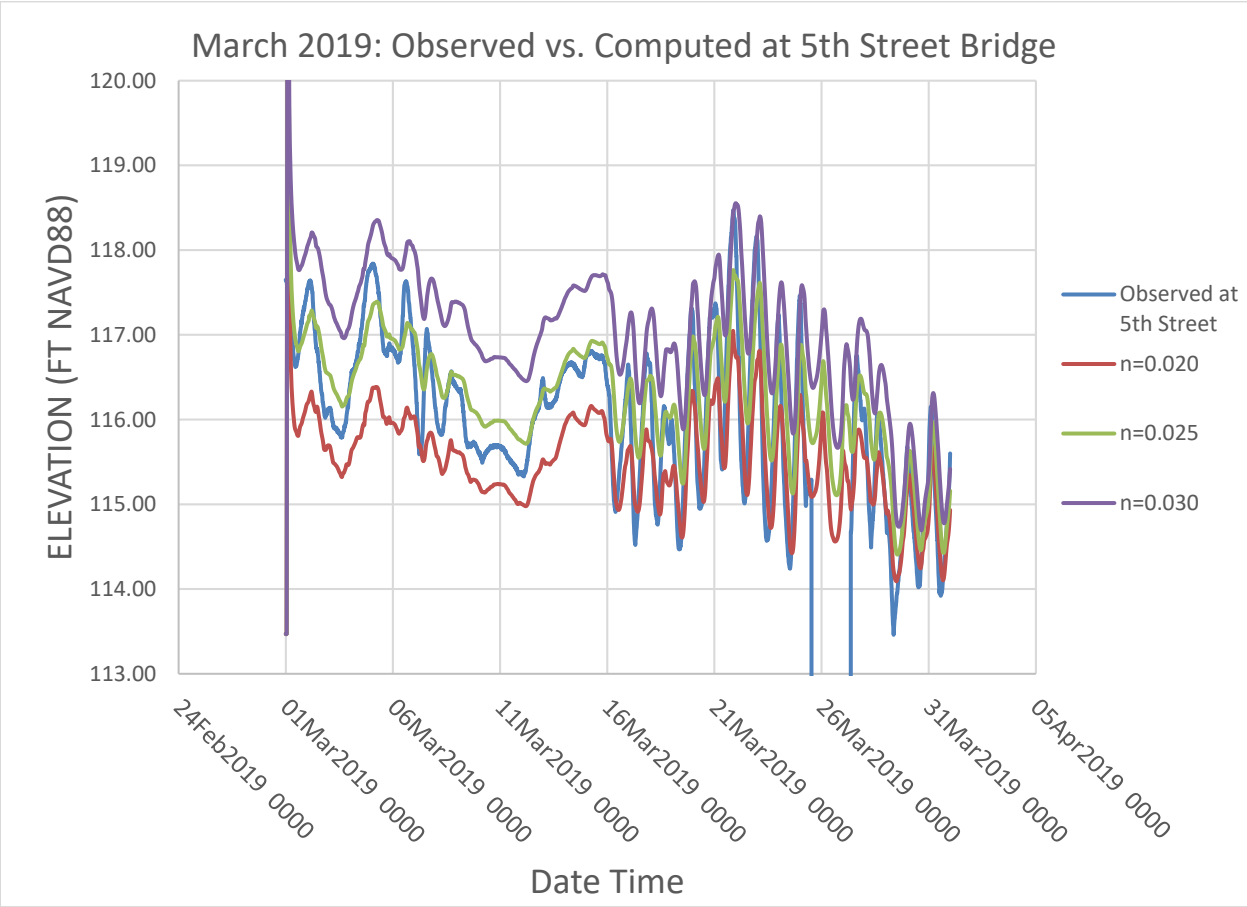

Figure 8. Calibration to March 2019 Data

Figure ***9*** compares the stage produced by the model for various Manning's n-values to the stage measured at the 5th Street Gage (02196670). The stages were produced from the discharges recorded at Gage 02197000 during the month of July 2019. The Manning's n value of 0.020 produced the stages closest to the measured values at 5th Street Gage.

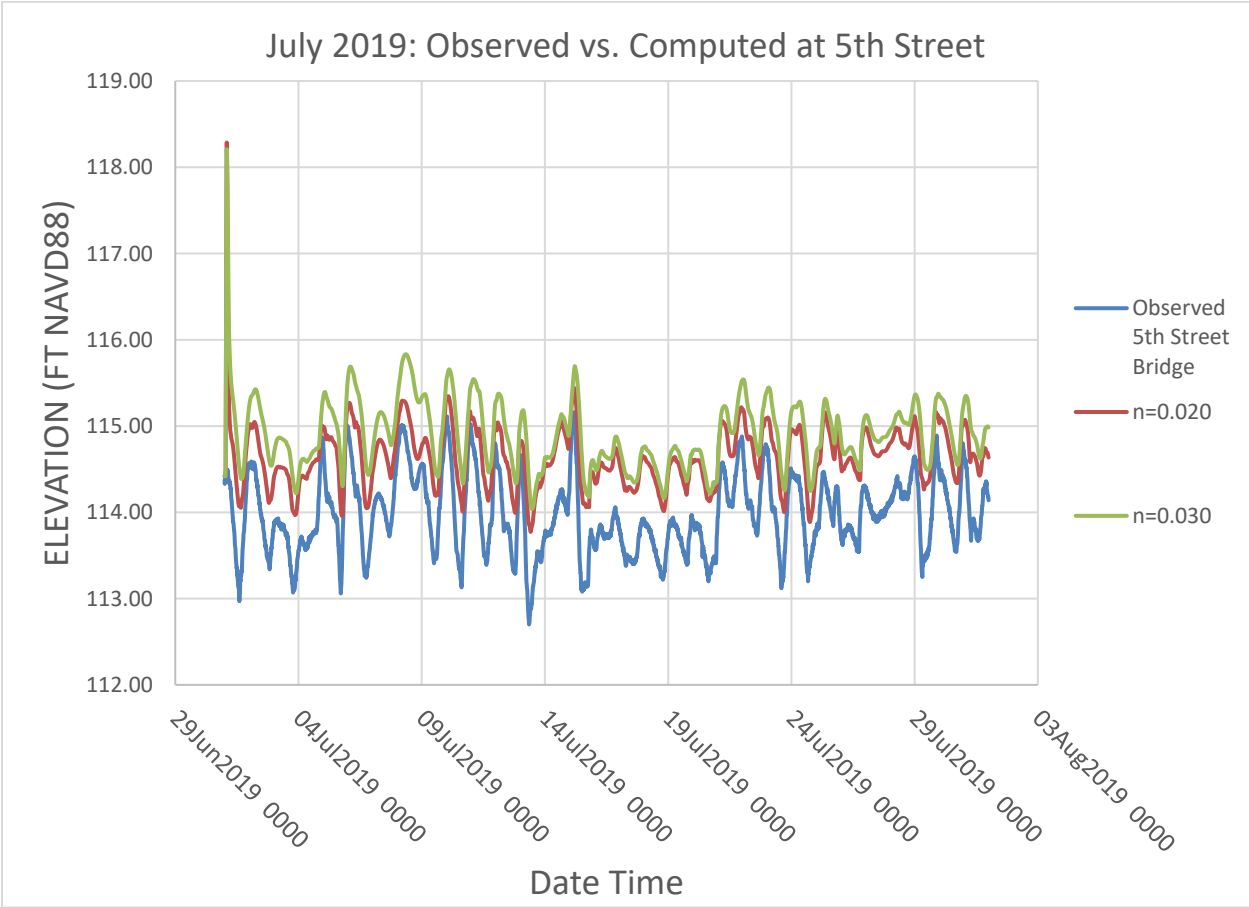

Figure 9. Calibration to July 2019 Data

Ultimately, 0.020 was selected as the Manning's n-value to represent the channel within hydraulic model.

2.2.3. Summary of Results

Water surface elevations within the pool are of primary importance in assessing with-project impacts to water supply, recreation, and navigation. The HEC-RAS 2D model was used to compute water surface elevations (and associated inundation, if applicable) for the various alternatives for a range of flow events. A brief summary of the computed water surface elevations at a few key locations can be found in Table ***5***. The locations of interest are immediately.

Table 5. Summary of Water Surface Elevations with Fish Passage

	3600 cfs	5000 cfs	8000 cfs	33,000 cfs (2-year)
NSBLD	109.7	110.2	110.9	114.8
Gum Swamp	109.9	110.5	111.4	116.4
Potash et al	110.5	111.3	112.8	119.8
SCE&G	110.7	111.5	113.1	120.2
Kimberly Clark	110.7	111.5	113.1	120.2
Hicks Raw Water	111.1	112.0	113.8	121.6
5th Street Bridge	111.4	112.4	114.2	122.6
N. Augusta	111.8	112.9	114.9	124.0

The hydraulic model was used to compute the change in water surface elevation for the Disposition Alternatives. Analysis determined the change water surface elevation for each alternative was negligible (on the order 2 to 3 inches) at each flowrate.

2.2.4. Erodibility Analysis

Sediment has accumulated behind the Training Wall structure. The study analyzed potential impacts to the sediment u the removal of the Training Wall and pile dikes. Sediment Movement is driven primarily by higher velocities. The Disposition used the velocities generated by the hydraulic model to estimate the erosion rate of the sediment. The top 16 feet of material behind the Training Wall comprises of sand. The clay and saprolite beneath this material should not erode under any anticipated river flow condition.

Figure ***10*** shows the representative cross section. This location was selected due since the most sediment has accumulated within this region. Figure **11** shows the velocity within the channel at the representative cross section during a constant flow 8,000 cfs. The red line represents the location where the Training Wall crosses the cross section. The velocity of Alternatives 1 and 2 during 8,000 cfs are approximately 1.5 and 1.37 fps respectively.

Figure 10. Representative Cross Section as shown in the HEC-RAS RASMapper

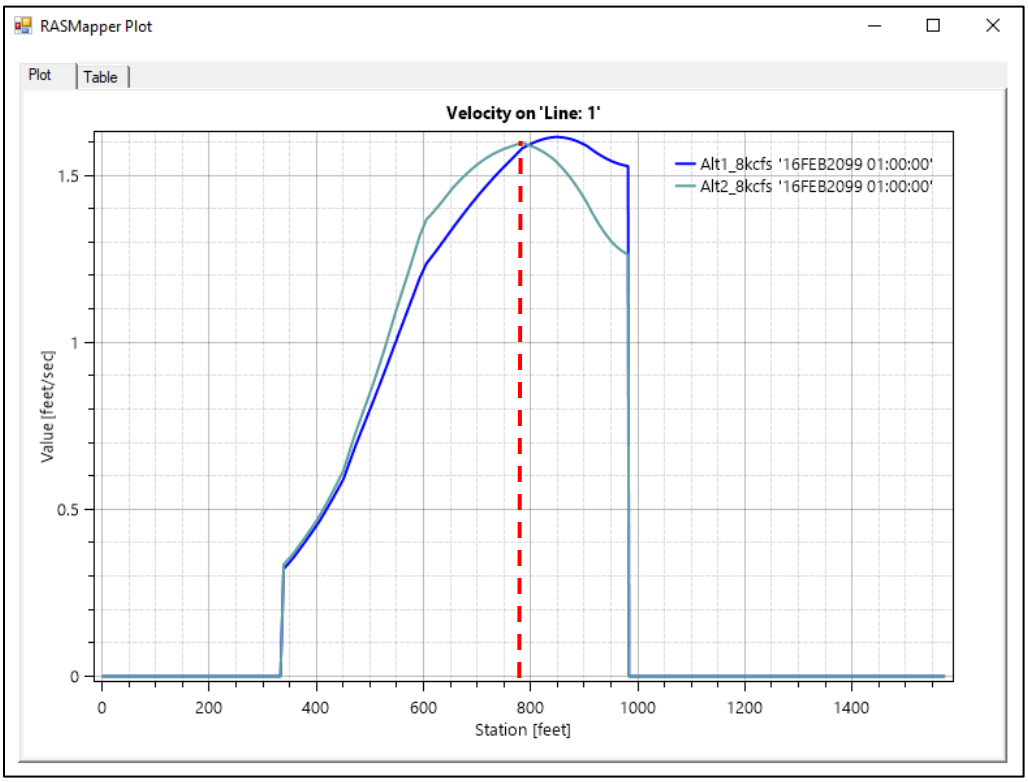

Figure 11. Velocity at Representative Cross Section during 8,000 cfs

Figure ***12*** shows the velocity within the channel at the representative cross section during a constant flow 25,000 cfs. The red line represents the location where the Training Wall crosses the cross section. The velocity of Alternatives 1 and 2 during is approximately 3 fps.

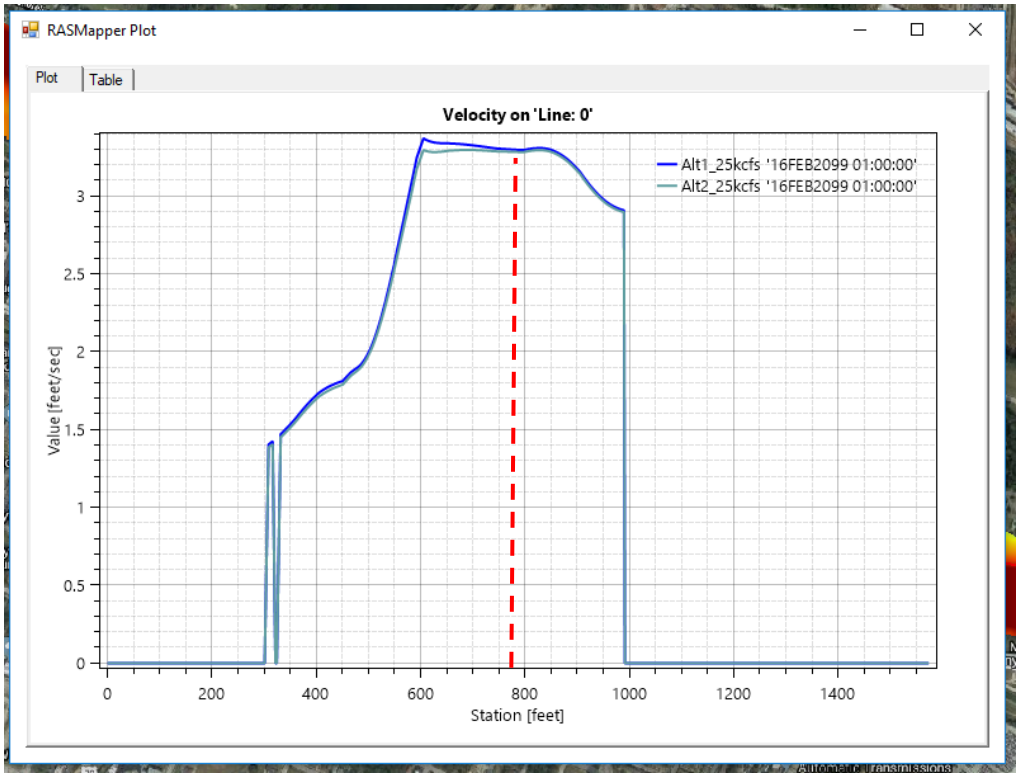

Figure 12. Velocity at Representative Cross Section during 25,000 cfs

The Erodibility Charts shown in Figures 11 and 12 relates erosion rates as a function of river flow velocity but are also dependent on the type of sediment. The range that bests represents the poorly graded sand behind the Training Wall is shown bounded by the red dashed lines. This is characterized by the upper end of the "high erodibility zone" and just on the edge of the "very high erodibility zone".

Figure ***13*** shows the erodibility chart for the sediment behind the training during 8,000 cfs flow condition and predicts minimal erosion.

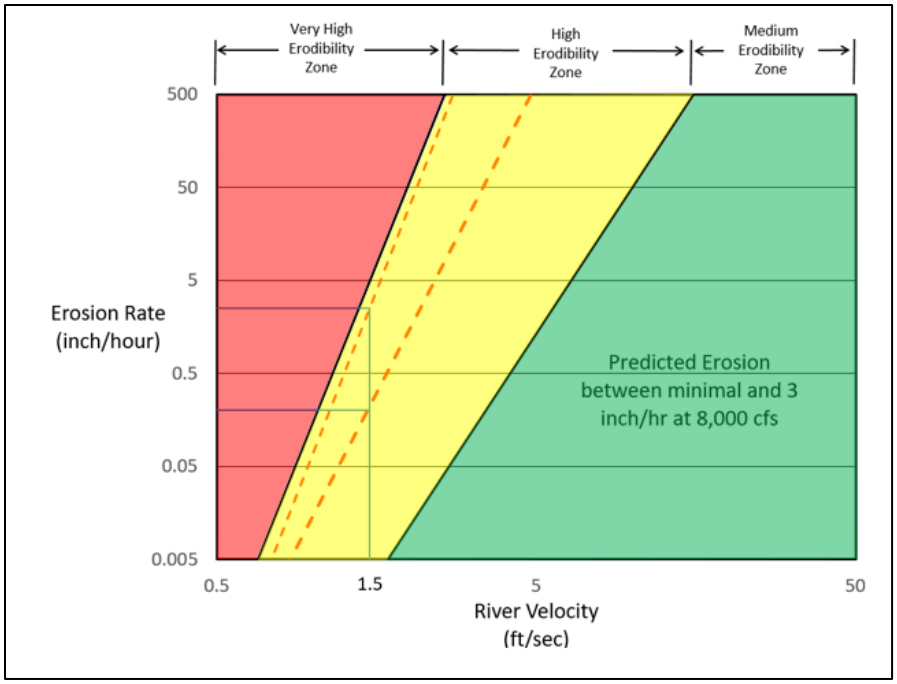

Figure 13. Sediment Erodibility Chart at 8,000 cfs

Figure 14 shows the erodibility chart for the sediment behind the Training Wall during 25,000 cfs flow condition and predicts erosion rate between 2 and greater than 30 feet per hours.

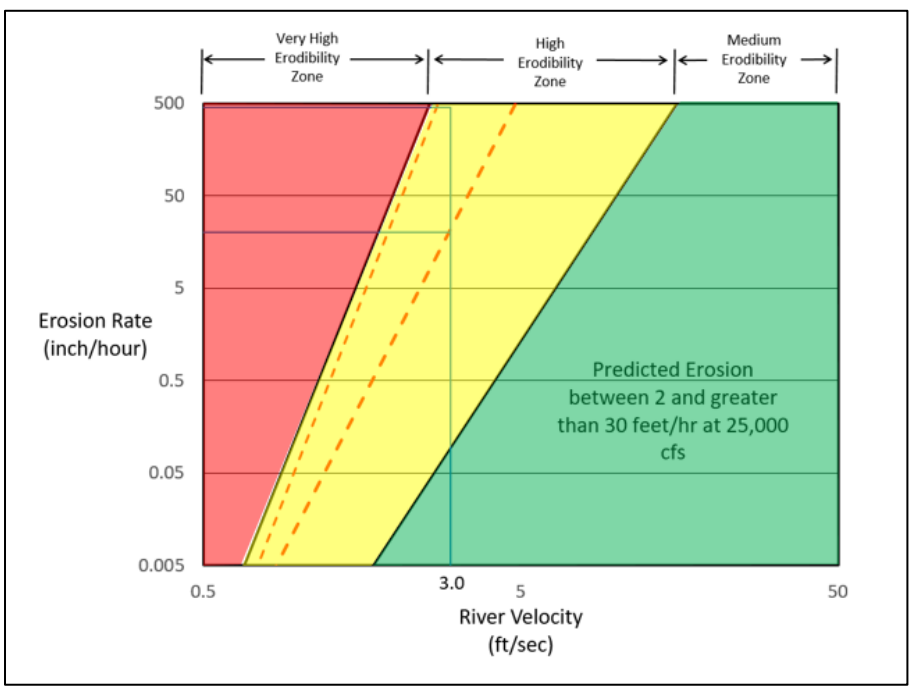

Figure 14. Sediment Erodibility Chart at 25,000 cfs

All erosion rates are instantaneous and predicted for the maximum river velocity in the hydrodynamic model. During any given high flow event the velocity will vary spatially and with time. The predicted erosion rates will therefore change with time and eventually drop to zero as the flows go back to normal. The erosion will eventually reach equilibrium with a new stable cross-section being formed in the river. Also, the velocities are higher toward the center channel. The channel experiences lower velocities toward the river banks.

According to the hydraulic model, the Savannah River has velocity reaching 3 fps at the 5th Street Bridge at 25,000 cfs. The hydraulic model was calibrated so that computed water surface elevations at 5th Street Bridge closely matched the observed stage USGS Gage 02196670. However, difference between the velocities generated produced by the model and the gage remain.

The analysis identified areas currently accumulating sediment. In general, sediment tends to accumulate on the inside of channel bends. The aerial image on the left side Figure 15 shows the first channel bend at River Mile 198, 3400 ft. (~0.6 ft.) downstream of the Training Wall. As you indicated, sediment has accumulated on the inside of the bend. The cross section on the right validates showing the channel is deeper on the right (SC) side of the channel and more sediment on the left (GA) side.

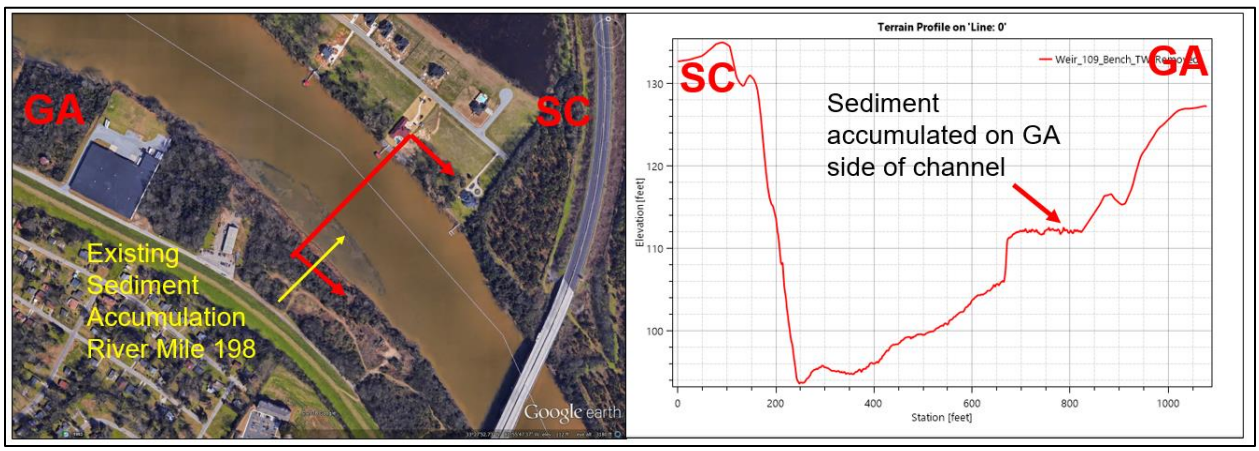

Figure 15. Existing Sediment at Channel Bend at River Mile 198

The aforementioned figures are for the first channel bend downstream of Training Wall. There are 5 additional channel bends between the Training Wall and the existing NSBLD. Sediment has accumulated inside of those bends as well. Using engineering judgment, any sediment movement will likely contribute to the existing sediment build-up inside the channel bends.

All erosion rates are instantaneous and predicted for the maximum river velocity in the hydrodynamic model. During any given high flow event the velocity will vary spatially and with time. The predicted erosion rates will therefore change with time and eventually drop to zero as the flows go back to normal. The erosion will eventually

reach equilibrium with a new stable cross-section being formed in the river. Note: the aforementioned figures correspond to the peak velocity of the representative cross section channel. The velocities are higher toward the center channel. Lower velocities as you approach the river banks.

2.2.5. Sediment Removal

A volume analysis was performed calculate the removal of sediment needed to make the channel bottom a uniform depth at various elevations. Figures 16 -18 illustrate the regions and depths requiring excavation to make the channel bottom elevation 100', 104, 107' NAVD88 respectively. Most of the sediment has accumulated behind the Training Wall's downstream section. The colors within each figure illustrates the amount of sediment removal required to make the channel bottom a uniform elevation. The bluish colors indicate relatively small amounts of sediment would need to be removed to make the region area uniform elevation, while the yellowish and red colors indicate a relatively large amount of sediment would need to be removed to make the designated area a uniform elevation. In reality the channel bottom would be graded to allow a gentle slope. However, the aforementioned method provides adequate excavation volumes for planning purposes.

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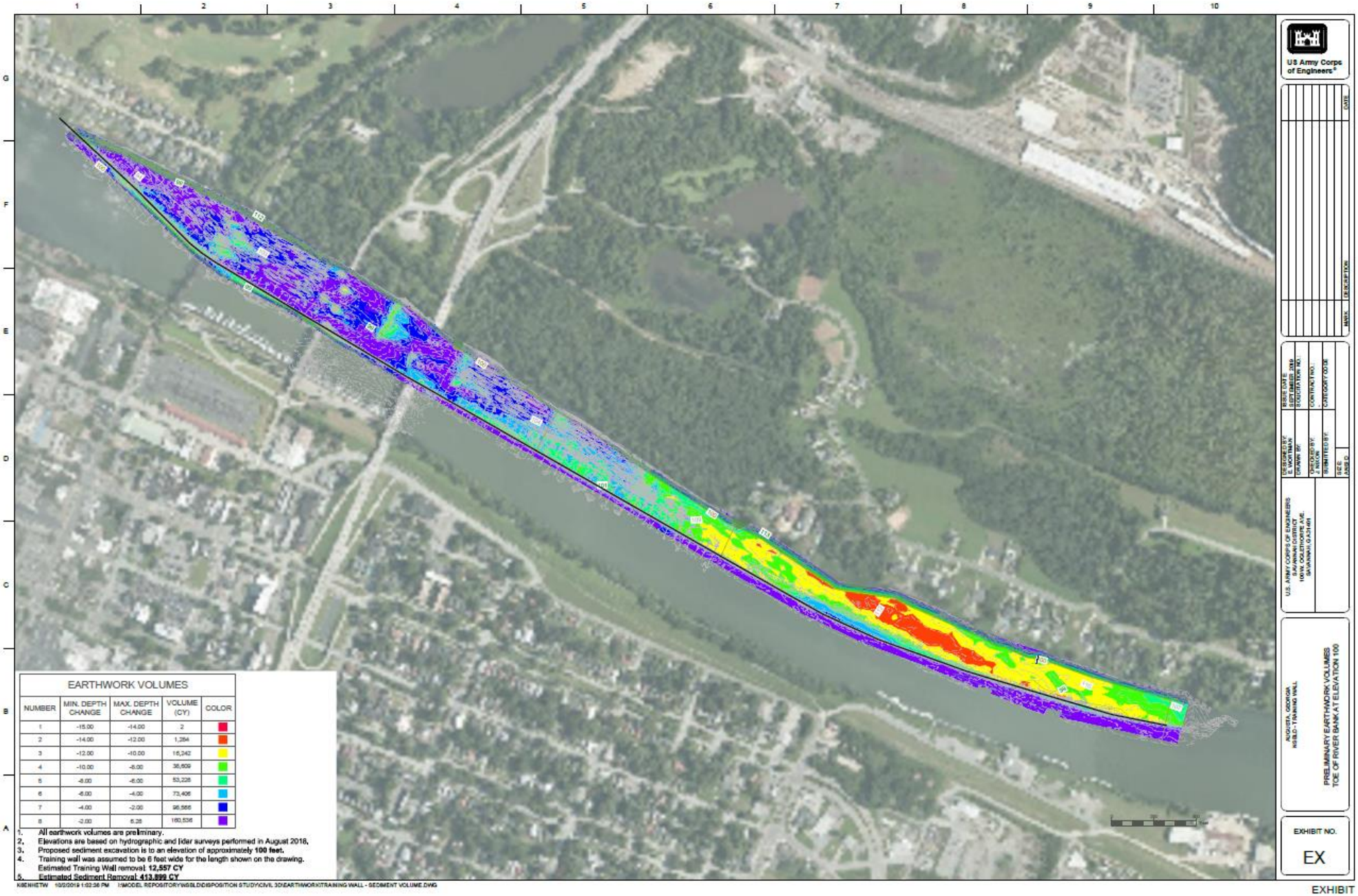

Figure 16. Excavation Volume for Sediment Removal to 100 Feet NAVD88.

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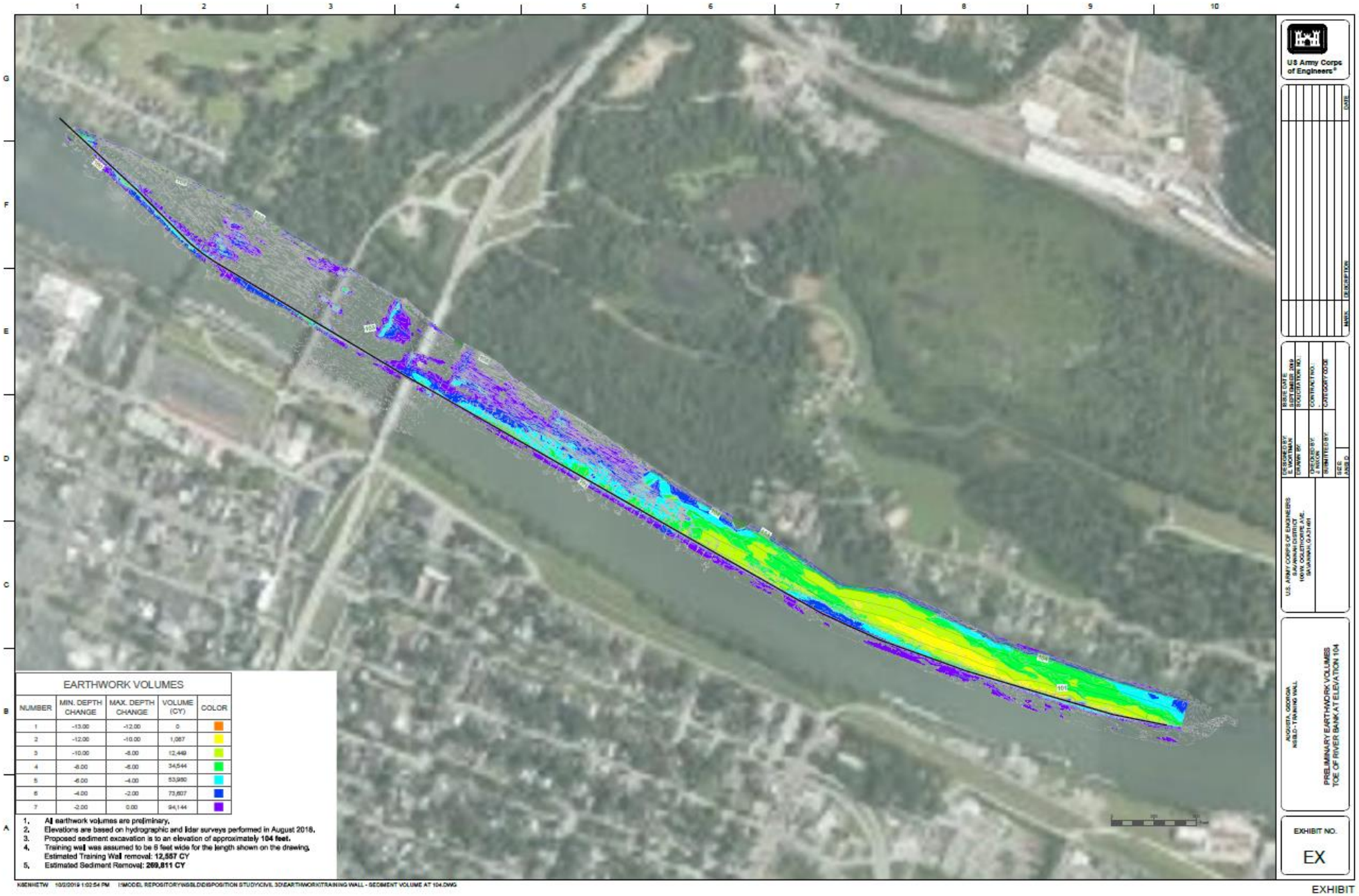

Figure 17. Excavation Volume for Sediment Removal to 104 NAVD88.

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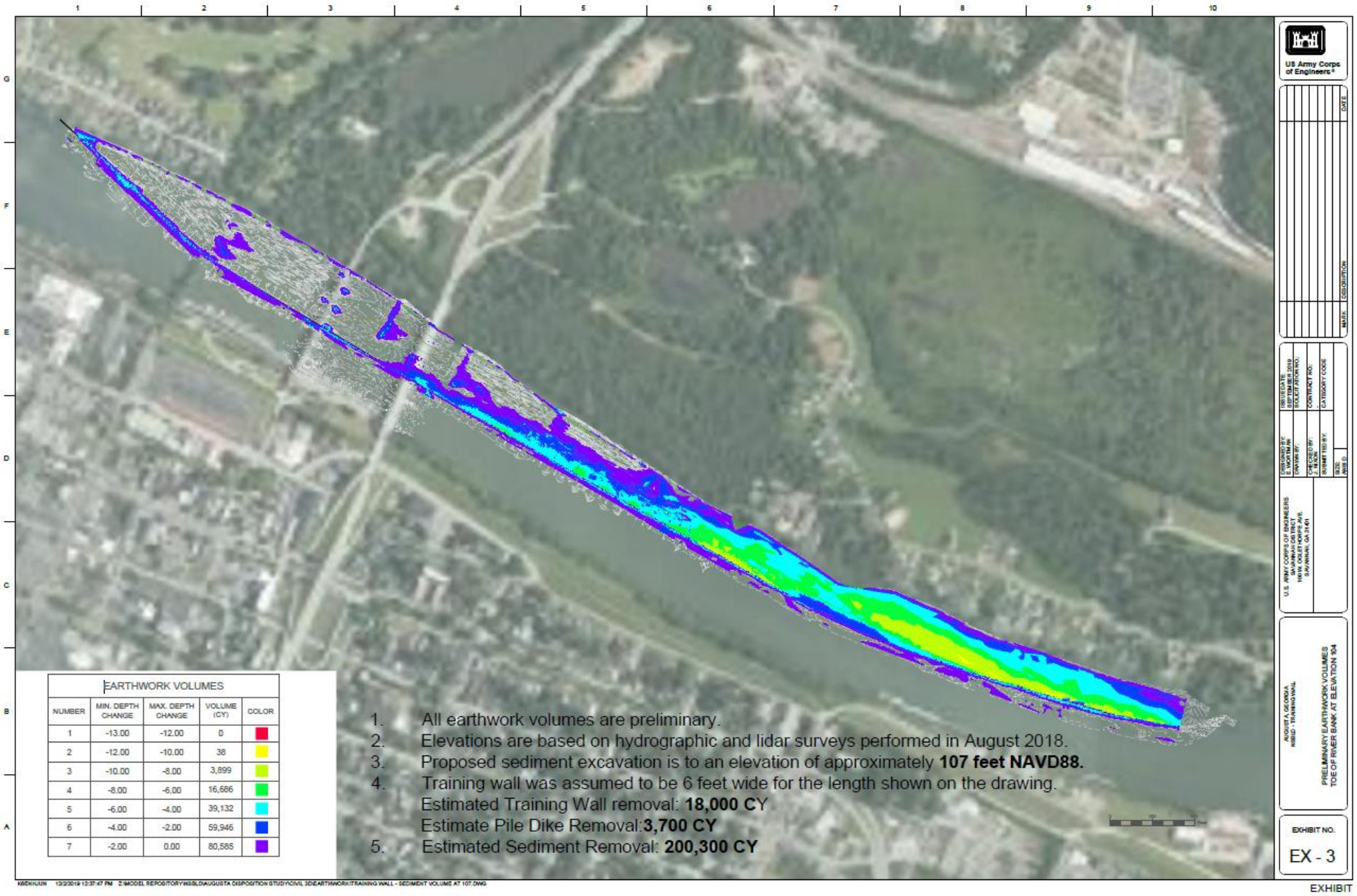

Figure 18. Excavation Volume for Sediment Removal to 107 Feet NAVD88.

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Developed from the quantities determined in Figures 16-18, Figure ***19*** shows sediment volume as a function of excavation depth. Excavation depth is the difference between the maximum elevation of sediment (110' NAVD88) and the desired channel bottom elevation. Note: the curve is not linear since the distribution of sediment is irregular in the area behind the Training Wall. During the study the PDT decided that excavation the sediment to 108' NAVD88 was sufficient depth for Alternative 3. The elevation of 108' NAVD88 would provide a minimum water depth of 4 ft. behind the Training Wall structure since the approximate water surface elevation is 112.4' NAVD88 at 5,000 cfs.

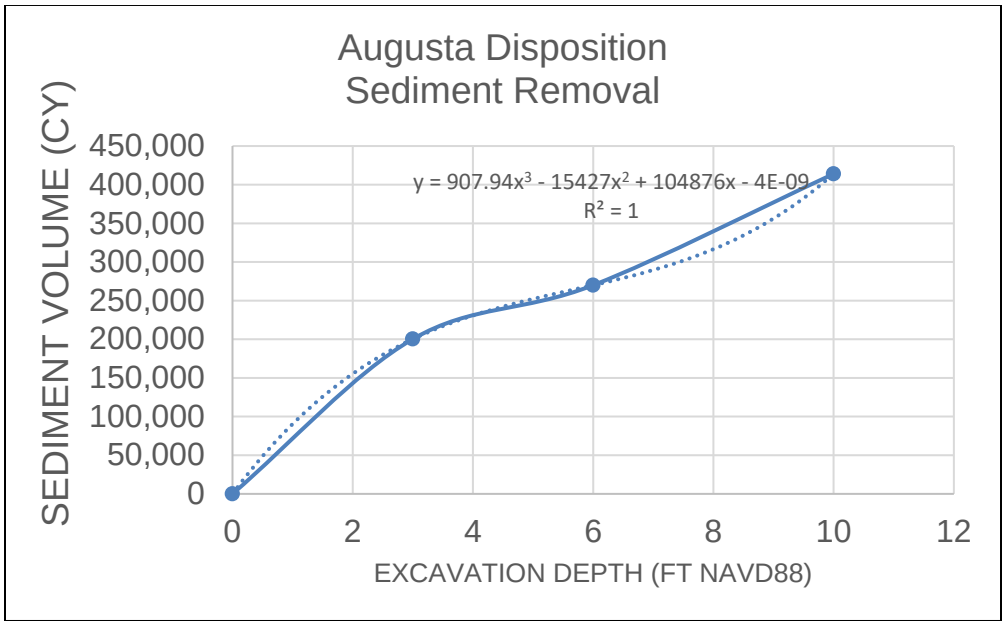


Figure 19. Sediment Removal Elevation Curve.

2.2.6. Recommended Plan

As described in the main report, the recommended plan is Alternative 2 which includes the removal of the Training Wall and associated pile dikes. The Alternative was selected. Costs shows in Section 5.

3. Surveying, Mapping, and Other Geospatial Data Requirements

3.1. Terrain Data

LiDAR point cloud data were obtained for the study area from https://coast.noaa.gov/dataviewer/# and processed by the Savannah District office. Point clouds for Aiken and Richmond counties were used to generate a DEM, with vegetation removed. Richmond County data have a horizontal accuracy of plus or minus 4 ft (1.21 m) at the 95% confidence level, the Fundamental Vertical Accuracy (FVA) tested 0.197 ft (0.06 m) RMSE at 95% confidence level. Aiken County data have a horizontal accuracy of plus or minus 11 ft (3.353 m) at the 90% confidence level, and a vertical accuracy of 1.2ft (0.366 m) at 90% confidence level. The extents of the terrain data are shown in Figure ***3*** in the previous section. Metadata for the original LiDAR dataset can be found at the NOAA website, though it should be noted that the elevation values were converted from meters to feet (NAVD 88) for the purposes of this project.[1]

3.2. Bathymetric Data

The Lidar data obtained from NOAA did not contain elevation data below the water surface of the Savannah River. The terrain model was supplemented with bathymetric data collected by the Hydrographic Survey Section at the Savannah District. Bathymetric survey sections were spaced approximately every 1000 ft. from the Augusta Shoals to approximately one mile downstream of the NSBLD. Additional sections spaced every 50ft were taken in the vicinity of the dam. All survey points were provided in NAVD 88 elevation. The Bathymetric data and topographic data were used to create a new “Terrain” layer within RAS Mapper to cover the entire study domain, as discussed in section 2.2.

In 2018, a bathymetric survey was performed along the Training Wall and the. From the data, a terrain was developed to support the hydraulic analysis within HEC-RAS

4. Geotechnical

4.1. Regional and Site Geology

The project site is located in the Atlantic Coastal Plain Physiographic Province. The Coastal Plain consists of horizontal to gently dipping Mesozoic and Cenozoic sedimentary rocks; primarily limestone, sandstone, and shale. The Coastal Plain is bound to the west by the Piedmont Physiographic Province. The crystalline Piedmont rocks, remnants of pre-Mesozoic orogenic events, dip seaward and form the basement of the Coastal Plain deposits. Figure ***20*** shows the physiographic provinces and major fault systems in the region surrounding the NSBLD.

The Fall Line is the boundary between the Piedmont and the Coastal Plain. Its name arises from the occurrence of waterfall and rapids that are the inland barriers to navigation on Georgia’s major rivers. The Fall Line is a boundary of bedrock geology, but it can also be recognized from stream geomorphology. Upstream from the Fall Line, rivers and streams typically have very small floodplains, if they have any at all, and they do not have well-developed meanders. Within approximately a mile downstream from the Fall Line, rivers and streams typically have floodplains or marshes across which

[1] https://coast.noaa.gov/htdata/lidar1_z/geoid12b/data/5112/sc2012_scdnr_aiken_m5112_metadata.html

they flow, and within three or four miles they meander. The most pronounced example of this is in the Savannah River's course at Augusta.

The Coastal Plain is a region of Cretaceous and Cenozoic sedimentary rocks and sediments. These strata dip toward the southeast, and so they are younger nearer the coast. At least near the Fall Line, they are ultimately underlain by igneous and metamorphic rocks like those of the Piedmont. The sedimentary rocks of the Coastal Plain partly consist of sediment eroded from the Piedmont over the last 100 million years or so, and partly of limestone generated by marine organisms and processes at sea. One could generalize that buried Triassic rocks in the subsurface are various rift-basin siliciclastics, the Cretaceous strata are sandstones and shales, the Tertiary strata are limestones and shales, and that the Quaternary strata are sands and muds.

The outcrops at the New Savannah Bluff Lock and Dam are mostly Quaternary alluvium composed of unconsolidated sand and gravel located primarily on the river's flood plain. Underlying the alluvium are sediments of Cretaceous to Eocene in age. They are dominantly terrestrial to shallow marine in origin and consist of sand, kaolinitic sand, kaolin, and pebbly sand. The sediments are underlain by metamorphic and igneous rocks including granite, biotite gneiss, granite gneiss, and amphibolite.

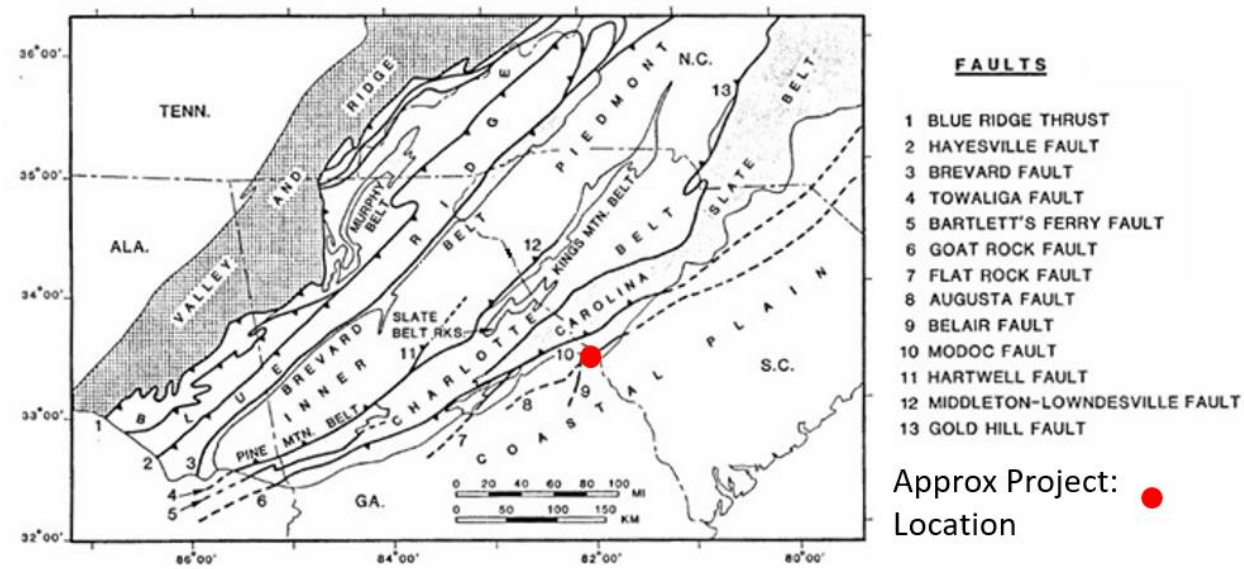


Figure 20 - Physiographic provinces and major fault systems in the region surrounding New Savannah Bluff Lock & Dam

4.2. Seismic Activity

Seismicity of the Coastal Plain is not well understood. The buried crystalline rocks show remnants of late Triassic rifting. Basins formed during the rifting are identified as magnetic lows, while intrusive igneous rocks are identified by magnetic highs. These heterogeneities may alternately concentrate and release stresses beneath the Coastal Plain. The release of stress may cause displacement along reactivated faults that extend up into the overlying sedimentary deposits. Sources of stress may be related to regional compression from the spreading Atlantic basin, the deep intrusion of magma along ancient rifts, or extensional movement caused by a sagging graben.

No earthquake-capable faults are recognized in the region surrounding NSBLD. Moderate seismicity has been experienced in the vicinity of NSBLD despite the lack of identified active faults. The Project is located within the South Carolina Trend, which is a broad, seismically-active source zone extending from the coastal plain of South Carolina to near the eastern border of Tennessee, roughly paralleling the Savannah River. Other regional seismic sources zones include Charleston, Eastern Tennessee, Giles County (Virginia), Central Virginia, and the more distant New Madrid. These source zones have the potential to produce more powerful earthquakes than the South Carolina Trend; in particular, Charleston and New Madrid. The greatest seismic hazard to the project, however, comes from a large magnitude earthquake originating from the Charleston source zone. Figure ***21*** is a United States Geological Survey (USGS) uniform hazard response spectra map showing the peak ground acceleration (PGA) in acceleration of gravity units (g) with a 2% probability of exceedance (PE) in 50 years. The seismic source zones described above are identified on this map.

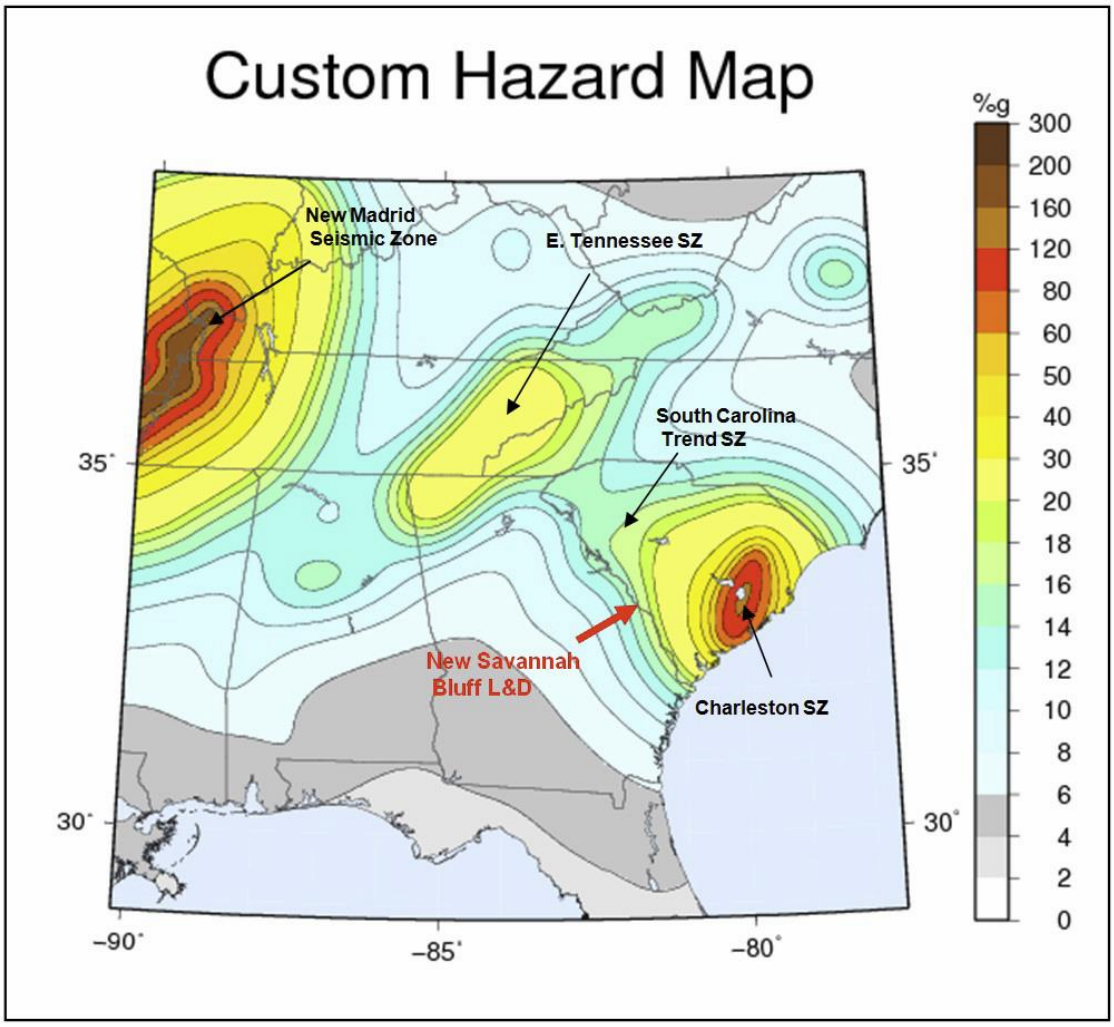


Figure 21 - Peak ground acceleration (PGA) in acceleration of gravity units (g) with a 2% probability of exceedance (PE) in 50 years

4.3. Sediment Characterization Sampling

The USACE Savannah District conducted sampling 22-24 October 2019. During the sampling event, 22 samples were collected from the sediment behind the Augusta Training Wall and the natural bottom material (saprolite) of the Savannah River. Analytical results from the natural river bottom (saprolite) sediments show no PCBs or SVOCs are present above the EPA RSL. These sediments are not anticipated to be impacted by the removal of the trainings wall. The results showed that there is no variability between the background sediments and the sediments behind the Augusta Training Wall. Details are included within the "Augusta Training Wall: Phase II Sediment Characterization Sampling Report" in Attachment A-1.

5. Cost Engineering

5.1. Introduction/Scope

The Augusta Training Wall is an approximately one and a half mile long wall with associated structures (perpendicular pilings) located on the Savannah River at Augusta, GA between River Mile 200 and River Mile 198 (). In the late 1800's, low training walls were constructed of wood pilings, wire cribbing, and layers of corded wood and rock to help prevent sandbar formations, while wing dams and pile dikes constructed of brush fascines and loaded with gravel and stone were used to prevent erosion along the riverbanks. The scope of work for the Tentatively Selected Plan (TSP), which is Alternative 2, is to remove the Augusta Training Wall from the river and dispose of the material.

The bulk of the material from the Training Wall is assumed to be hauled and disposed of at the Augusta County Landfill, where a tipping fee will be required in order to dispose of it. The material is assumed to be excavated from the river, transported to the bank, offloaded into trucks, where it will then be hauled to the landfill for disposal. At this time, it is assumed that the 8,222 CY of rock to be excavated will NOT be taken to the landfill; rather, all of the stone will be hauled to J. Strom Thurmond Lake and placed at a location to be determined for their use in future projects. A considerable amount of project cost could be saved if the remaining material were allowed to be disposed of on the banks of the river, or if adequate land was purchased to allow the spoils to be piled up. However, this has not been made possible at this point in the project so landfill disposal has been used as the base assumption.

The cross section of the Training Wall is shown below, along with the quantity estimate for the material to be excavated. Additionally, the excavation quantity table for excavating the sediment down to various depths has been included here.

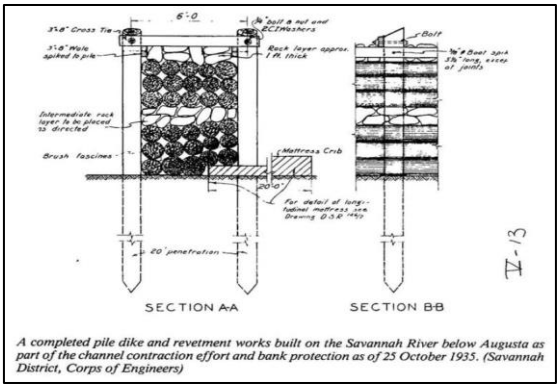


Figure 22. Cross Section of Training Wall from Historic documents.

COMPONENTS		VOL. (CY)
Rock		8,222
Brush		12,933
Wood	Poles	235
	Horizontal Cross Ties	66
	Lateral Cross Ties	131
Total Material		**21,588**

Figure 23. Quantities of Training Wall and Pile Dike Structural Components

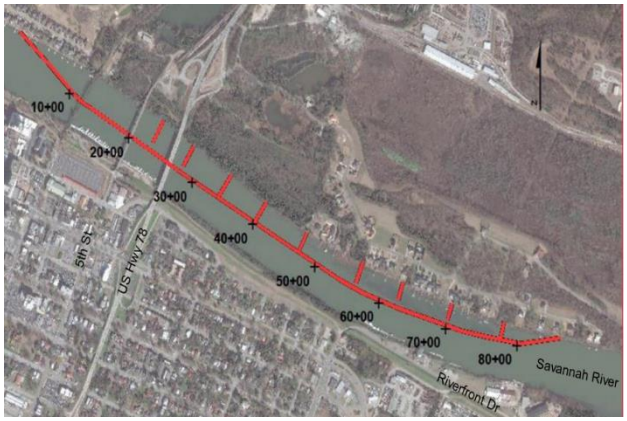


Figure 24. Training Wall Alignment

Elevation (Ft. NAVD88)	Excavation Depth	Sediment Volume (CY)
110	0	-
109	1	90,000
108	2	155,000
107	3	200,000
106	4	230,000
105	5	252,000
104	6	270,000
103	7	289,000
102	8	316,000
101	9	356,000
100	10	414,000

Figure 25. Quantities of Sediment at Specific Excavation Depths.

5.2. General Estimate Information

5.2.1. Acquisition Plan

Due to the nature of the job (heavy marine work), it is assumed that this will be advertised as a Full and Open/Unrestricted project. Per conversations with PDT members and leadership, typically projects over $15-20M would be put out as Unrestricted procurements, with all projects smaller than that typically going to MATOCs unless the work is not able to be performed by a wide array of MATOC contractors. It is assumed that this will be a low bid solicitation (i.e., no selection board/'best value' contract).

5.2.2. Markup Info

- Assumed the following markups for the Prime, who is at this stage of estimate development is assumed to perform the work except for the hauling and disposal of the material. Prime markups assumed to be:
- JOOH - 12%

    - HOOH - 10%
    - Profit - 10%
    - Bond - 1.5%

- Assumed the following markups for the Subcontractors:
    - JOOH - 5-8%
    - HOOH - 8-10%
    - Profit - 8-10%

- The MII cost estimate does not include any escalation markups. Escalation will be applied in TPCS sheets.
- The cost estimate includes 22% contingency (as calculated by a Risk Analysis).

5.2.3. Labor/Productivity Info

- Assumed a work schedule of 5 days a week, 10 hours per day.
- Construction duration of roughly 9 months (270 cd)
- LS&H percentage for in-channel contractors increased to 150% to account for work on navigable waterways.
- Davis-Bacon Wage Rates used for the Richmond County, GA area - Combo of GA165, GA90, and GA16, as well as the August Wage Survey rates (included in backup).
- Local Augusta/surrounding labor pool assumed to be sufficient to handle the demand for this project (ie., no subsistence/per diem included for craft workers)

5.2.4. Miscellaneous items

- Sales tax of 7% included for all material items, unless sales tax is included in price quote (will be noted in either Project Item or CSI task).
- 2016 MII costbook used as basis of pricing.
- 2018 Region III equipment book used as labor library.
- Gas and Diesel prices updated on 26 Feb 2020 from: <http://tonto.eia.doe.gov/oog/info/gdu/gasdiesel.asp>. Used Lower Atlantic prices as of 24 Feb for gas and on-road diesel. Subtracted $0.50/gallon for off-road diesel for GA.
- Price for electricity updated on 26 Feb 2020 from: <http://www.eia.gov/fuelelectric.html>. Used GA commercial electric price per Kwh for Nov 19 (latest one).
- Cost of money updated on 26 Feb 2020 from http://www.fms.treas.gov/prompt/rates.html

5.3. Summary of other alternatives

Alternative 1 – No Action

This alternative involves leaving the Training Wall in place and installing buoys every 100 ft of channel, for an approximate total of 75 buoys. It is assumed these would

standard buoys for river work.

Alternative 2 – Removal of Training Wall Only

This alternative involves removing the Training Wall, as outlined above in the TSP description. However, all sediment will be left in the river to naturally erode. The quantity of material to be removed is the same (21,588 CY) and the assumptions on disposal at the county landfill still apply. The total first cost for this alternative is approximately $5.5m.

Alternative 3 – Removal of Training Wall and Sediment Removal to EL. 108'

Alternative 3 is to remove the training wall as outlined above, and also remove some (but not all) of the sediment that has accumulated behind it. Sediment behind the wall will be removed down from the existing elevation to roughly EL. 108, an average cut of roughly 2 ft, which corresponds to a quantity of ~155,000 CY to remove. As with the training wall material, the sediment is assumed to be disposed of at the Augusta Landfill. There has already been some coordination about the potential materials to be disposed of there. The total first cost for this alternative is roughly $29m.

5.4. MII Estimate Summaries

(double-click picture to open in Adobe)

Print Date Wed 26 February 2020
Eff. Date 10/1/2019

U.S. Army Corps of Engineers
Project : Savannah River Training Wall Disposition Study, Sec 216
Savannah Training Wall Summary Report
Augusta, GA

Time 14:26:16

Title Page

Full & Open/Unrestricted Procurement Assumed
Design-Bid-Build Solicitation

The scope of work for the Tentatively Selected Plan (TSP) is project is to remove the Augusta Training Wall from the Savannah River. The material from the training wall is assumed to be hauled and disposed of at the Augusta County Landfill, where a tipping fee will be required in order to dispose of it. The material is assumed to be excavated from the river, transported to the bank, offloaded into trucks, where it will then be hauled to the landfill for disposal. The exception is the rock, which will be transported to J. Strom Thurmond Lake to be placed for future use by the Corps. A considerable amount of project cost could be saved if the material were allowed to be disposed of on the banks of the river, or if adequate land was purchased to allow the spoils to be piled up. However, this has not been made possible at this point in the project so landfill disposal has been used as the base assumption.

Files Located at <\\irl-fs01\ou\ORG\ED\Public\MCACES\ED-M-C\Civil\Work For Other Districts\SAS - Savannah>

Estimated by Taylor Canfield, PE, CCC, ED-M-C, (502) 315-6268
Designed by SAS
Prepared by Taylor Canfield, PE, CCC, ED-M-C, (502) 315-6268
Preparation Date 2/26/2020
Effective Date of Pricing 10/1/2019
Estimated Construction Time 270 Days
Checked by : Elliott Roughen, PE, CCE

This report is not copyrighted, but the information contained herein is For Official Use Only.

Labor ID: Local D-B EQ ID: EP18R03

Currency in US dollars

TRACES MII Version 4.4

5.5. Risk Analysis Results

(double-click picture to open in Adobe)

North Branch Ecorse Creek Flood Risk Management GRR /FY16 Update

Contingency on Base Estimate	80% Confidence Project Cost	
Base Estimate (No Real Estate)	$23,656,510	
Baseline Estimate Cost Contingency Amount →	$4,900,997	22%
Baseline Cost (80% Confidence, No RE) →	$28,557,508	

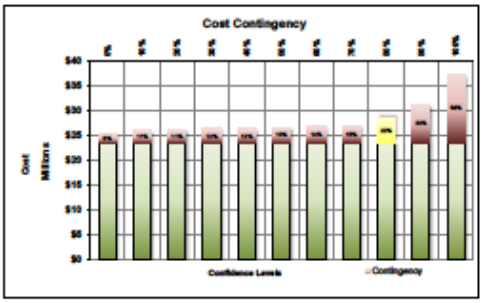
Contingency on Schedule	80% Confidence Project Schedule	
Project Base Schedule Duration →	12.0 Months	
Schedule Contingency Duration →	3.7 Months	31%
Project Schedule Duration (80% Confidence) →	15.7 Months	

Augusta Training Wall Disposition
13-Dec-19

- PROJECT CONTINGENCY DEVELOPMENT -

INITIAL CONSTRUCTION
Contingency Analysis

Base Case Estimate (Excluding 01)	$23,656,510	
Confidence Level	**Contingency Value**	**Contingency**
0%	1,732,521	8%
10%	2,582,216	11%
20%	2,596,791	11%
30%	2,815,346	12%
40%	2,815,346	12%
50%	3,031,911	13%
60%	3,248,477	14%
70%	3,465,042	15%
80%	4,900,997	22%
90%	7,579,779	33%
100%	13,643,601	58%

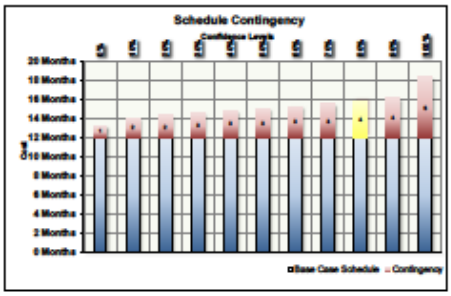


Augusta Training Wall Disposition
13-Dec-19

- SCHEDULE CONTINGENCY (DURATION) DEVELOPMENT -

Contingency Analysis

Base Case Schedule	12.0 Months	
Confidence Level	**Contingency Value**	**Contingency**
0%	1 Months	10%
10%	2 Months	17%
20%	2 Months	19%
30%	3 Months	21%
40%	3 Months	23%
50%	3 Months	25%
60%	3 Months	27%
70%	3 Months	29%
80%	4 Months	31%
90%	4 Months	34%
100%	6 Months	52%



APPENDIX A

5.6. TPCS – Alternative 2 and Alternative 3 (TSP)

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**** TOTAL PROJECT COST SUMMARY ****

Printed:2/26/2020
Page 1 of 4

PROJECT: Augusta Training Wall Disposition
PROJECT NO: P2 xxxxxx
LOCATION: Augusta, GA

DISTRICT: Savannah District
POC: CHIEF, COST ENGINEERING, Bart Smith

PREPARED: 2/26/2020

This Estimate reflects the scope and schedule in report; Augusta Training Wall Disposition

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)						TOTAL PROJECT COST (FULLY FUNDED)			
						Program Year (Budget EC): 2020 Effective Price Level Date: 1 OCT 19									
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Spent Thru: 1-Oct-19 ($K)	TOTAL FIRST COST ($K)	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J		K	L	M	N	O
09	CHANNELS & CANALS	$3,446	$758	22.0%	$4,204	0.0%	$3,446	$758	$4,204	$0	$4,204	3.5%	$3,568	$785	$4,353
	CONSTRUCTION ESTIMATE TOTALS:	$3,446	$758		$4,204	0.0%	$3,446	$758	$4,204	$0	$4,204	3.5%	$3,568	$785	$4,353
01	LANDS AND DAMAGES	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN	$500	$110	22.0%	$610	0.0%	$500	$110	$610	$0	$610	3.1%	$515	$113	$629
31	CONSTRUCTION MANAGEMENT	$500	$110	22.0%	$610	0.0%	$500	$110	$610	$0	$610	7.3%	$537	$118	$655
	PROJECT COST TOTALS:	$4,446	$978	22.0%	$5,424		$4,446	$978	$5,424	$0	$5,424	3.9%	$4,620	$1,016	$5,636

ESTIMATED TOTAL PROJECT COST: $5,636

CHIEF, COST ENGINEERING, Bart Smith

PROJECT MANAGER, Josh Nickel

CHIEF, REAL ESTATE, Ralph Werthmann

CHIEF, PLANNING, Steven Fischer

CHIEF, ENGINEERING, Tracy Hendren

CHIEF, OPERATIONS, Michael Montone

CHIEF, CONSTRUCTION, Kenneth Gray

CHIEF, CONTRACTING, Paige Blechinger

CHIEF, RM, Cynthia Powers

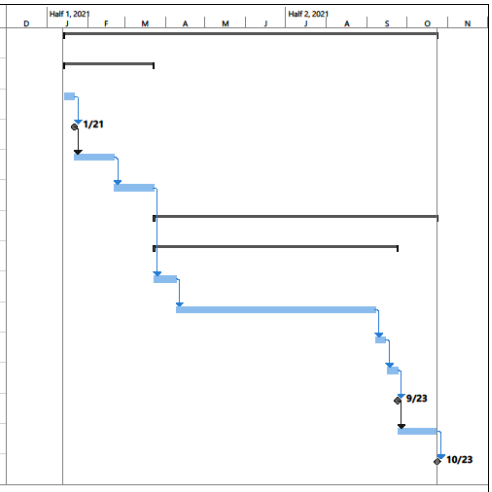
CHIEF, DPM, Erik Blechinger

Filename: Savannah River Training Wall_Sec216_TPCS.xlsx
TPCS Alt 2

5.7. Construction Schedule

(double-click picture to open in Adobe)

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
1		Construction Schedule	283 days	Thu 1/14/21	Sat 10/23/21	
2		Preconstruction Phase	68 days	Thu 1/14/21	Mon 3/22/21	
3		Construction Contract Award	5 days	Thu 1/14/21	Thu 1/21/21	
4		Notice to Proceed	0 days	Thu 1/21/21	Thu 1/21/21	3
5		Generate Contractor Submittals	30 edays	Thu 1/21/21	Sat 2/20/21	4
6		Review/Approve Submittals	30 edays	Sat 2/20/21	Mon 3/22/21	5
7		Construction Phase	215 days	Tue 3/23/21	Sat 10/23/21	
8		Phase 2	106 days	Tue 3/23/21	Thu 9/23/21	
9		Mobilization	10 days	Tue 3/23/21	Thu 4/8/21	6
10		Demo Training Wall And Remove Material	86 days	Fri 4/9/21	Mon 9/6/21	9
11		Cleanup/Restore	5 days	Tue 9/7/21	Tue 9/14/21	10
12		Demob From Site	5 days	Thu 9/16/21	Thu 9/23/21	11
13		Construction Complete	0 days	Thu 9/23/21	Thu 9/23/21	12
14		Project Closeout	30 edays	Thu 9/23/21	Sat 10/23/21	13
15		Project Complete	0 days	Sat 10/23/21	Sat 10/23/21	14



Project: Sav River TW Alt2
Date: Tue 2/25/20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Progress | Manual Progress

Page 1

6. References

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CDM-Smith, New Savannah Bluff Lock and Dam Fish Passage Mitigation Analysis for Impacted Water Users. July 2018.

Chow, Ven Te. *Open channel hydraulics*. McGraw-Hill Book Company, Inc; New York, 1959.

Jung, Younghun, et al. "An approach using a 1D hydraulic model, Landsat imaging and generalized likelihood uncertainty estimation for an approximation of flood discharge." *Water* 5.4 (2013): 1598-1621.

http://www.habitat.noaa.gov/pdf/Final_Federal_Interagency_Technical_Memorandum_Fish_Passage_Guidelines.pdf

USACE. Annual Report of the Chief of Engineers. 1886.

Attachment 1

Attachment A-1- Augusta Training Wall Phase II Sediment Characterization Sampling

APPENDIX A

ENGINEERING APPENDIX – ATTACHMENT 1
AUGUSTA TRAINING WALL PHASE II
SEDIMENT CHARACTERIZATION SAMPLING

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U.S. Army Corps of Engineers
Savannah District

Augusta Training Wall Phase II
Sediment Characterization Sampling
Augusta, Georgia
November 2019

1.0 Introduction

This report presents the environmental and geotechnical sediment results from the October 2019 sampling event performed by U.S. Army Corps of Engineers (USACE) Savannah District at the Augusta Training Wall in Augusta, GA. The sampling event was performed to determine the type of material behind the training wall and to evaluate environmental considerations for disposition of the material. Sediment samples were analyzed for semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and Metals, including Mercury. Particle size analysis was also conducted to evaluate physical soil properties for potential disposition. The physical and environmental material conditions will be evaluated to determine what recommendations are necessary for its disposition.

2.0 Site Overview and Brief History

The Augusta Training Wall is an approximately one and a half mile long wall with associated structures (perpendicular pilings) located on the Savannah River at Augusta, GA between River Mile 200 and River Mile 198 (Figure 1). In the late 1800's, low training walls were constructed of wood pilings, wire cribbing, and layers of corded wood and rock to help prevent sandbar formations, while wing dams and pile dikes constructed of brush fascines and loaded with gravel and stone were used to prevent erosion along the riverbanks.

3.0 Field Activities and Sampling Procedures

USACE Savannah District personnel mobilized to the site on 21 October 2019 and conducted sampling from 22 – 24 October 2019. Sediment samples were collected from sites B-1a, B-2a, B-3a, B-4a, B-6a, B-7a, B-9a, B-10a, B-12a, and B-13a behind the Augusta Training Wall, and background (BG) sites BG-1, BG-2, BG-3 and BG-4 outside of the Augusta Training Wall site (Figure 1). All sediment samples were analyzed for SVOCs, PCBs, Metals including Mercury, and samples behind the Training Wall were analyzed for particle size.

Sediment sampling was conducted using a Geoprobe® 7822Dt drill rig situated on a USACE – Baltimore District owned barge which was steered by two USACE – Savannah District owned and operated boats, a

20 ft. John Boat, 115 HP and a 17 ft. Boston Whaler, 90 HP. The team mobilized to sample locations and anchored to collect sediment samples in water depths up to 16 feet. Sediment samples were retrieved in plastic macrocore sleeves in 5 ft. intervals up to 20 feet below the river bottom. Sample collection depths were determined by the subsurface lithology. Site and material limitations prevented full recovery of each sample, where the sample recoveries ranged from 0.2 – 4.8 ft. of material in a 5 ft. sample run. The sample was kept inside the a plastic sleeve, sealed with plastic end caps, labeled, and immediately placed on ice to be inspected and extracted onshore.

After returning onshore all samples were scanned with a Photoionization Detector (PID) at 0.5 ft. intervals, individually extracted from their plastic sleeves and homogenized in decontaminated stainless steel bowls. Sediment samples were classified using the Unified Soil Classification (USCS) system under Designation D2488-17 (ASTM D2488-17). Sediment samples were transferred directly into new pre-labeled laboratory sample containers and immediately placed on ice in laboratory approved coolers. All samples were shipped overnight via FedEx to TestAmerica for environmental analyses in Tampa, FL. The sediment samples were analyzed for SVOCs by EPA Method 8270C, PCBs by EPA Methods 8082A, and Metals including Mercury by EPA Methods 6010D and 7471A, respectively. Additionally, sediment from samples B-1a, B-2a, B-3a, B-4a, B-6a, B-7a, B-9a, B-10a, B-12a, and B-13a were also placed in plastic Uline jars for particle size analysis (ASTM D422) and shipped overnight via FedEx to Environmental Materials Unit (EMU) in Marietta, GA.

4.0 Results

A boring summary with PID results is displayed in Table 1, a sample summary is shown in Table 2, and particle size results are summarized in Table 3. A cross section of the site (Figure 2b) displays lithology with depth. A summary of the laboratory results can be found in Table 4. The full set of particle size results can be found in Appendix A, and the full set of laboratory results can be found in Appendix B.

Particle size results from the October 2019 sampling event indicate that the sediment behind the training wall is characterized as yellowish brown poorly graded sand (SP) according to ASTM D2487-17 (Table 3). The sediment ranges between 5 feet thick at the upstream portion of the wall to 16 feet thick at the downstream end of the training wall. These sediments are easily erodible, loose overburden material. The natural river bottom sediment is characterized as gray to greenish gray lean clay (CL) according to ASTM D2487-17 (Table 3). These sediments, also known as saprolite, are highly resistant to erosion. The cross sectional view of the site (Figure 2) shows the distribution of SP and CL with depth behind the Augusta Training Wall.

Analytical results from the October 2019 sampling event showed no presence of PCBs or SVOCs above the EPA Regional Screening Level (RSL) residential soil standard (Table 4). No PCBs were detected in any of the samples collected. Several SVOCs were detected at concentrations well below the RSL including Benzo[a]anthracene, Benzo[a]pyrene, Chrysene, Fluoranthene, Isophorone, Phenol and Pyrene. Arsenic was the only metal detected at concentrations exceeding the RSL of 0.68 mg/kg. Arsenic was detected in sample B-1a-6-10 (1.3 J), B-3a-6-10 (0.84 J), B-6a-16-17 (1.5 J) and B-13a-12-15 (0.76 J). Other metals

detected below the RSL include Barium, Chromium, Lead, Cadmium, Selenium and Mercury. PID results indicate there were no volatile organic compounds in the sediment samples (Table 1).

5.0 Conclusions

During the October 2019 sampling event, 22 samples were collected from the sediment behind the Augusta Training Wall and the natural bottom material (saprolite) of the Savannah River. Additionally, four background sediment samples were collected from the Savannah River bottom outside of the Augusta Training Wall to characterize existing conditions. Particle size results reveal that the sediments behind the Training Wall are primarily composed of highly erodible poorly graded sand. The sediment ranges between 5 feet thick at the upstream portion of the wall to 16 feet thick at the downstream end of the training wall. The natural river bottom sediment is composed of lean clays, highly resistant to erosion.

Analytical testing results were compared to the EPA residential RSL as a conservative screening tool to determine if further evaluation is necessary. Testing results from the loose sandy sediments behind the training wall show that no metals, PCBs or SVOCs are present at concentrations exceeding the EPA RSL. Analytical results from the natural river bottom (saprolite) sediments show that no PCBs or SVOCs are present above the EPA RSL. Arsenic was detected in several samples at concentrations slightly above the residential RSL in the saprolite material. These low level detections are consistent with naturally occurring levels in the region (USGS, 1984) and do not appear to be the result of anthropogenic activities. These sediments are not anticipated to be impacted by the removal of the training wall.

The analytical results were also compared to the four background samples collected. The background samples were collected from the sediments of the existing river bottom upstream (BG-1), adjacent to the training wall (BG-2) and downstream in likely shoaling areas (BG-3 and BG4). The results show that there is no variability between the background sediments and the sediments behind the Augusta Training Wall.

6.0 References

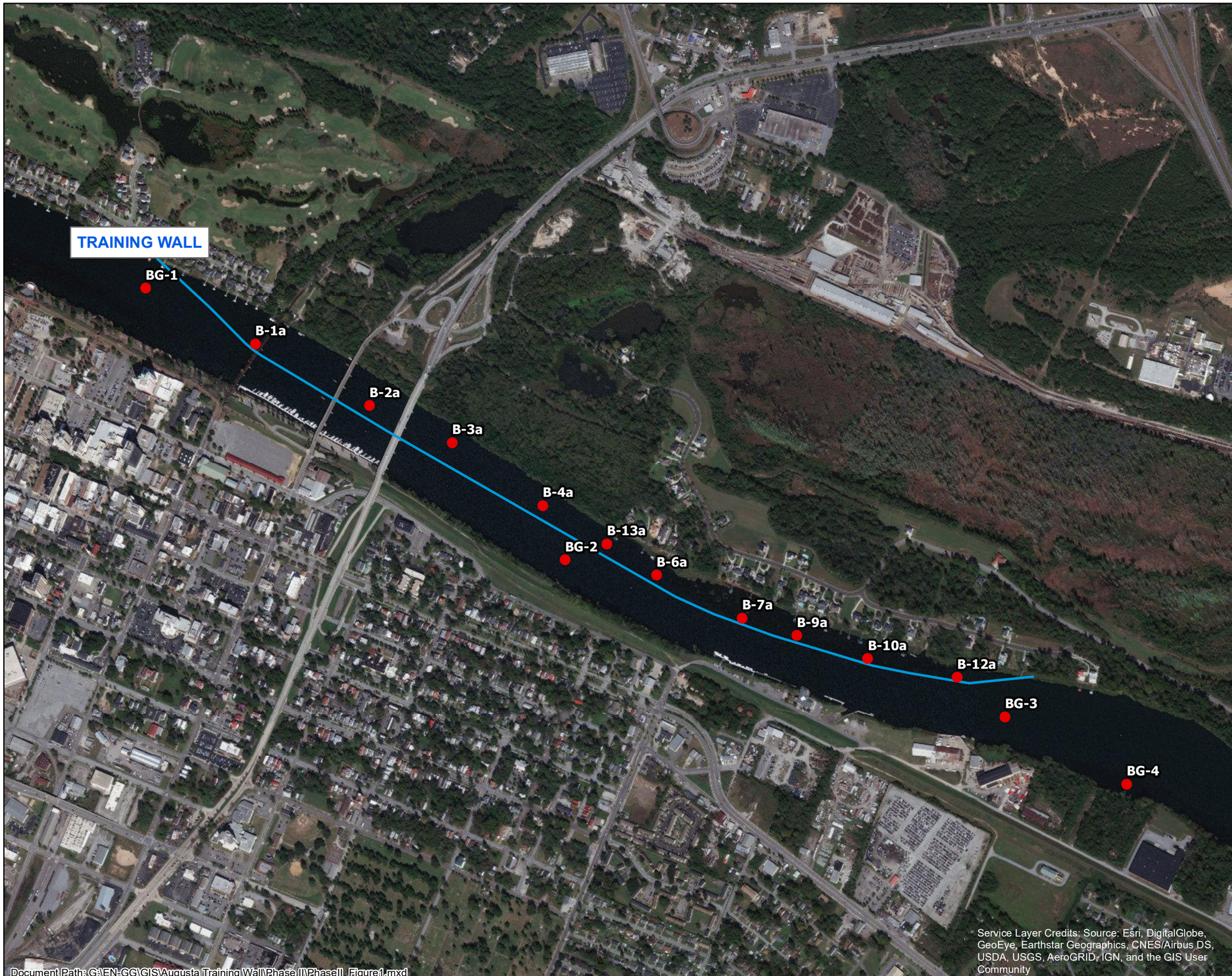
ASTM D2488-17, Standard Practice for Description and Identification of Soils (Visual-Manual Procedures), ASTM International, West Conshohocken, PA, 2017.

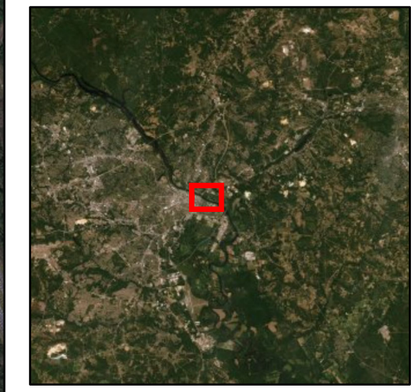
ASTM D2487-17, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System), ASTM International, West Conshohocken, PA, 2017.

ASTM D422-63(2007)e2, Standard Test Method for Particle-Size Analysis of Soils (Withdrawn 2016), ASTM International, West Conshohocken, PA, 2007.

USGS 1984, Element Concentrations in Soil and Other Surficial Materials of the Conterminous United States, USGS Professional Paper 1270, 1984.

FIGURES





Legend

- Sample Location
- Augusta Training Wall

NOTE:

BG = Background Sample.

N

0 950 1,900
Feet

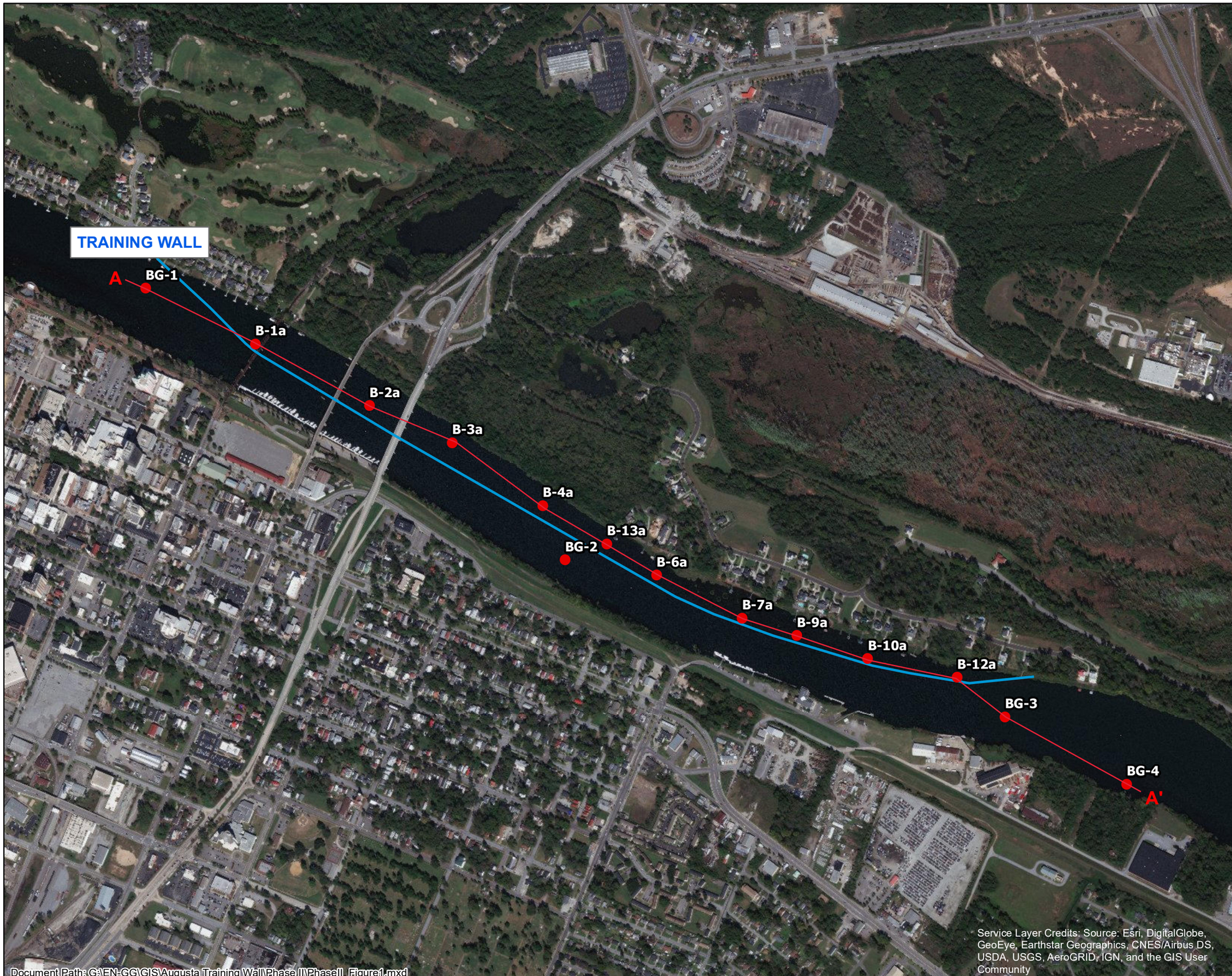
U.S. ARMY
CORPS OF ENGINEERS
SAVANNAH DISTRICT
SAVANNAH, GEORGIA

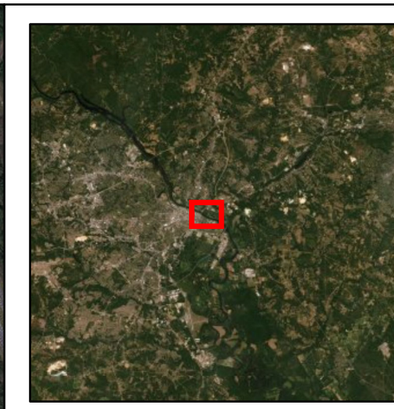
AUGUSTA TRAINING WALL
PHASE II SAMPLE LOCATIONS

Augusta, GA

November 2019

NOVEMBER 2019	FIGURE 1





Legend

- Sample Location
- Augusta Training Wall

NOTE:

BG = Background Sample.

Cross Section Line

N

0 950 1,900

Feet

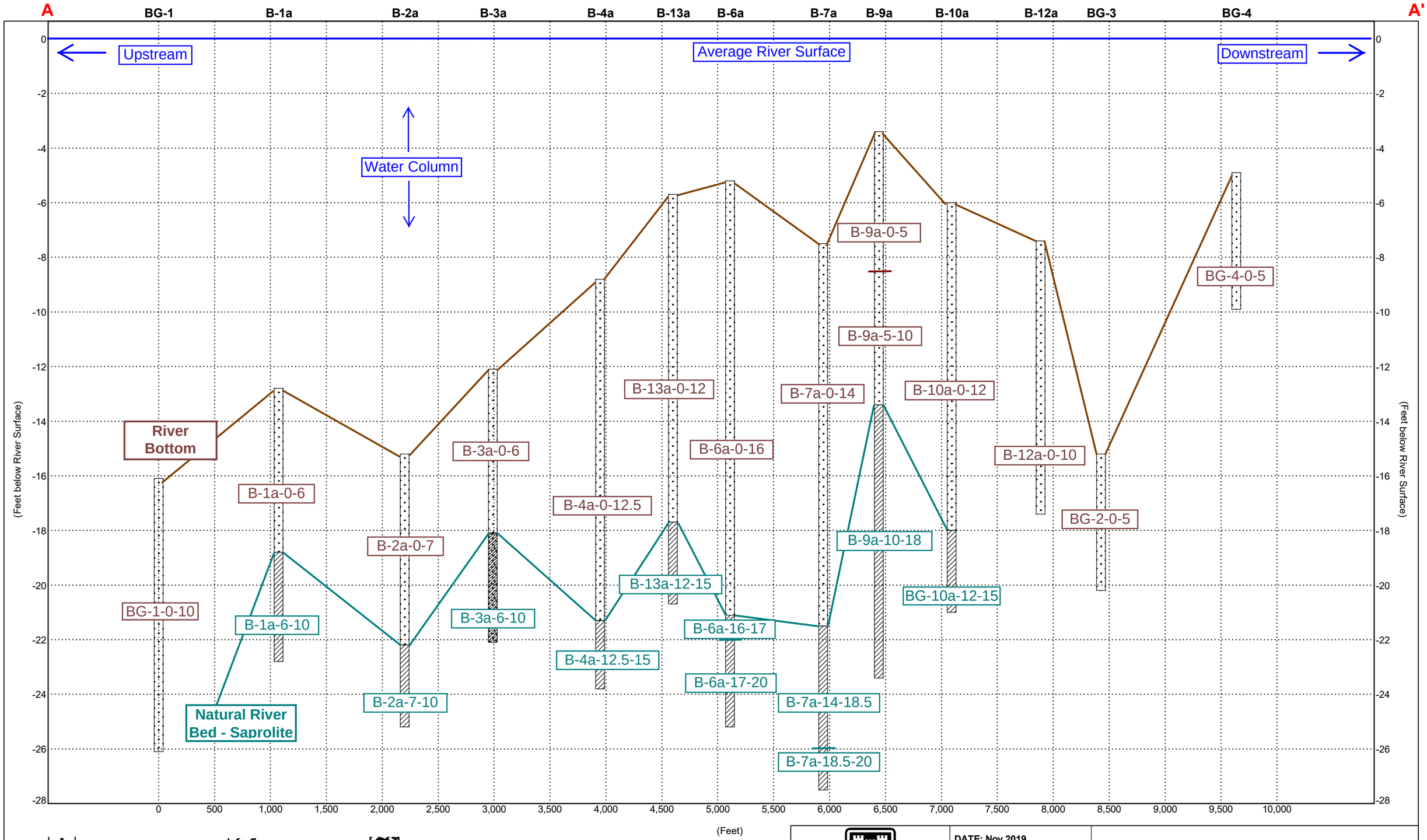
U.S. ARMY
CORPS OF ENGINEERS
SAVANNAH DISTRICT
SAVANNAH, GEORGIA

AUGUSTA TRAINING WALL
CROSS SECTION LOCATION

Augusta, GA

November 2019

NOVEMBER 2019 | FIGURE 2a



US Army Corps of Engineers
Savannah District

DATE: Nov 2019

SCALE: AS SHOWN

Figure 2b. Cross Section

Augusta Training Wall Disposition Study

TABLES

Table 1. Boring Summary. Depth to River Bottom measured from top front of barge.

Boring	Depth to River Bottom (ft)	Depth Drilled into River Bottom (ft)	Sample Run (ft below river bottom)	Sample Recovery (ft)	PID (ppm)
BG-1	16.1	10	0 - 5	0.2	0
			5 - 10	0.5	0
BG-2	16.5	5	0 - 5	0.6	0
BG-3	15.2	5	0 - 5	1.5	0
BG-4	4.9	5	0 - 5	2.1	0
B-1a	12.8	10	0 - 5	0.7	0
			5 - 10	2.1	0
B-2a	15.2	10	0 - 5	0.4	0
			5 - 10	2.0	0
B-3a	12.1	10	0 - 5	0.7	0
			5 - 10	2.1	0
B-4a	8.8	15	0 - 5	0.3	0
			5 - 10	1.2	0
			5 - 15	0.8	0
B-6a	5.2	20	0 - 5	0.3	0
			5 - 10	1.3	0
			5 - 15	1.1	0
			15 - 20	2.8	0
B-7a	7.5	20	0 - 5	1.2	0
			5 - 10	1.2	0
			5 - 15	1.2	0
			15 - 20	4.7	0
B-9a	3.4	20	0 - 5	1.2	0
			5 - 10	2.0	0
			5 - 15	2.5	0
			15 - 20	4.0	0
B-10a	6.0	15	0 - 5	1.8	0
			5 - 10	0.7	0
			5 - 15	1.8	0
B-12a	7.4	10	0 - 5	0.2	0
			5 - 10	1.4	0
B-13a	5.7	20	0 - 10	0.4	0
			10 - 15	1.1	0
			15 - 20	1.4	0

Table 2. Sample Summary

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	SOIL SAMPLE LOG DATA SHEET

Client: U.S. Army Corps of Engineers **Location/Project:** Augusta Training Wall Phase II
Sampled By: April Kelly **Method:** Macrocore **Drill Rig:** Geoprobe 7822Dt
Sample Analysis (Preservative): Metals, Total plus Hg (ice), SVOC (ice), PCB (ice),
Number of Jars per Analysis: 1 Metals and Hg, 1 SVOC and PCB

Sample ID	Date	Time	Total Sample Jars	Sample Depth (ft)	Soil Classification	PID (PPM)	Duplicate	Particle Size Analysis	Comments
BG-1-0-10-10-19	10/24/2019	1028	2	0.0 - 10.0	SP	0			
BG-2-0-5-10-19	10/24/2019	1058	2	0.0 - 5.0	SP	0			
BG-3-0-5-10-19	10/24/2019	1114	2	0.0 - 5.0	SP	0			
BG-4-0-5-10-19	10/24/2019	1042	2	0.0 - 5.0	SP	0			
B-1a-0-6-10-19	10/24/2019	1142	2	0.0 - 6.0	SP	0		X	
B-1a-6-10-10-19	10/24/2019	1151	2	6.0 - 10.0	CL	0			
B-2a-0-7-10-19	10/24/2019	1205	2	0.0 - 7.0	SP	0			
B-2a-7-10-10-19	10/24/2019	1210	2	7.0 - 10.0	CL	0		X	
B-3a-0-6-10-19	10/24/2019	1241	2	0.0 - 6.0	SP	0			
B-3a-6-10-10-19	10/24/2019	1242	4	6.0 - 10.0	SC	0	X	X	DUP-1-10-19, 1200
B-4a-0-12.5-10-19	10/24/2019	1318	2	0.0 - 12.5	SP	0		X	
B-4a-12.5-15-10-19	10/24/2019	1321	2	12.5 - 15.0	CL	0			
B-6a-0-16-10-19	10/24/2019	1353	6	0.0 - 16.0	SP	0		X	MS/MSD
B-6a-16-17-10-19	10/24/2019	1406	2	16.0 - 17.0	CL	0			
B-6a-17-20-10-19	10/24/2019	1408	2	17.0 - 20.0	CL	0			
B-7a-0-14-10-19	10/24/2019	1433	2	0.0 - 14.0	SP	0			
B-7a-14-18.5-10-19	10/24/2019	1434	2	14.0 - 18.5	CL	0			
B-7a-18.5-20-10-19	10/24/2019	1439	2	18.5 - 20	CL	0		X	
B-9a-0-5-10-19	10/24/2019	1513	2	0.0 - 5.0	SP	0			
B-9a-5-10-10-19	10/24/2019	1516	2	5.0 - 10.0	SP	0			
B-9a-10-18-10-19	10/24/2019	1530	2	10.0 - 18.0	CL	0		X	Particle size sample depth 14.0' - 18.0'
B-10a-0-12-10-19	10/24/2019	1547	2	0.0 - 12.0	SP	0			
B-10a-12-15-10-19	10/24/2019	1548	2	12.0- 15.0	CL	0		X	
B-12a-0-10-10-19	10/24/2019	1600	2	0.0 - 10.0	SP	0		X	
B-13a-0-12-10-19	10/24/2019	1634	2	0.0 - 12.0	SP	0		X	
B-13a-12-15-10-19	10/24/2019	1635	2	6.0 - 7.0	CL	0			

Notes:
BG = Background
B = Boring

Table 3. Summary of Material Properties using ASTM D422 Particle Size Analysis. Percentages indicate percent of sample that passed through the Sieve No.

SUMMARY OF MATERIAL PROPERTIES

PROJECT: Augusta Training Wall **LOCATION:** August, GA **4-Nov-19**

			ASTM D422 Particle Size Analysis												
			Fine gravel	Coarse Sand		Medium Sand		Fine Sand			Silt/Clay				
LAB Number	Hole Number	Depth (ft)	3/8 in %	No.4 %	No.10 %	No.20 %	No.40 %	No.60 %	No.100 %	No.140 %	No.200 %	D2216 MC%	Color	Class.	D2488 Unified Soil Classification System
K6/13787	B-1A	0.0 to 6.0	100.0	94.6	84.5	56.3	21.5	8.0	3.5	2.4	1.6	17.1	Yellowish Brown	SP	Poorly Graded Sand (SP), with a trace of gravel & mica.
K6/13788	B-2A	7.0 to 10.0	100.0	99.5	96.6	88.2	81.3	76.2	69.5	62.8	54.7	15.9	Gray	CL	(Visual) Sandy Lean Clay (CL).
K6/13789	B-3A	6.0 to 10.0	100.0	97.9	92.0	82.6	71.9	63.7	53.6	44.8	36.0	18.8	Light Gray	SC	(Visual) Clayey Sand (SC), with a trace of gravel.
K6/13790	B-4A	0.0 to 12.5	100.0	97.7	88.3	60.1	24.9	14.0	9.6	7.7	6.4	17.9	Yellowish Brown	SP-SM	Poorly Graded Silty Sand (SP-SM), with a trace of gravel & mica.
K6/13791	B-6A	0.0 to 16.0		100.0	93.4	60.9	19.7	11.2	7.5	6.0	4.9	17.3	Yellowish Brown	SP	Poorly Graded Sand (SP), with a trace of mica.
K6/13792	B-7A	18.5 to 20.0		100.0	99.9	99.5	98.5	96.7	91.1	83.1	73.1	39.1	Greenish Gray	CL	(Visual) Lean Clay (CL), with some sand.
K6/13793	B-9A	14.0 to 18.0	100.0	98.4	96.3	90.8	87.0	85.2	83.4	82.0	80.2	44.2	Brownish Yellow & Light Gray	CL	(Visual) Lean Clay (CL), with a little sand, and a trace of gravel & mica.
K6/13794	B-10A	12.0 to 15.0		100.0	99.4	98.7	97.6	95.8	92.5	88.2	81.1	29.2	Yellowish Brown & Brownish Yellow	CL	(Visual) Lean Clay (CL), with a little sand.
K6/13795	B-12A	0.0 to 10.0		100.0	96.9	68.1	18.6	8.8	6.1	5.2	4.5	20.0	Yellowish Brown	SP	Poorly Graded Sand (SP), with a trace of mica.
K6/13796	B-13A	0.0 to 12.0	100.0	95.2	89.2	58.0	13.7	5.5	3.0	2.1	1.6	21.0	Yellowish Brown	SP	Poorly Graded Sand (SP), with a trace of gravel & mica.

USACE, Savannah District Materials Testing RTCX - Marietta, GA 30062

Notes:

3/8 in: fine gravel

No. 4 through No. 140 indicates percentage of sands

No.200 column indicates percentage of fines (silts and/or clays)

MC: Moisture Content

Table 4. Augusta Training Wall Geochemical Results.

Lab ID:	EPA RSL Resident Soil	660-98299-1	660-98299-3	660-98299-4	660-98299-2	660-98299-5	660-98299-6	660-98299-7	660-98299-8	660-98299-9
Client ID:		BG-1-0-10-10-19	BG-2-0-5-10-19	BG-3-0-5-10-19	BG-4-0-5-10-19	B-1a-0-6-10-19	B-1a-6-10-10-19	B-2a-0-7-10-19	B-2a-7-10-10-19	B-3a-0-6-10-19
Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Material Type:		Loose Overburden	Loose Overburden	Loose Overburden	Loose Overburden	Loose Overburden	Saprolite	Loose Overburden	Saprolite	Loose Overburden
Sample Date:		10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019
Metals by 6010D, Mercury by 7471B (mg/kg)	**mg/Kg**	**Metals and Mercury (mg/Kg)**								
Arsenic	0.68	0.12 J	0.32 J	0.40 J	0.17 J	0.12 J	1.3 J	*ND*	0.26 J	0.48 J
Barium	1.50E+04	8.4	15	23	5.2	7.4	60	5.9	5.8	12
Cadmium	71	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Chromium	*NE*	2.4	4.3	4.1	2.9	2.1	4.9 J	3.8	2.1	4.4
Lead	400	0.79 J	1.9	4	2.3	0.93 J	1.8 J	0.53 J	0.64 J	1.3
Selenium	390	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Mercury	11	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Semivolatile Organic Compounds (SVOCs) by 8270D	**mg/Kg**	**SVOCs (mg/Kg)**								
Benzo[a]anthracene	1.1	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Benzo[a]pyrene	0.11	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Chrysene	110	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Fluoranthene	2400	*ND*	*ND*	0.062 J	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Isophorone	570	*ND*	*ND*	*ND*	*ND*	*ND*	0.34 J	*ND*	*ND*	*ND*
Phenol	19000	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Pyrene	1800	*ND*	*ND*	0.063 J	0.056 J	*ND*	*ND*	*ND*	*ND*	*ND*

Lab ID:	EPA RSL Resident Soil	660-98299-10	660-98299-11	660-98302-1	660-98302-2	660-98302-3	660-98302-4	660-98302-5	660-98302-6	660-98302-7
Client ID:		B-3a-6-10-10-19*	DUP-1-10-19	B-4a-0-12.5-10-19	B-4a-12.5-15-10-19	B-6a-0-16-10-19	B-6a-16-17-10-19	B-6a-17-20-10-19	B-7a-0-14-10-19	B-7a-14-18.5-10-19
Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Material Type:		Saprolite	Saprolite	Loose Overburden	Saprolite	Loose Overburden	Saprolite	Saprolite	Loose Overburden	Saprolite
Sample Date:		10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019
Metals by 6010D, Mercury by 7471B (mg/kg)	**mg/Kg**	**Metals and Mercury (mg/Kg)**								
Arsenic	0.68	0.84 J	0.73 J	0.23 J	0.43 J	0.28 J	0.67 J	1.5 J	0.25 J	*ND*
Barium	1.50E+04	8.6	8.2	8.7	5.2	9.5	69	18	12	41
Cadmium	71	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	0.18 J	*ND*	0.39 J
Chromium	*NE*	1.5 J	2.7 J	5.4	3.6 J	8.7	9.7	22	5.9	7
Lead	400	2.1 J	1.6 J	1.1	1.4 J	1.7	2.7 J	5.5 J	1.8	13
Selenium	390	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	3.8 J
Mercury	11	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Semivolatile Organic Compounds (SVOCs) by 8270D	**mg/Kg**	**SVOCs (mg/Kg)**								
Benzo[a]anthracene	1.1	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	0.053 J	*ND*
Benzo[a]pyrene	0.11	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	0.052 J	*ND*
Chrysene	110	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Fluoranthene	2400	*ND*	*ND*	*ND*	*ND*	0.054 J	*ND*	*ND*	*ND*	*ND*
Isophorone	570	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Phenol	19000	*ND*	*ND*	*ND*	0.16 J Q	*ND*	*ND*	*ND*	*ND*	*ND*
Pyrene	1800	*ND*	*ND*	*ND*	*ND*	0.059 J	*ND*	*ND*	0.060 J	*ND*

Lab ID:	EPA RSL Resident Soil	660-98302-8	660-98303-1	660-98303-2	660-98303-3	660-98303-4	660-98303-5	660-98303-6	660-98303-7	660-98303-8
Client ID:		B-7a-18.5-20-10-19	B-9a-0-5-10-19	B-9a-5-10-19	B-9a-10-18-10-19	B-10a-0-12-10-19	B-10a-12-15-10-19	B-13a-0-12-10-19	B-13a-12-15-10-19	B-12a-0-10-10-19
Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Material Type:		Saprolite	Loose Overburden	Saprolite	Saprolite	Loose Overburden	Saprolite	Loose Overburden	Saprolite	Loose Overburden
Sample Date:		10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019	10/24/2019
Metals by 6010D, Mercury by 7471B (mg/kg)	**mg/Kg**	**Metals and Mercury (mg/Kg)**								
Arsenic	0.68	*ND*	0.16 J	0.28 J	*ND*	0.19 J	*ND*	0.26 J	0.76 J	0.13 J
Barium	1.50E+04	64	9.1	11	77	9.3	12	12	12	5.4
Cadmium	71	*ND*	*ND*	*ND*	0.16 J	*ND*	*ND*	*ND*	*ND*	*ND*
Chromium	*NE*	2.2 J	4.8	2.9	8.1	5.3	310	4.1	9.8	6.4
Lead	400	4.3 J	1.4	1.7	4.8	1.4	3.4 J	2.3	2.1 J	1.4
Selenium	390	*ND*	*ND*	*ND*	2.3 J	*ND*	*ND*	*ND*	*ND*	*ND*
Mercury	11	*ND*	*ND*	*ND*	0.020 J	*ND*	*ND*	*ND*	*ND*	*ND*
Semivolatile Organic Compounds (SVOCs) by 8270D	**mg/Kg**	**SVOCs (mg/Kg)**								
Benzo[a]anthracene	1.1	*ND*	0.092 J	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Benzo[a]pyrene	0.11	*ND*	0.071 J M	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Chrysene	110	*ND*	0.069 J	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Fluoranthene	2400	*ND*	0.15 J	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Isophorone	570	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Phenol	19000	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Pyrene	1800	*ND*	0.16 J	*ND*	*ND*	0.060 J	*ND*	*ND*	*ND*	*ND*

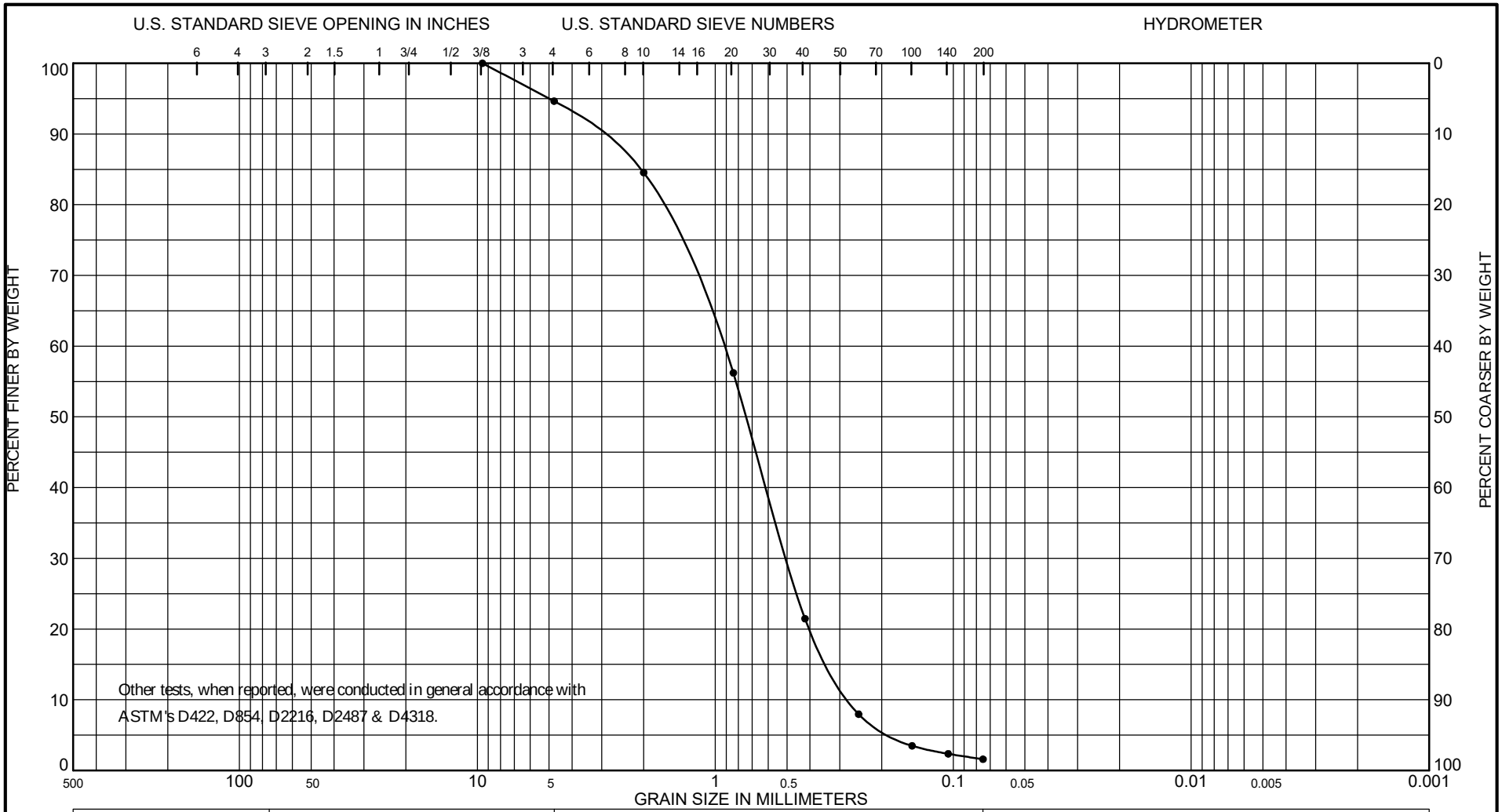
Notes:

BG: Background Sample outside of Training Wall
B: Boring inside of Training Wall
RSL: Regional Screening Level (updated April 2019).
Bold: exceeds EPA RSL standard.
mg/Kg: milligrams per Kilogram.
J: The reported result is an estimated value.
Q: One of more quality control criteria failed.
ND : Not Detected.
NE : Not established.
* indicates Duplicate sample collected.

APPENDIX A
PARTICLE SIZE GRADATION CURVES

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1243e
REQUISITION: W33SJG93036295



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

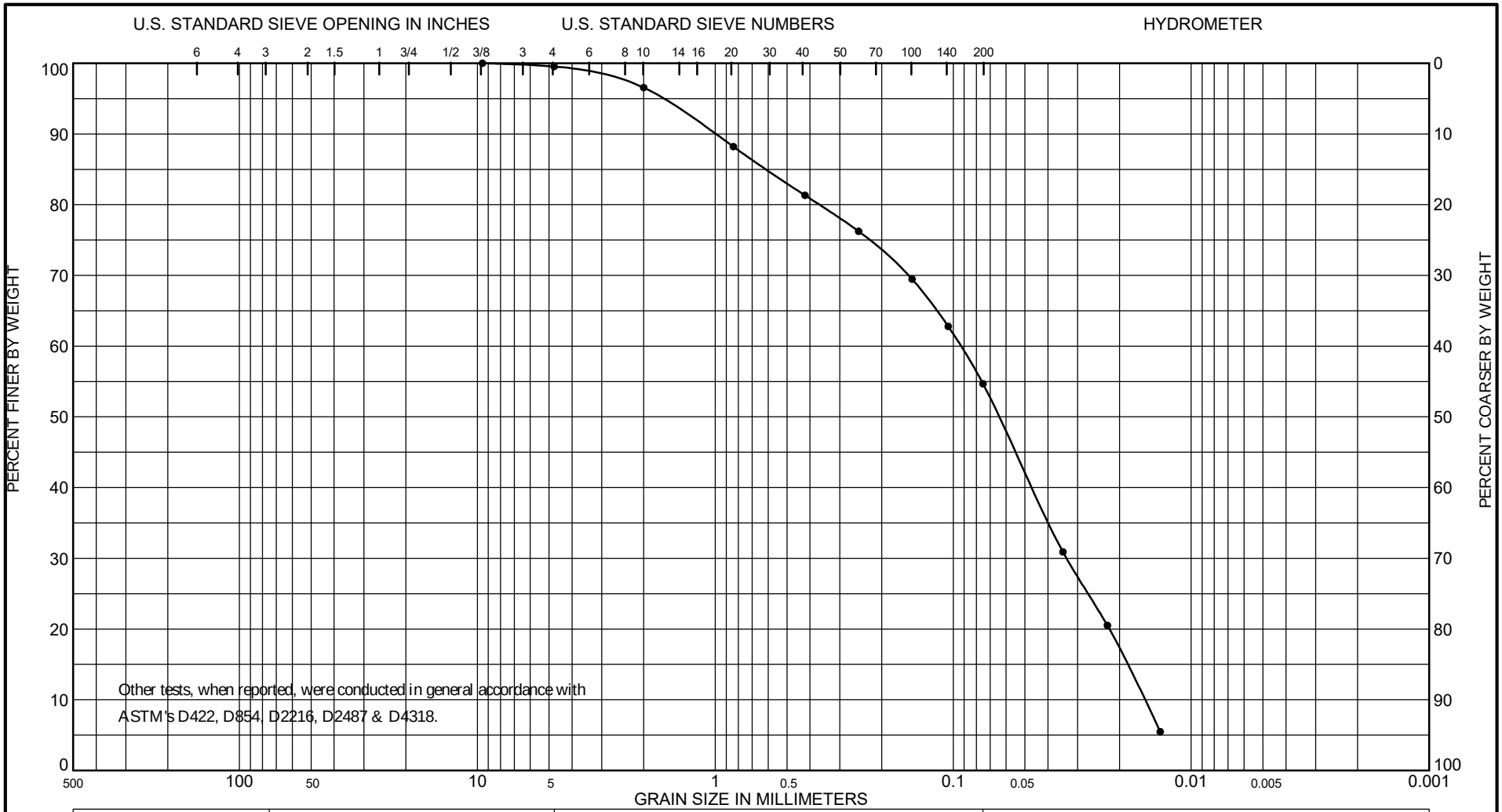
Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
	0.0 to 6.0	Yellowish Brown, Poorly Graded Sand (SP), with a trace of gravel & mica.	17.1			

Project Augusta Training Wall
Soi Testing August, GA
Lab No. K6/13787
Hole No. B-1A
Date 11/4/19

GRADATION CURVES

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1243e
REQUISITION: W33SJG93036295



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

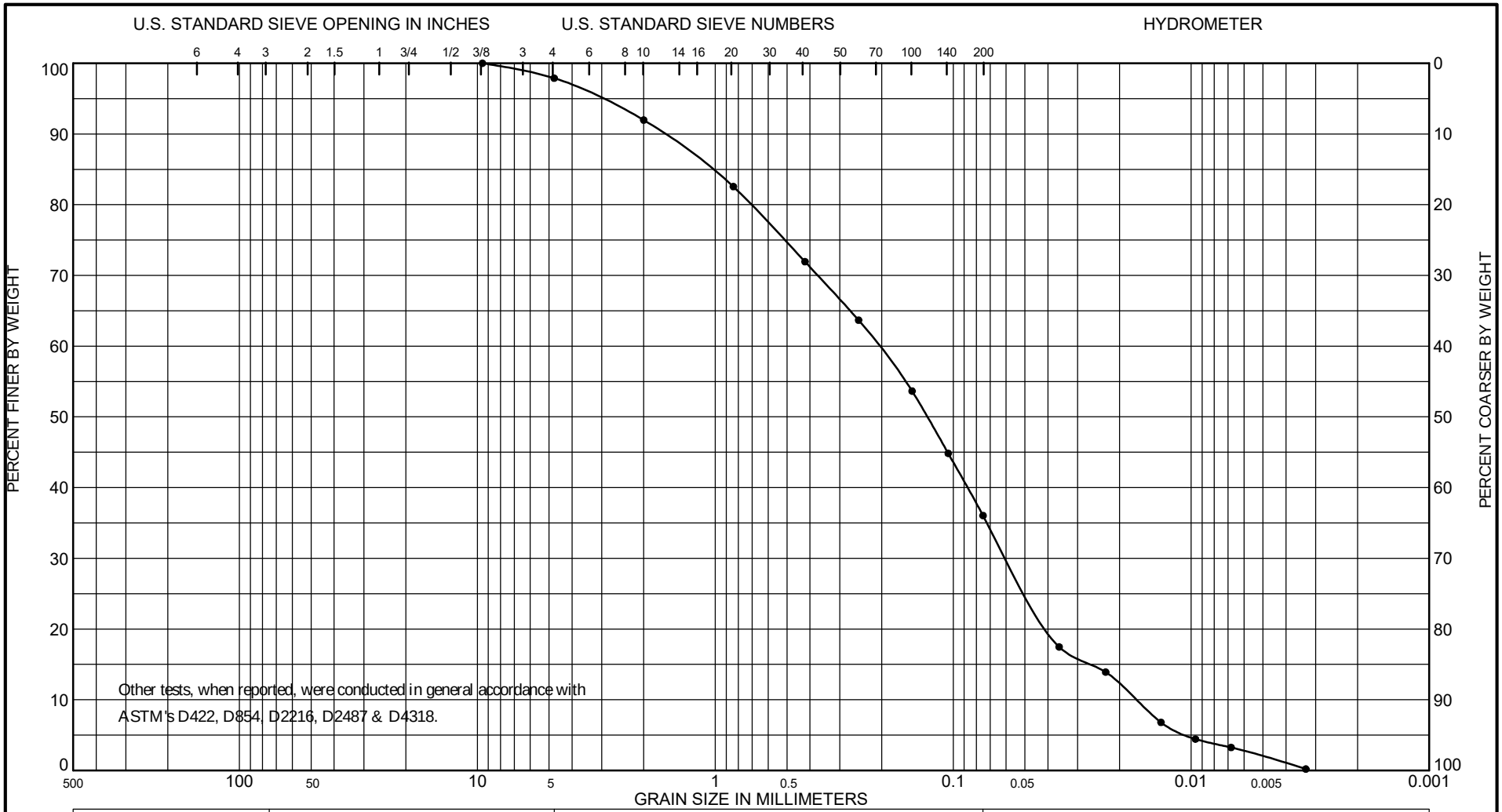
Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
	7.0 to 10.0	Gray, (Visual) Sandy Lean Clay (CL).	15.9			

Project Augusta Training Wall
Soi Testing August, GA
Lab No. K6/13788
Hole No. B-2A
Date 11/4/19

GRADATION CURVES

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1243e
REQUISITION: W33SJG93036295



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
	6.0 to 10.0	Light Gray, (Visual) Clayey Sand (SC), with a trace of gravel.	18.8			

Project Augusta Training Wall

Soi Testing August, GA

Lab No. K6/13789

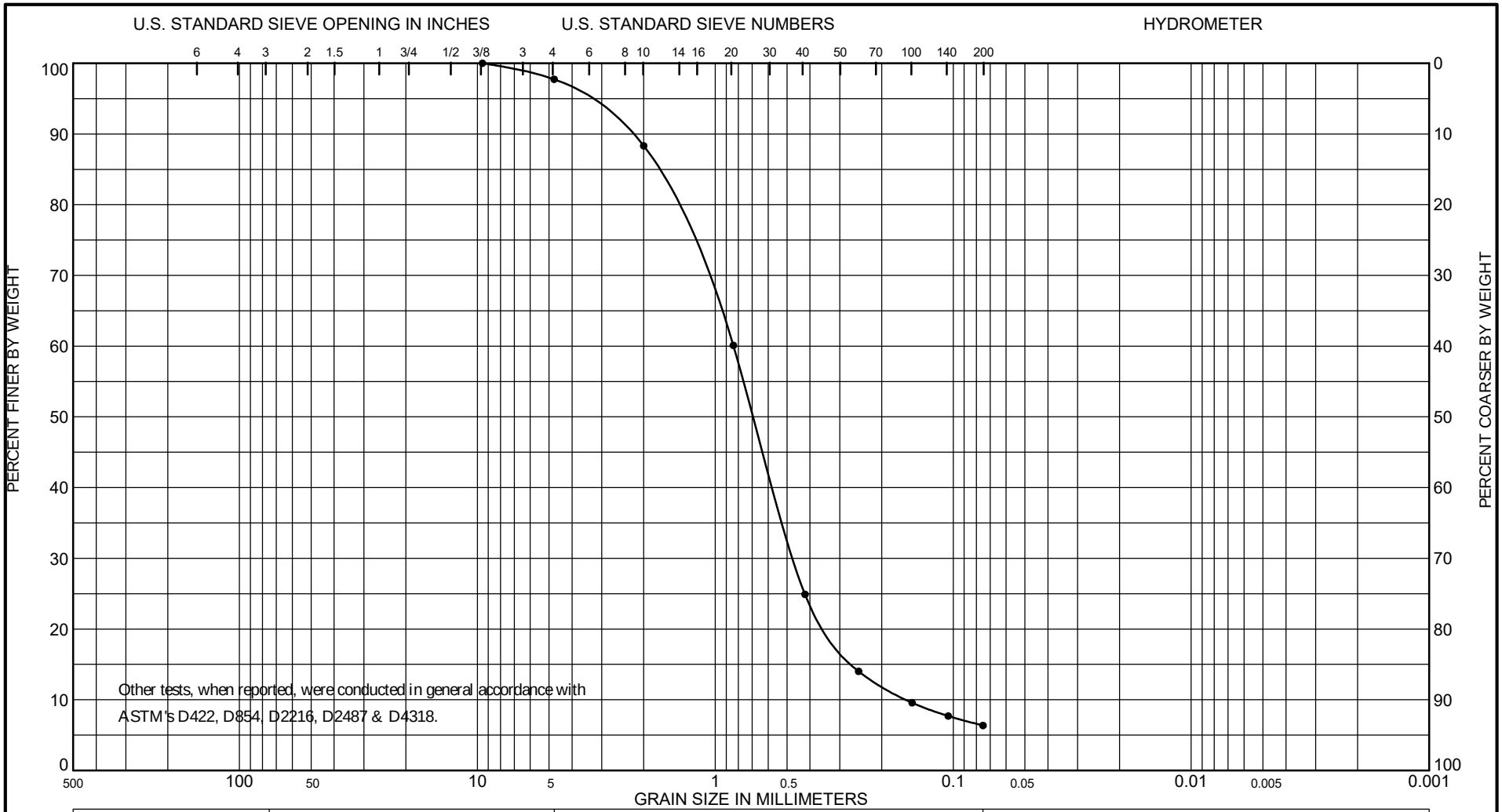
Hole No. B-3A

Date 11/4/19

GRADATION CURVES

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1243e
REQUISITION: W33SJG93036295



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

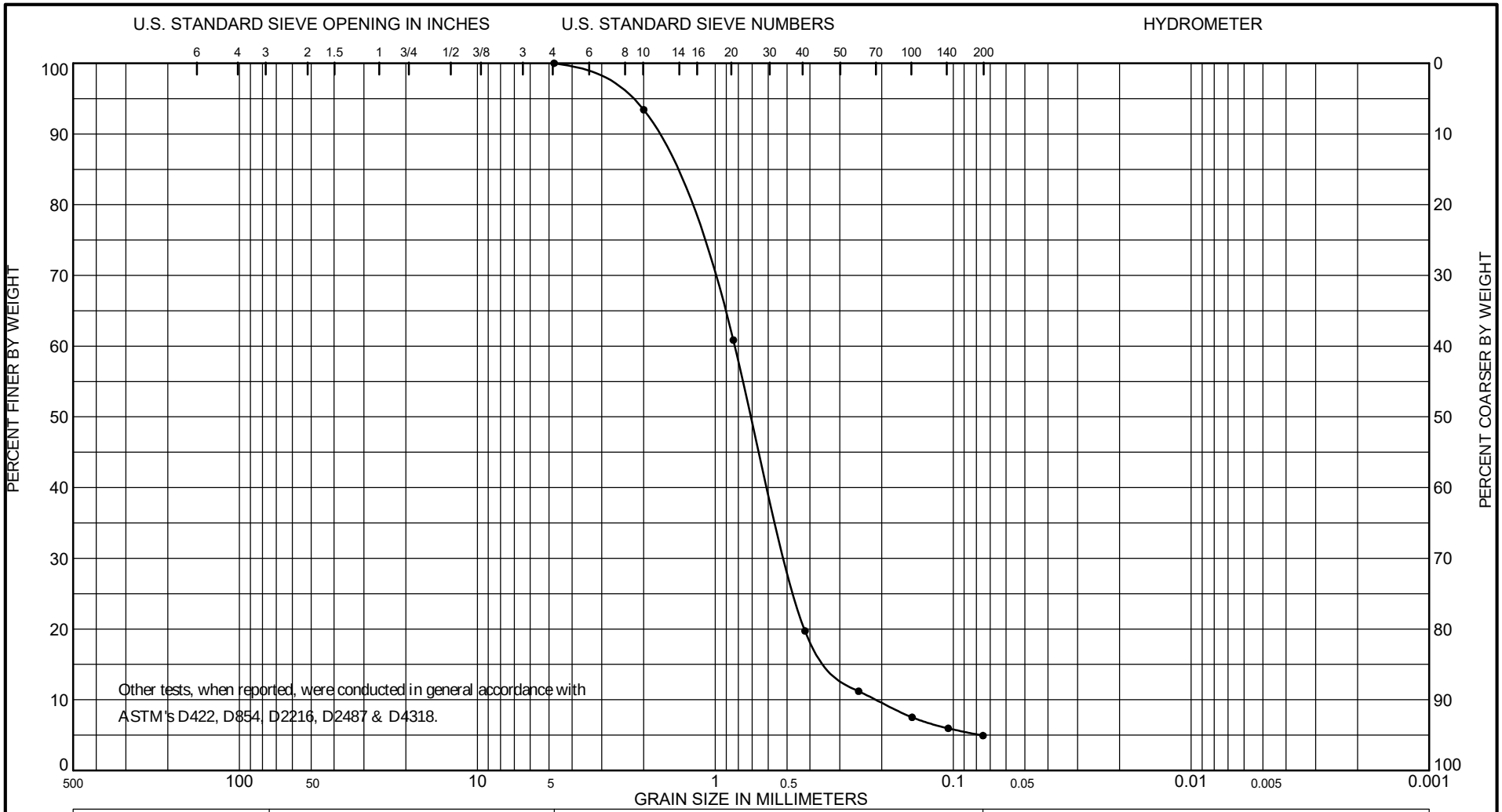
Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
	0.0 to 12.5	Yellowish Brown, Poorly Graded Silty Sand (SP-SM), with a trace of	17.9			
		gravel & mica.				

Project Augusta Training Wall
Soi Testing August, GA
Lab No. K6/13790
Hole No. B-4A
Date 11/4/19

GRADATION CURVES

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1243e
REQUISITION: W33SJG93036295



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
	0.0 to 16.0	Yellowish Brown, Poorly Graded Sand (SP), with a trace of mica.	17.3			

Project Augusta Training Wall

Soi Testing August, GA

Lab No. K6/13791

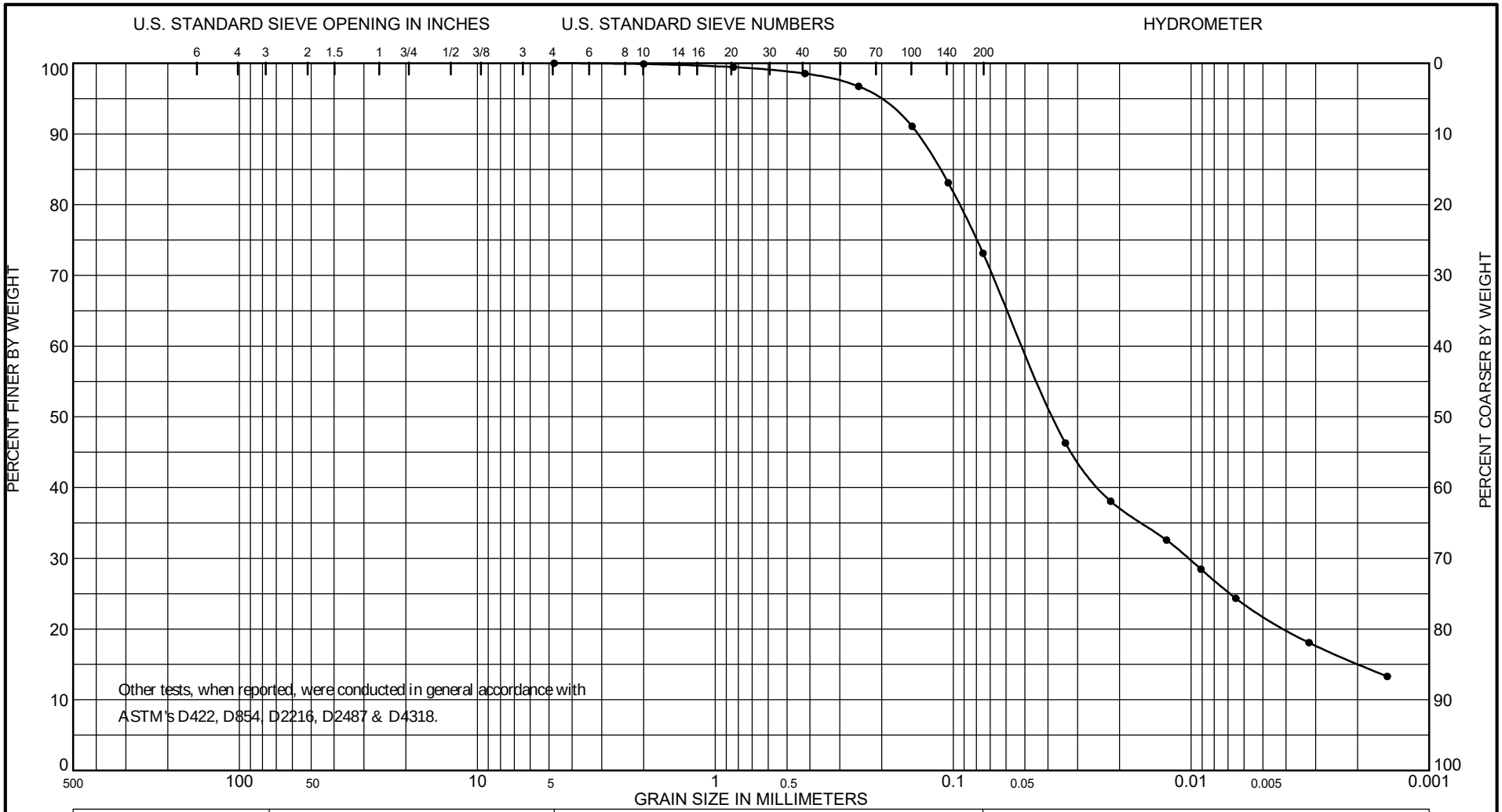
Hole No. B-6A

Date 11/4/19

GRADATION CURVES

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1243e
REQUISITION: W33SJG93036295



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

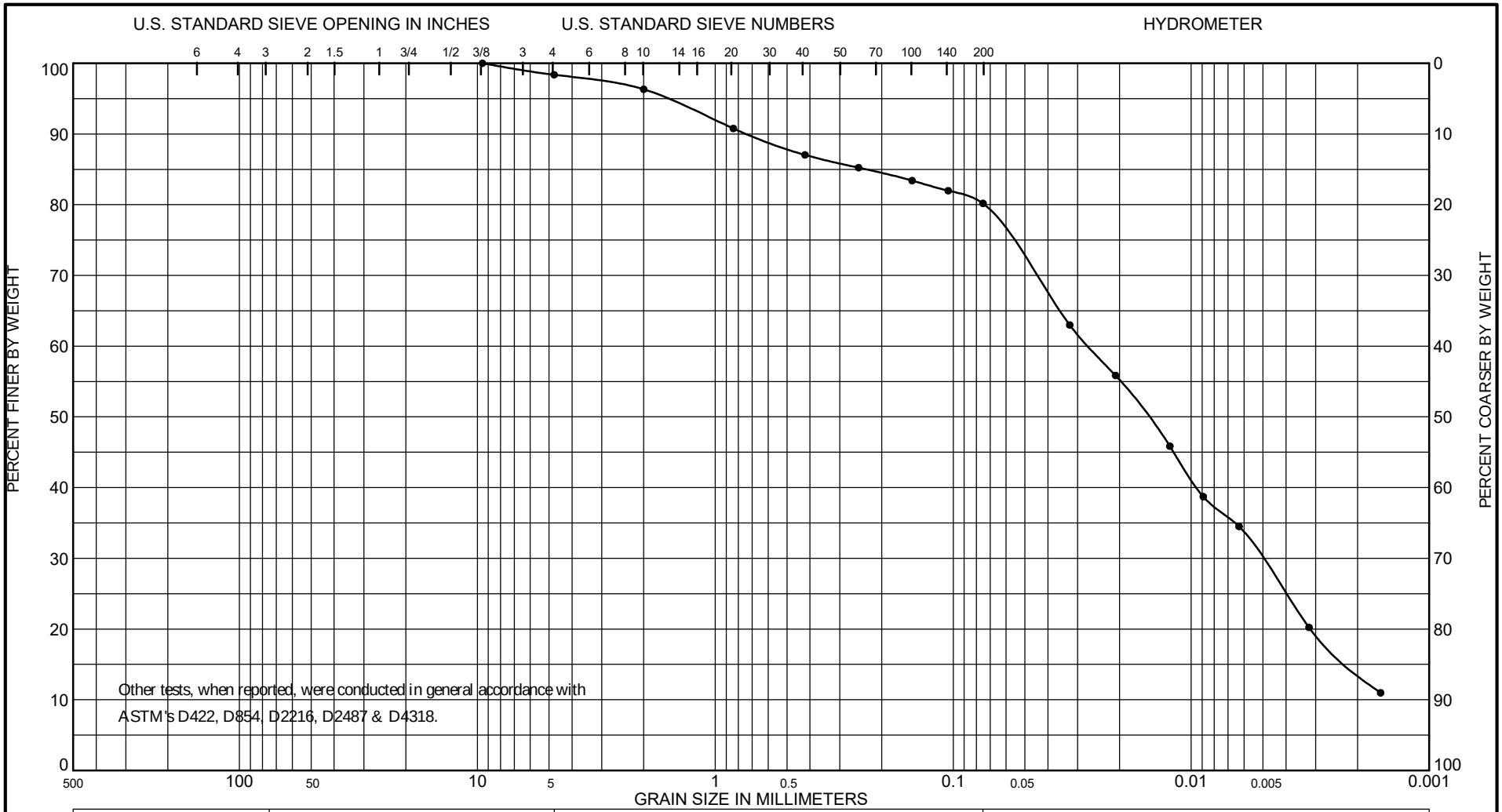
Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
	18.5 to 20.0	Greenish Gray, (Visual) Lean Clay (CL), with some sand.	39.1			

Project Augusta Training Wall
Soi Testing August, GA
Lab No. K6/13792
Hole No. B-7A
Date 11/4/19

GRADATION CURVES

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1243e
REQUISITION: W33SJG93036295



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

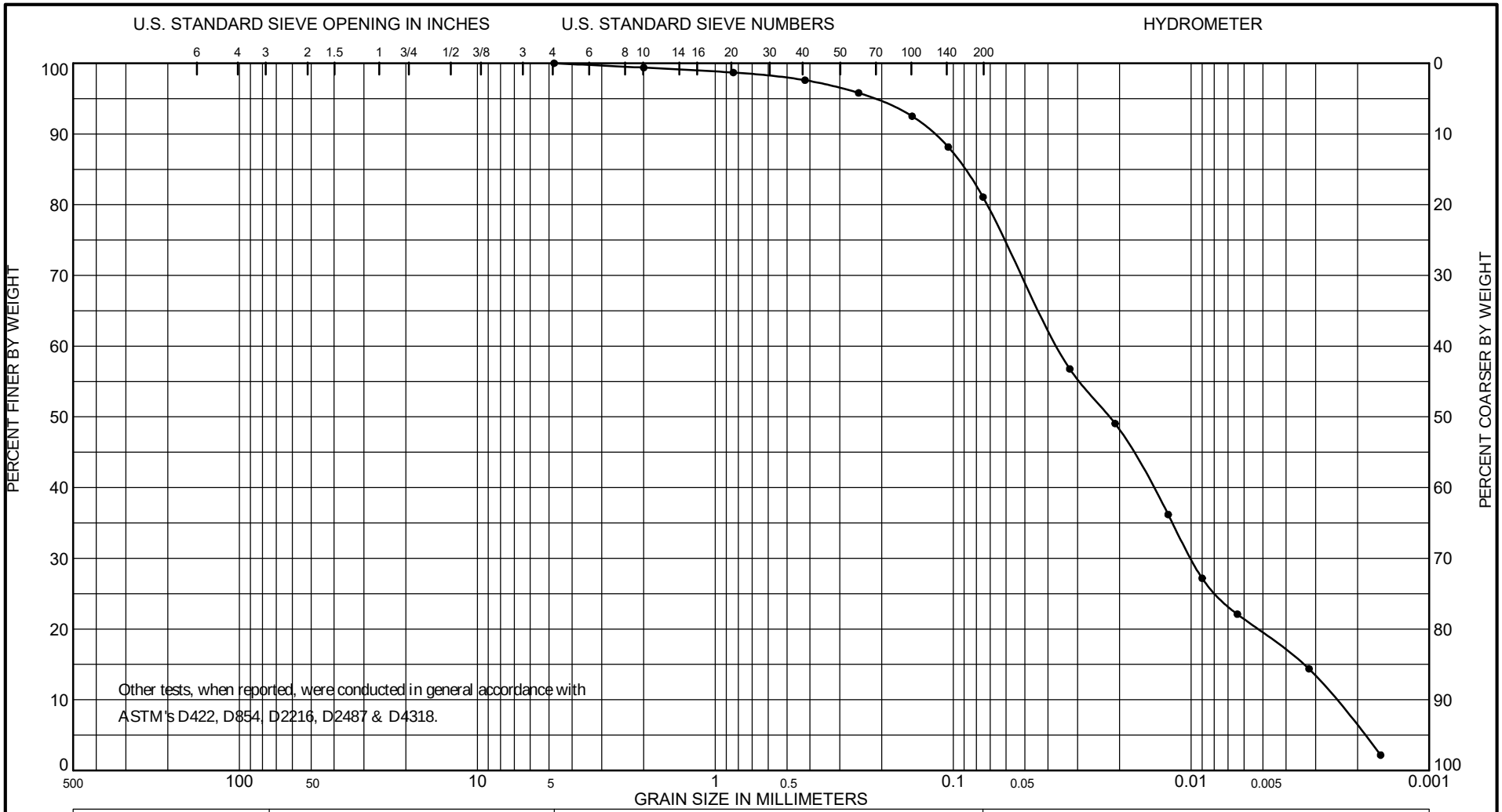
Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
	14.0 to 18.0	Brownish Yellow & Light Gray, (Visual) Lean Clay (CL), with a little sand, and a trace of gravel & mica.	44.2			

Project Augusta Training Wall
Soi Testing August, GA
Lab No. K6/13793
Hole No. B-9A
Date 11/4/19

GRADATION CURVES

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1243e
REQUISITION: W33SJG93036295



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

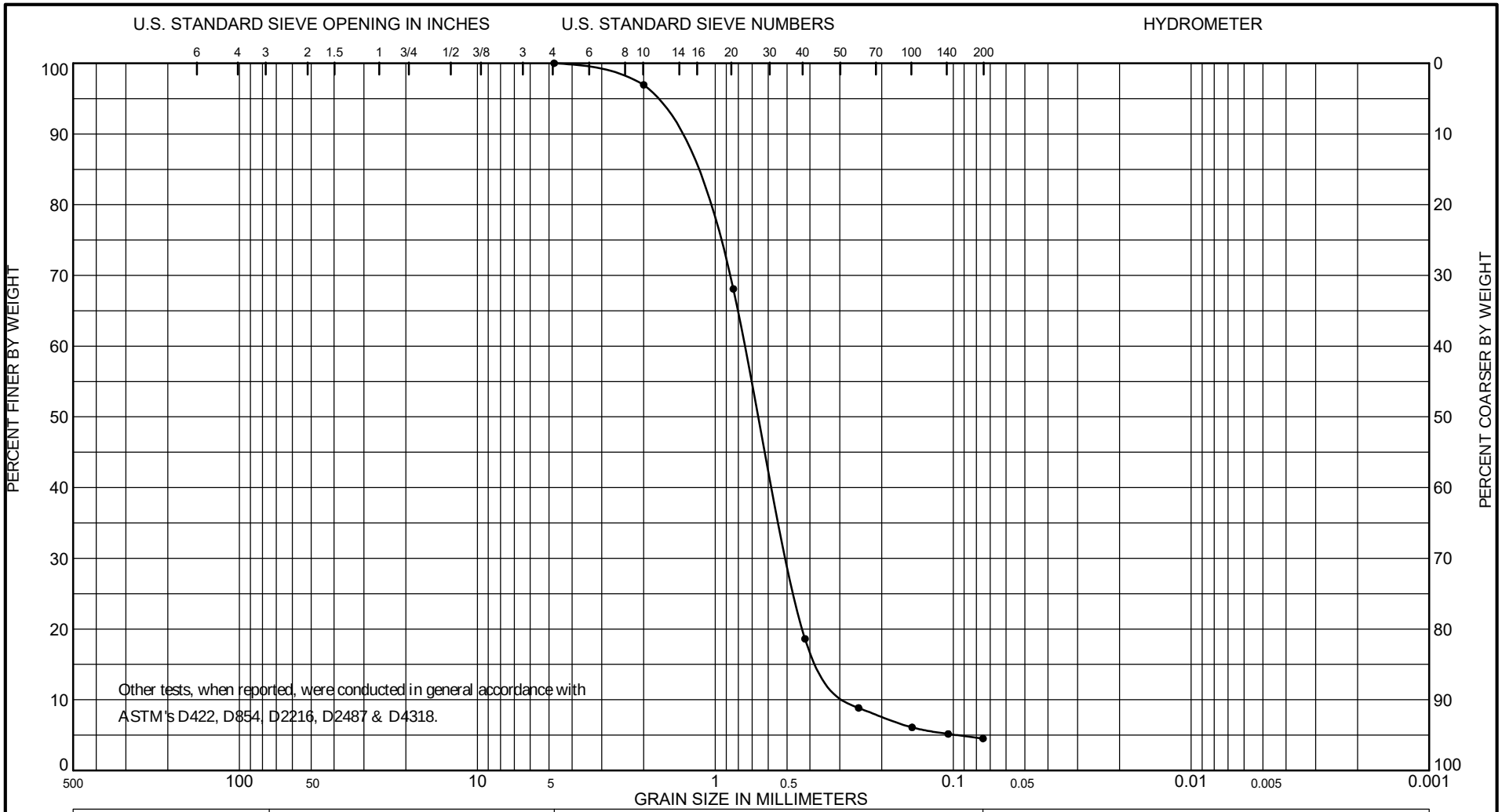
Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
	12.0 to 15.0	Yellowish Brown & Brownish Yellow, (Visual) Lean Clay (CL), with a little sand.	29.2			

Project Augusta Training Wall
Soi Testing August, GA
Lab No. K6/13794
Hole No. B-10A
Date 11/4/19

GRADATION CURVES

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1243e
REQUISITION: W33SJG93036295



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
	0.0 to 10.0	Yellowish Brown, Poorly Graded Sand (SP), with a trace of mica.	20.0			

Project Augusta Training Wall

Soi Testing August, GA

Lab No. K6/13795

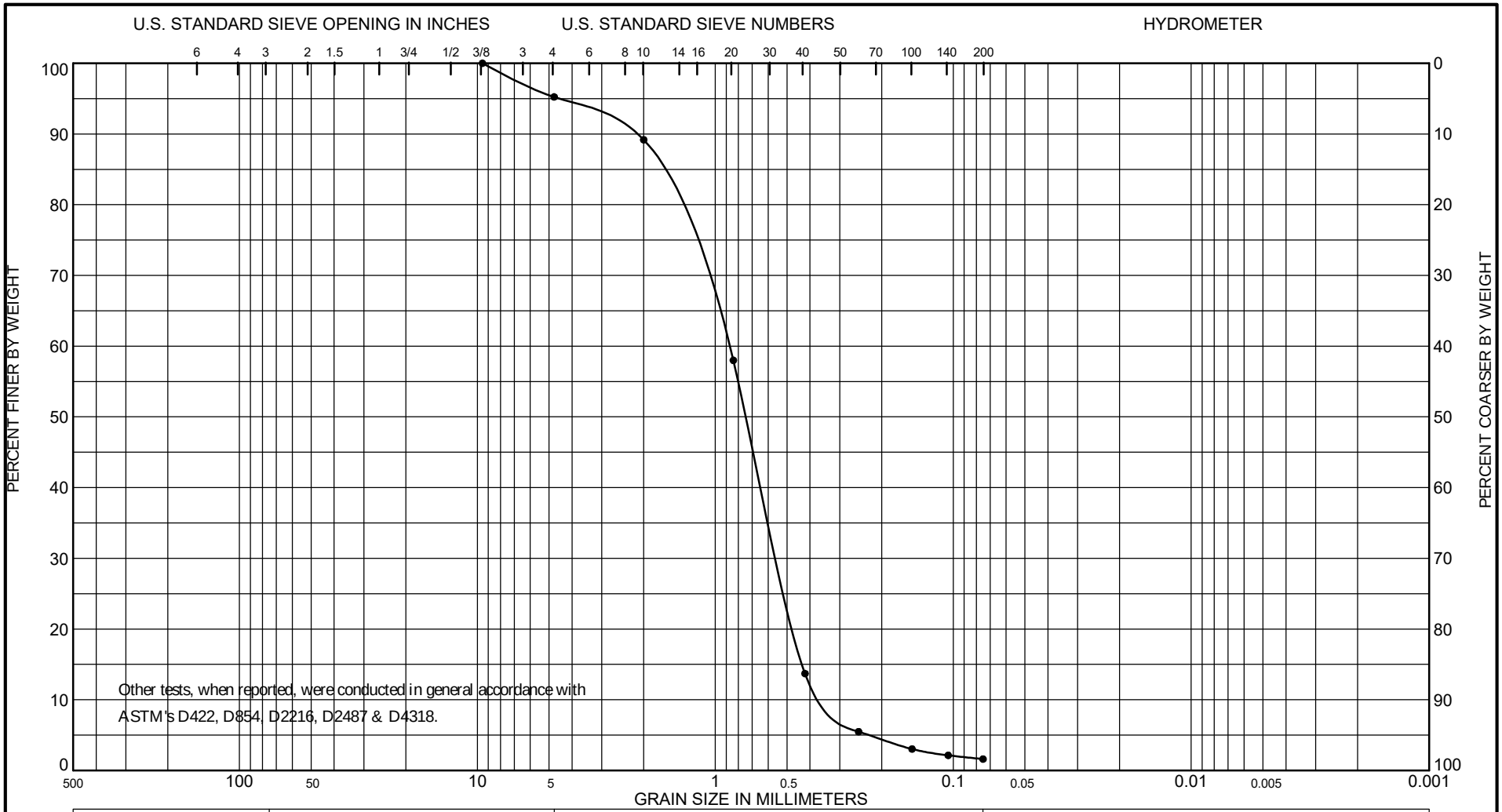
Hole No. B-12A

Date 11/4/19

GRADATION CURVES

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1243e
REQUISITION: W33SJG93036295



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
	0.0 to 12.0	Yellowish Brown, Poorly Graded Sand (SP), with a trace of gravel & mica.	21.0			

Project Augusta Training Wall
Soi Testing August, GA
Lab No. K6/13796
Hole No. B-13A
Date 11/4/19

GRADATION CURVES

APPENDIX B
LABORATORY DATA SHEETS

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Tampa
6712 Benjamin Road
Suite 100
Tampa, FL 33634
Tel: (813)885-7427

Laboratory Job ID: 660-98299-1
Client Project/Site: Augusta Training Wall, Augusta, GA

For:
U.S. Army Corps of Engineers
100 West Oglethorpe Ave
Savannah, Georgia 31401

Attn: Brett Zeigler

Kathryn Smith

Authorized for release by:
10/31/2019 4:34:05 PM
Kathryn Smith, Manager of Project Management
(912)250-0275
kathy.smith@testamericainc.com

Designee for

Jon Lawhon, Project Manager I
(912)250-0283
jon.lawhon@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.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.

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Certification Summary 46
Chain of Custody 48
Receipt Checklists 49

Sample Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
660-98299-1	BG-1-0-10-10-19	Solid	10/24/19 10:28	10/25/19 08:30	
660-98299-2	BG-4-0-5-10-19	Solid	10/24/19 10:42	10/25/19 08:30	
660-98299-3	BG-2-0-5-10-19	Solid	10/24/19 10:58	10/25/19 08:30	
660-98299-4	BG-3-0-5-10-19	Solid	10/24/19 11:14	10/25/19 08:30	
660-98299-5	B-1a-0-6-10-19	Solid	10/24/19 11:42	10/25/19 08:30	
660-98299-6	B-1a-6-10-10-19	Solid	10/24/19 11:51	10/25/19 08:30	
660-98299-7	B-2a-0-7-10-19	Solid	10/24/19 12:05	10/25/19 08:30	
660-98299-8	B-2a-7-10-10-19	Solid	10/24/19 12:10	10/25/19 08:30	
660-98299-9	B-3a-0-6-10-19	Solid	10/24/19 12:41	10/25/19 08:30	
660-98299-10	B-3a-6-10-10-19	Solid	10/24/19 12:42	10/25/19 08:30	
660-98299-11	DUP-1-10-19	Solid	10/24/19 12:00	10/25/19 08:30	

Job ID: 660-98299-1

Laboratory: Eurofins TestAmerica, Tampa

Narrative

CASE NARRATIVE
Client: U.S. Army Corps of Engineers
Project: Augusta Training Wall, Augusta, GA

Report Number: 660-98299-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 10/25/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 0.6º C.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples BG-1-0-10-10-19 (660-98299-1), BG-4-0-5-10-19 (660-98299-2), BG-2-0-5-10-19 (660-98299-3), BG-3-0-5-10-19 (660-98299-4), B-1a-0-6-10-19 (660-98299-5), B-1a-6-10-10-19 (660-98299-6), B-2a-0-7-10-19 (660-98299-7), B-2a-7-10-10-19 (660-98299-8), B-3a-0-6-10-19 (660-98299-9), B-3a-6-10-10-19 (660-98299-10) and DUP-1-10-19 (660-98299-11) were analyzed for Semivolatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared and analyzed on 10/29/2019.

Surrogate recovery for the following sample was outside control limits: B-1a-6-10-10-19 (660-98299-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

The laboratory control sample (LCS) for preparation batch 660-217581 and analytical batch 660-217589 recovered outside control limits for the following analytes: Carbazole. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. Carbazole is a known poor performing analyte.

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

POLYCHLORINATED BIPHENYLS (PCBS)

Samples BG-1-0-10-10-19 (660-98299-1), BG-4-0-5-10-19 (660-98299-2), BG-2-0-5-10-19 (660-98299-3), BG-3-0-5-10-19 (660-98299-4), B-1a-0-6-10-19 (660-98299-5), B-1a-6-10-10-19 (660-98299-6), B-2a-0-7-10-19 (660-98299-7), B-2a-7-10-10-19 (660-98299-8), B-3a-0-6-10-19 (660-98299-9), B-3a-6-10-10-19 (660-98299-10) and DUP-1-10-19 (660-98299-11) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The samples were prepared on 10/28/2019 and analyzed on 10/30/2019.

This method incorporates 2nd column confirmation. Corrective action is not taken for surrogate/spike compounds unless results from both columns are unacceptable. Results outside criteria are qualified.

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

METALS BY ICP

Samples BG-1-0-10-10-19 (660-98299-1), BG-4-0-5-10-19 (660-98299-2), BG-2-0-5-10-19 (660-98299-3), BG-3-0-5-10-19 (660-98299-4), B-1a-0-6-10-19 (660-98299-5), B-1a-6-10-10-19 (660-98299-6), B-2a-0-7-10-19 (660-98299-7), B-2a-7-10-10-19 (660-98299-8), B-3a-0-6-10-19 (660-98299-9), B-3a-6-10-10-19 (660-98299-10) and DUP-1-10-19 (660-98299-11) were analyzed for Metals by ICP in accordance with EPA SW-846 Method 6010D. The samples were prepared and analyzed on 10/28/2019.

Samples B-1a-6-10-10-19 (660-98299-6)[5X], B-3a-6-10-10-19 (660-98299-10)[3X] and DUP-1-10-19 (660-98299-11)[3X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Job ID: 660-98299-1 (Continued)

Laboratory: Eurofins TestAmerica, Tampa (Continued)

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

TOTAL MERCURY

Samples BG-1-0-10-10-19 (660-98299-1), BG-4-0-5-10-19 (660-98299-2), BG-2-0-5-10-19 (660-98299-3), BG-3-0-5-10-19 (660-98299-4), B-1a-0-6-10-19 (660-98299-5), B-1a-6-10-10-19 (660-98299-6), B-2a-0-7-10-19 (660-98299-7), B-2a-7-10-10-19 (660-98299-8), B-3a-0-6-10-19 (660-98299-9), B-3a-6-10-10-19 (660-98299-10) and DUP-1-10-19 (660-98299-11) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared and analyzed on 10/29/2019.

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

PERCENT SOLIDS/MOISTURE

Samples BG-1-0-10-10-19 (660-98299-1), BG-4-0-5-10-19 (660-98299-2), BG-2-0-5-10-19 (660-98299-3), BG-3-0-5-10-19 (660-98299-4), B-1a-0-6-10-19 (660-98299-5), B-1a-6-10-10-19 (660-98299-6), B-2a-0-7-10-19 (660-98299-7), B-2a-7-10-10-19 (660-98299-8), B-3a-0-6-10-19 (660-98299-9), B-3a-6-10-10-19 (660-98299-10) and DUP-1-10-19 (660-98299-11) were analyzed for Percent Solids/Moisture in accordance with TestAmerica SOP. The samples were analyzed on 10/28/2019 and 10/29/2019.

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

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

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)

Detection Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: BG-1-0-10-10-19 — Lab Sample ID: 660-98299-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.12	J	1.2	0.097	mg/Kg	1	☼	6010D	Total/NA
Barium	8.4		1.2	0.065	mg/Kg	1	☼	6010D	Total/NA
Chromium	2.4		1.2	0.086	mg/Kg	1	☼	6010D	Total/NA
Lead	0.79	J	1.2	0.17	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: BG-4-0-5-10-19 — Lab Sample ID: 660-98299-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Pyrene	0.056	J	0.41	0.046	mg/Kg	1	☼	8270D	Total/NA
Arsenic	0.17	J	1.3	0.11	mg/Kg	1	☼	6010D	Total/NA
Barium	5.2		1.3	0.071	mg/Kg	1	☼	6010D	Total/NA
Chromium	2.9		1.3	0.093	mg/Kg	1	☼	6010D	Total/NA
Lead	2.3		1.3	0.18	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: BG-2-0-5-10-19 — Lab Sample ID: 660-98299-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.32	J	1.2	0.10	mg/Kg	1	☼	6010D	Total/NA
Barium	15		1.2	0.069	mg/Kg	1	☼	6010D	Total/NA
Chromium	4.3		1.2	0.091	mg/Kg	1	☼	6010D	Total/NA
Lead	1.9		1.2	0.18	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: BG-3-0-5-10-19 — Lab Sample ID: 660-98299-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.062	J	0.41	0.061	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.063	J	0.41	0.046	mg/Kg	1	☼	8270D	Total/NA
Arsenic	0.40	J	1.3	0.11	mg/Kg	1	☼	6010D	Total/NA
Barium	23		1.3	0.071	mg/Kg	1	☼	6010D	Total/NA
Chromium	4.1		1.3	0.093	mg/Kg	1	☼	6010D	Total/NA
Lead	4.0		1.3	0.19	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: B-1a-0-6-10-19 — Lab Sample ID: 660-98299-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.12	J	1.3	0.11	mg/Kg	1	☼	6010D	Total/NA
Barium	7.4		1.3	0.073	mg/Kg	1	☼	6010D	Total/NA
Chromium	2.1		1.3	0.095	mg/Kg	1	☼	6010D	Total/NA
Lead	0.93	J	1.3	0.19	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: B-1a-6-10-10-19 — Lab Sample ID: 660-98299-6

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Isophorone	0.34	J	0.47	0.062	mg/Kg	1	☼	8270D	Total/NA
Arsenic	1.3	J	7.3	0.61	mg/Kg	5	☼	6010D	Total/NA
Barium	60		7.3	0.41	mg/Kg	5	☼	6010D	Total/NA
Chromium	4.9	J	7.3	0.54	mg/Kg	5	☼	6010D	Total/NA
Lead	1.8	J	7.3	1.1	mg/Kg	5	☼	6010D	Total/NA

Client Sample ID: B-2a-0-7-10-19 — Lab Sample ID: 660-98299-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Barium	5.9		1.3	0.071	mg/Kg	1	☼	6010D	Total/NA
Chromium	3.8		1.3	0.094	mg/Kg	1	☼	6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-2a-0-7-10-19 (Continued) — Lab Sample ID: 660-98299-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.53	J	1.3	0.19	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: B-2a-7-10-10-19 — Lab Sample ID: 660-98299-8

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.26	J	1.3	0.11	mg/Kg	1	☼	6010D	Total/NA
Barium	5.8		1.3	0.074	mg/Kg	1	☼	6010D	Total/NA
Chromium	2.1		1.3	0.097	mg/Kg	1	☼	6010D	Total/NA
Lead	0.64	J	1.3	0.19	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: B-3a-0-6-10-19 — Lab Sample ID: 660-98299-9

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.48	J	1.2	0.095	mg/Kg	1	☼	6010D	Total/NA
Barium	12		1.2	0.064	mg/Kg	1	☼	6010D	Total/NA
Chromium	4.4		1.2	0.084	mg/Kg	1	☼	6010D	Total/NA
Lead	1.3		1.2	0.17	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: B-3a-6-10-10-19 — Lab Sample ID: 660-98299-10

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.84	J	3.6	0.30	mg/Kg	3	☼	6010D	Total/NA
Barium	8.6		3.6	0.20	mg/Kg	3	☼	6010D	Total/NA
Chromium	1.5	J	3.6	0.26	mg/Kg	3	☼	6010D	Total/NA
Lead	2.1	J	3.6	0.52	mg/Kg	3	☼	6010D	Total/NA

Client Sample ID: DUP-1-10-19 — Lab Sample ID: 660-98299-11

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.73	J	3.7	0.30	mg/Kg	3	☼	6010D	Total/NA
Barium	8.2		3.7	0.20	mg/Kg	3	☼	6010D	Total/NA
Chromium	2.7	J	3.7	0.27	mg/Kg	3	☼	6010D	Total/NA
Lead	1.6	J	3.7	0.53	mg/Kg	3	☼	6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: BG-1-0-10-10-19

Date Collected: 10/24/19 10:28
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-1

Matrix: Solid
Percent Solids: 81.1

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.063	U	0.41	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Acenaphthylene	0.053	M U	0.41	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Acetophenone	0.10	M U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Anthracene	0.070	M U	0.41	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Atrazine	0.16	U	1.2	0.16	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Benzo[a]anthracene	0.056	M U	0.41	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Benzo[a]pyrene	0.055	U	0.41	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Benzo[b]fluoranthene	0.11	M U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Benzo[g,h,i]perylene	0.11	M U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Benzo[k]fluoranthene	0.070	M U	0.41	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
1,1'-Biphenyl	0.84	U	2.6	0.84	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Bis(2-chloroethoxy)methane	0.096	U	0.41	0.096	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Bis(2-chloroethyl)ether	0.096	U	0.41	0.096	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
bis (2-chloroisopropyl) ether	0.050	M U	0.41	0.050	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Bis(2-ethylhexyl) phthalate	0.058	U	0.41	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
4-Bromophenyl phenyl ether	0.099	U	0.41	0.099	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Butyl benzyl phthalate	0.048	M U	0.41	0.048	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Caprolactam	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Carbazole	0.49	Q U	1.2	0.49	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
4-Chloroaniline	0.091	M U	0.81	0.091	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
4-Chloro-3-methylphenol	0.061	U	0.41	0.061	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
2-Chloronaphthalene	0.073	U	0.41	0.073	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
2-Chlorophenol	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
4-Chlorophenyl phenyl ether	0.095	U	0.41	0.095	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Chrysene	0.057	M U	0.41	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Dibenz(a,h)anthracene	0.11	M U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Dibenzofuran	0.066	M U	0.41	0.066	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
2,4-Dichlorophenol	0.053	U	0.41	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Diethyl phthalate	0.058	U	0.41	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
2,4-Dimethylphenol	0.063	U	0.41	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Dimethyl phthalate	0.068	U	0.41	0.068	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Di-n-butyl phthalate	0.073	M U	0.41	0.073	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
4,6-Dinitro-2-methylphenol	0.24	U	2.1	0.24	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
2,4-Dinitrophenol	0.35	U	2.1	0.35	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
2,4-Dinitrotoluene	0.060	U	0.41	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
2,6-Dinitrotoluene	0.062	U	0.41	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Di-n-octyl phthalate	0.044	M U	0.41	0.044	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Fluoranthene	0.060	U	0.41	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Fluorene	0.058	M U	0.41	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Hexachlorobenzene	0.051	U	0.41	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Hexachlorobutadiene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Hexachlorocyclopentadiene	0.091	U	0.41	0.091	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Hexachloroethane	0.095	U	0.41	0.095	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Indeno[1,2,3-cd]pyrene	0.051	M U	0.41	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Isophorone	0.053	M U	0.41	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
2-Methylnaphthalene	0.071	M U	0.41	0.071	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
2-Methylphenol	0.14	U	0.41	0.14	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
3 & 4 Methylphenol	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Naphthalene	0.10	M U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: BG-1-0-10-10-19

Date Collected: 10/24/19 10:28
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-1

Matrix: Solid
Percent Solids: 81.1

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.092	M U	2.1	0.092	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
3-Nitroaniline	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
4-Nitroaniline	0.12	U	2.1	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Nitrobenzene	0.056	U	0.41	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
2-Nitrophenol	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
4-Nitrophenol	0.20	M U	2.1	0.20	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
N-Nitrosodi-n-propylamine	0.15	U	0.41	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Pentachlorophenol	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Phenanthrene	0.067	U	0.41	0.067	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Phenol	0.15	M U	0.41	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
Pyrene	0.046	U	0.41	0.046	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
2,4,5-Trichlorophenol	0.069	U	0.41	0.069	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1
2,4,6-Trichlorophenol	0.072	U	0.41	0.072	mg/Kg	☼	10/29/19 09:08	10/29/19 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*81*		*30 - 120*	*10/29/19 09:08*	*10/29/19 16:13*	*1*
2-Fluorophenol (Surr)	*77*		*16 - 113*	*10/29/19 09:08*	*10/29/19 16:13*	*1*
Nitrobenzene-d5 (Surr)	*77*		*20 - 120*	*10/29/19 09:08*	*10/29/19 16:13*	*1*
Phenol-d5 (Surr)	*78*		*19 - 144*	*10/29/19 09:08*	*10/29/19 16:13*	*1*
Terphenyl-d14 (Surr)	*90*		*30 - 131*	*10/29/19 09:08*	*10/29/19 16:13*	*1*
2,4,6-Tribromophenol (Surr)	*79*		*23 - 129*	*10/29/19 09:08*	*10/29/19 16:13*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.020	M U	0.082	0.020	mg/Kg	☼	10/28/19 08:03	10/30/19 12:07	1
PCB-1221	0.041	M U	0.12	0.041	mg/Kg	☼	10/28/19 08:03	10/30/19 12:07	1
PCB-1232	0.022	M U	0.082	0.022	mg/Kg	☼	10/28/19 08:03	10/30/19 12:07	1
PCB-1242	0.035	M U	0.11	0.035	mg/Kg	☼	10/28/19 08:03	10/30/19 12:07	1
PCB-1248	0.024	M U	0.082	0.024	mg/Kg	☼	10/28/19 08:03	10/30/19 12:07	1
PCB-1254	0.012	M U	0.040	0.012	mg/Kg	☼	10/28/19 08:03	10/30/19 12:07	1
PCB-1260	0.019	M U	0.055	0.019	mg/Kg	☼	10/28/19 08:03	10/30/19 12:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*91*		*30 - 150*	*10/28/19 08:03*	*10/30/19 12:07*	*1*
DCB Decachlorobiphenyl	*119*		*30 - 150*	*10/28/19 08:03*	*10/30/19 12:07*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.12**	**J**	1.2	0.097	mg/Kg	☼	10/28/19 07:37	10/28/19 12:02	1
Barium	**8.4**		1.2	0.065	mg/Kg	☼	10/28/19 07:37	10/28/19 12:02	1
Cadmium	0.033	U	0.59	0.033	mg/Kg	☼	10/28/19 07:37	10/28/19 12:02	1
Chromium	**2.4**		1.2	0.086	mg/Kg	☼	10/28/19 07:37	10/28/19 12:02	1
Lead	**0.79**	**J**	1.2	0.17	mg/Kg	☼	10/28/19 07:37	10/28/19 12:02	1
Selenium	0.43	U	2.3	0.43	mg/Kg	☼	10/28/19 07:37	10/28/19 12:02	1
Silver	0.22	U	1.2	0.22	mg/Kg	☼	10/28/19 07:37	10/28/19 12:02	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.013	U	0.045	0.013	mg/Kg	☼	10/29/19 11:30	10/29/19 12:50	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: BG-4-0-5-10-19

Date Collected: 10/24/19 10:42
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-2

Matrix: Solid
Percent Solids: 79.6

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.063	U	0.41	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Acenaphthylene	0.053	U	0.41	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Acetophenone	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Anthracene	0.071	U	0.41	0.071	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Atrazine	0.17	U	1.2	0.17	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Benzo[a]anthracene	0.056	U	0.41	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Benzo[a]pyrene	0.055	U	0.41	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Benzo[b]fluoranthene	0.11	M U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Benzo[g,h,i]perylene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Benzo[k]fluoranthene	0.070	M U	0.41	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
1,1'-Biphenyl	0.84	U	2.6	0.84	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Bis(2-chloroethoxy)methane	0.096	U	0.41	0.096	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Bis(2-chloroethyl)ether	0.096	U	0.41	0.096	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
bis (2-chloroisopropyl) ether	0.050	U	0.41	0.050	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Bis(2-ethylhexyl) phthalate	0.058	U	0.41	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
4-Bromophenyl phenyl ether	0.099	U	0.41	0.099	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Butyl benzyl phthalate	0.048	U	0.41	0.048	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Caprolactam	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Carbazole	0.49	Q U	1.2	0.49	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
4-Chloroaniline	0.091	U	0.81	0.091	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
4-Chloro-3-methylphenol	0.061	U	0.41	0.061	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
2-Chloronaphthalene	0.074	U	0.41	0.074	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
2-Chlorophenol	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
4-Chlorophenyl phenyl ether	0.095	U	0.41	0.095	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Chrysene	0.057	U	0.41	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Dibenz(a,h)anthracene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Dibenzofuran	0.066	U	0.41	0.066	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
2,4-Dichlorophenol	0.053	U	0.41	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Diethyl phthalate	0.058	U	0.41	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
2,4-Dimethylphenol	0.064	U	0.41	0.064	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Dimethyl phthalate	0.069	U	0.41	0.069	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Di-n-butyl phthalate	0.074	U	0.41	0.074	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
4,6-Dinitro-2-methylphenol	0.24	U	2.1	0.24	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
2,4-Dinitrophenol	0.36	U	2.1	0.36	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
2,4-Dinitrotoluene	0.060	U	0.41	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
2,6-Dinitrotoluene	0.062	U	0.41	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Di-n-octyl phthalate	0.044	U	0.41	0.044	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Fluoranthene	0.060	U	0.41	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Fluorene	0.058	U	0.41	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Hexachlorobenzene	0.051	U	0.41	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Hexachlorobutadiene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Hexachlorocyclopentadiene	0.092	U	0.41	0.092	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Hexachloroethane	0.095	U	0.41	0.095	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Indeno[1,2,3-cd]pyrene	0.052	U	0.41	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Isophorone	0.053	U	0.41	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
2-Methylnaphthalene	0.071	U	0.41	0.071	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
2-Methylphenol	0.14	U	0.41	0.14	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
3 & 4 Methylphenol	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Naphthalene	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: BG-4-0-5-10-19

Date Collected: 10/24/19 10:42
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-2

Matrix: Solid
Percent Solids: 79.6

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.092	U	2.1	0.092	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
3-Nitroaniline	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
4-Nitroaniline	0.12	U	2.1	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Nitrobenzene	0.057	U	0.41	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
2-Nitrophenol	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
4-Nitrophenol	0.20	U	2.1	0.20	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
N-Nitrosodi-n-propylamine	0.15	U	0.41	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Pentachlorophenol	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Phenanthrene	0.067	U	0.41	0.067	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Phenol	0.15	U	0.41	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
Pyrene	**0.056**	**J**	0.41	0.046	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
2,4,5-Trichlorophenol	0.069	U	0.41	0.069	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1
2,4,6-Trichlorophenol	0.073	U	0.41	0.073	mg/Kg	☼	10/29/19 09:08	10/29/19 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*90*		*30 - 120*	*10/29/19 09:08*	*10/29/19 17:38*	*1*
2-Fluorophenol (Surr)	*65*		*16 - 113*	*10/29/19 09:08*	*10/29/19 17:38*	*1*
Nitrobenzene-d5 (Surr)	*79*		*20 - 120*	*10/29/19 09:08*	*10/29/19 17:38*	*1*
Phenol-d5 (Surr)	*78*		*19 - 144*	*10/29/19 09:08*	*10/29/19 17:38*	*1*
Terphenyl-d14 (Surr)	*85*		*30 - 131*	*10/29/19 09:08*	*10/29/19 17:38*	*1*
2,4,6-Tribromophenol (Surr)	*108*		*23 - 129*	*10/29/19 09:08*	*10/29/19 17:38*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.020	M U	0.084	0.020	mg/Kg	☼	10/28/19 08:03	10/30/19 12:22	1
PCB-1221	0.042	M U	0.13	0.042	mg/Kg	☼	10/28/19 08:03	10/30/19 12:22	1
PCB-1232	0.022	M U	0.084	0.022	mg/Kg	☼	10/28/19 08:03	10/30/19 12:22	1
PCB-1242	0.036	M U	0.11	0.036	mg/Kg	☼	10/28/19 08:03	10/30/19 12:22	1
PCB-1248	0.025	M U	0.084	0.025	mg/Kg	☼	10/28/19 08:03	10/30/19 12:22	1
PCB-1254	0.012	M U	0.041	0.012	mg/Kg	☼	10/28/19 08:03	10/30/19 12:22	1
PCB-1260	0.019	M U	0.056	0.019	mg/Kg	☼	10/28/19 08:03	10/30/19 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*		*30 - 150*	*10/28/19 08:03*	*10/30/19 12:22*	*1*
DCB Decachlorobiphenyl	*109*		*30 - 150*	*10/28/19 08:03*	*10/30/19 12:22*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.17**	**J**	1.3	0.11	mg/Kg	☼	10/28/19 07:37	10/28/19 12:05	1
Barium	**5.2**		1.3	0.071	mg/Kg	☼	10/28/19 07:37	10/28/19 12:05	1
Cadmium	0.036	U	0.63	0.036	mg/Kg	☼	10/28/19 07:37	10/28/19 12:05	1
Chromium	**2.9**		1.3	0.093	mg/Kg	☼	10/28/19 07:37	10/28/19 12:05	1
Lead	**2.3**		1.3	0.18	mg/Kg	☼	10/28/19 07:37	10/28/19 12:05	1
Selenium	0.47	U	2.5	0.47	mg/Kg	☼	10/28/19 07:37	10/28/19 12:05	1
Silver	0.24	U	1.3	0.24	mg/Kg	☼	10/28/19 07:37	10/28/19 12:05	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.016	U	0.052	0.016	mg/Kg	☼	10/29/19 11:30	10/29/19 12:55	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: BG-2-0-5-10-19

Date Collected: 10/24/19 10:58
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-3

Matrix: Solid
Percent Solids: 78.8

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.064	U	0.42	0.064	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Acenaphthylene	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Acetophenone	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Anthracene	0.072	U	0.42	0.072	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Atrazine	0.17	U	1.3	0.17	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Benzo[a]anthracene	0.057	U	0.42	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Benzo[a]pyrene	0.056	M U	0.42	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Benzo[b]fluoranthene	0.12	U	0.42	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Benzo[g,h,i]perylene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Benzo[k]fluoranthene	0.072	M U	0.42	0.072	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
1,1'-Biphenyl	0.86	U	2.7	0.86	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Bis(2-chloroethoxy)methane	0.099	U	0.42	0.099	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Bis(2-chloroethyl)ether	0.099	U	0.42	0.099	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
bis (2-chloroisopropyl) ether	0.052	U	0.42	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Bis(2-ethylhexyl) phthalate	0.059	U	0.42	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
4-Bromophenyl phenyl ether	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Butyl benzyl phthalate	0.049	U	0.42	0.049	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Caprolactam	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Carbazole	0.51	Q U	1.3	0.51	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
4-Chloroaniline	0.094	U	0.84	0.094	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
4-Chloro-3-methylphenol	0.063	U	0.42	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
2-Chloronaphthalene	0.076	U	0.42	0.076	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
2-Chlorophenol	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
4-Chlorophenyl phenyl ether	0.098	U	0.42	0.098	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Chrysene	0.059	U	0.42	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Dibenz(a,h)anthracene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Dibenzofuran	0.068	U	0.42	0.068	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
2,4-Dichlorophenol	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Diethyl phthalate	0.060	U	0.42	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
2,4-Dimethylphenol	0.065	U	0.42	0.065	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Dimethyl phthalate	0.070	U	0.42	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Di-n-butyl phthalate	0.076	U	0.42	0.076	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
4,6-Dinitro-2-methylphenol	0.24	U	2.2	0.24	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
2,4-Dinitrophenol	0.36	U	2.2	0.36	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
2,4-Dinitrotoluene	0.062	U	0.42	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
2,6-Dinitrotoluene	0.063	U	0.42	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Di-n-octyl phthalate	0.045	U	0.42	0.045	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Fluoranthene	0.061	U	0.42	0.061	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Fluorene	0.060	U	0.42	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Hexachlorobenzene	0.052	U	0.42	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Hexachlorobutadiene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Hexachlorocyclopentadiene	0.094	U	0.42	0.094	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Hexachloroethane	0.097	U	0.42	0.097	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Indeno[1,2,3-cd]pyrene	0.053	U	0.42	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Isophorone	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
2-Methylnaphthalene	0.073	U	0.42	0.073	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
2-Methylphenol	0.14	U	0.42	0.14	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
3 & 4 Methylphenol	0.056	U	0.42	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Naphthalene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: BG-2-0-5-10-19

Date Collected: 10/24/19 10:58
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-3

Matrix: Solid
Percent Solids: 78.8

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.095	U	2.2	0.095	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
3-Nitroaniline	0.20	U	2.2	0.20	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
4-Nitroaniline	0.12	U	2.2	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Nitrobenzene	0.058	U	0.42	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
2-Nitrophenol	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
4-Nitrophenol	0.20	U	2.2	0.20	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
N-Nitrosodi-n-propylamine	0.15	U	0.42	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Pentachlorophenol	0.19	U	2.2	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Phenanthrene	0.069	U	0.42	0.069	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Phenol	0.16	M U	0.42	0.16	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
Pyrene	0.047	U	0.42	0.047	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
2,4,5-Trichlorophenol	0.071	U	0.42	0.071	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1
2,4,6-Trichlorophenol	0.075	U	0.42	0.075	mg/Kg	☼	10/29/19 09:08	10/29/19 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*90*		*30 - 120*	*10/29/19 09:08*	*10/29/19 18:03*	*1*
2-Fluorophenol (Surr)	*66*		*16 - 113*	*10/29/19 09:08*	*10/29/19 18:03*	*1*
Nitrobenzene-d5 (Surr)	*77*		*20 - 120*	*10/29/19 09:08*	*10/29/19 18:03*	*1*
Phenol-d5 (Surr)	*78*		*19 - 144*	*10/29/19 09:08*	*10/29/19 18:03*	*1*
Terphenyl-d14 (Surr)	*83*		*30 - 131*	*10/29/19 09:08*	*10/29/19 18:03*	*1*
2,4,6-Tribromophenol (Surr)	*107*		*23 - 129*	*10/29/19 09:08*	*10/29/19 18:03*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.020	M U	0.084	0.020	mg/Kg	☼	10/28/19 08:03	10/30/19 12:37	1
PCB-1221	0.042	M U	0.13	0.042	mg/Kg	☼	10/28/19 08:03	10/30/19 12:37	1
PCB-1232	0.022	M U	0.084	0.022	mg/Kg	☼	10/28/19 08:03	10/30/19 12:37	1
PCB-1242	0.036	M U	0.11	0.036	mg/Kg	☼	10/28/19 08:03	10/30/19 12:37	1
PCB-1248	0.025	M U	0.084	0.025	mg/Kg	☼	10/28/19 08:03	10/30/19 12:37	1
PCB-1254	0.012	M U	0.041	0.012	mg/Kg	☼	10/28/19 08:03	10/30/19 12:37	1
PCB-1260	0.019	M U	0.057	0.019	mg/Kg	☼	10/28/19 08:03	10/30/19 12:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*92*		*30 - 150*	*10/28/19 08:03*	*10/30/19 12:37*	*1*
DCB Decachlorobiphenyl	*114*		*30 - 150*	*10/28/19 08:03*	*10/30/19 12:37*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.32**	**J**	1.2	0.10	mg/Kg	☼	10/28/19 07:37	10/28/19 12:09	1
Barium	**15**		1.2	0.069	mg/Kg	☼	10/28/19 07:37	10/28/19 12:09	1
Cadmium	0.035	U	0.62	0.035	mg/Kg	☼	10/28/19 07:37	10/28/19 12:09	1
Chromium	**4.3**		1.2	0.091	mg/Kg	☼	10/28/19 07:37	10/28/19 12:09	1
Lead	**1.9**		1.2	0.18	mg/Kg	☼	10/28/19 07:37	10/28/19 12:09	1
Selenium	0.46	U	2.5	0.46	mg/Kg	☼	10/28/19 07:37	10/28/19 12:09	1
Silver	0.24	U	1.2	0.24	mg/Kg	☼	10/28/19 07:37	10/28/19 12:09	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.014	U	0.046	0.014	mg/Kg	☼	10/29/19 11:30	10/29/19 12:57	1

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: BG-3-0-5-10-19
Date Collected: 10/24/19 11:14
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-4
Matrix: Solid
Percent Solids: 77.4

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.064	U	0.41	0.064	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Acenaphthylene	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Acetophenone	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Anthracene	0.072	U	0.41	0.072	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Atrazine	0.17	U	1.3	0.17	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Benzo[a]anthracene	0.057	U	0.41	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Benzo[a]pyrene	0.056	U	0.41	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Benzo[b]fluoranthene	0.12	U	0.41	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Benzo[g,h,i]perylene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Benzo[k]fluoranthene	0.071	M U	0.41	0.071	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
1,1'-Biphenyl	0.85	U	2.6	0.85	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Bis(2-chloroethoxy)methane	0.098	U	0.41	0.098	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Bis(2-chloroethyl)ether	0.097	U	0.41	0.097	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
bis (2-chloroisopropyl) ether	0.051	U	0.41	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Bis(2-ethylhexyl) phthalate	0.059	U	0.41	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
4-Bromophenyl phenyl ether	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Butyl benzyl phthalate	0.049	U	0.41	0.049	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Caprolactam	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Carbazole	0.50	Q U	1.3	0.50	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
4-Chloroaniline	0.092	U	0.83	0.092	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
4-Chloro-3-methylphenol	0.062	U	0.41	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
2-Chloronaphthalene	0.075	U	0.41	0.075	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
2-Chlorophenol	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
4-Chlorophenyl phenyl ether	0.097	U	0.41	0.097	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Chrysene	0.058	U	0.41	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Dibenz(a,h)anthracene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Dibenzofuran	0.067	U	0.41	0.067	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
2,4-Dichlorophenol	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Diethyl phthalate	0.059	U	0.41	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
2,4-Dimethylphenol	0.065	U	0.41	0.065	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Dimethyl phthalate	0.070	U	0.41	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Di-n-butyl phthalate	0.075	U	0.41	0.075	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
4,6-Dinitro-2-methylphenol	0.24	U	2.1	0.24	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
2,4-Dinitrophenol	0.36	U	2.1	0.36	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
2,4-Dinitrotoluene	0.061	U	0.41	0.061	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
2,6-Dinitrotoluene	0.063	U	0.41	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Di-n-octyl phthalate	0.044	U	0.41	0.044	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Fluoranthene	**0.062**	**J**	0.41	0.061	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Fluorene	0.059	U	0.41	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Hexachlorobenzene	0.052	U	0.41	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Hexachlorobutadiene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Hexachlorocyclopentadiene	0.093	U	0.41	0.093	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Hexachloroethane	0.096	U	0.41	0.096	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Indeno[1,2,3-cd]pyrene	0.052	U	0.41	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Isophorone	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
2-Methylnaphthalene	0.072	U	0.41	0.072	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
2-Methylphenol	0.14	U	0.41	0.14	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
3 & 4 Methylphenol	0.055	U	0.41	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Naphthalene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: BG-3-0-5-10-19

Date Collected: 10/24/19 11:14
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-4

Matrix: Solid
Percent Solids: 77.4

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.094	U	2.1	0.094	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
3-Nitroaniline	0.20	U	2.1	0.20	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
4-Nitroaniline	0.12	U	2.1	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Nitrobenzene	0.057	U	0.41	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
2-Nitrophenol	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
4-Nitrophenol	0.20	U	2.1	0.20	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
N-Nitrosodi-n-propylamine	0.15	U	0.41	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Pentachlorophenol	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Phenanthrene	0.068	U	0.41	0.068	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Phenol	0.15	U	0.41	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
Pyrene	**0.063**	**J**	0.41	0.046	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
2,4,5-Trichlorophenol	0.070	U	0.41	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1
2,4,6-Trichlorophenol	0.074	U	0.41	0.074	mg/Kg	☼	10/29/19 09:08	10/29/19 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*79*		*30 - 120*	*10/29/19 09:08*	*10/29/19 18:28*	*1*
2-Fluorophenol (Surr)	*55*		*16 - 113*	*10/29/19 09:08*	*10/29/19 18:28*	*1*
Nitrobenzene-d5 (Surr)	*68*		*20 - 120*	*10/29/19 09:08*	*10/29/19 18:28*	*1*
Phenol-d5 (Surr)	*66*		*19 - 144*	*10/29/19 09:08*	*10/29/19 18:28*	*1*
Terphenyl-d14 (Surr)	*79*		*30 - 131*	*10/29/19 09:08*	*10/29/19 18:28*	*1*
2,4,6-Tribromophenol (Surr)	*87*		*23 - 129*	*10/29/19 09:08*	*10/29/19 18:28*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.021	M U	0.086	0.021	mg/Kg	☼	10/28/19 08:03	10/30/19 12:51	1
PCB-1221	0.043	M U	0.13	0.043	mg/Kg	☼	10/28/19 08:03	10/30/19 12:51	1
PCB-1232	0.023	M U	0.086	0.023	mg/Kg	☼	10/28/19 08:03	10/30/19 12:51	1
PCB-1242	0.037	M U	0.11	0.037	mg/Kg	☼	10/28/19 08:03	10/30/19 12:51	1
PCB-1248	0.026	M U	0.086	0.026	mg/Kg	☼	10/28/19 08:03	10/30/19 12:51	1
PCB-1254	0.012	M U	0.043	0.012	mg/Kg	☼	10/28/19 08:03	10/30/19 12:51	1
PCB-1260	0.020	M U	0.058	0.020	mg/Kg	☼	10/28/19 08:03	10/30/19 12:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*87*		*30 - 150*	*10/28/19 08:03*	*10/30/19 12:51*	*1*
DCB Decachlorobiphenyl	*108*		*30 - 150*	*10/28/19 08:03*	*10/30/19 12:51*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.40**	**J**	1.3	0.11	mg/Kg	☼	10/28/19 07:37	10/28/19 12:12	1
Barium	**23**		1.3	0.071	mg/Kg	☼	10/28/19 07:37	10/28/19 12:12	1
Cadmium	0.036	U	0.64	0.036	mg/Kg	☼	10/28/19 07:37	10/28/19 12:12	1
Chromium	**4.1**		1.3	0.093	mg/Kg	☼	10/28/19 07:37	10/28/19 12:12	1
Lead	**4.0**		1.3	0.19	mg/Kg	☼	10/28/19 07:37	10/28/19 12:12	1
Selenium	0.47	U	2.6	0.47	mg/Kg	☼	10/28/19 07:37	10/28/19 12:12	1
Silver	0.24	U	1.3	0.24	mg/Kg	☼	10/28/19 07:37	10/28/19 12:12	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	U	0.048	0.015	mg/Kg	☼	10/29/19 11:30	10/29/19 12:59	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-1a-0-6-10-19

Date Collected: 10/24/19 11:42
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-5

Matrix: Solid
Percent Solids: 78.2

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.064	U	0.42	0.064	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Acenaphthylene	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Acetophenone	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Anthracene	0.072	U	0.42	0.072	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Atrazine	0.17	U	1.3	0.17	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Benzo[a]anthracene	0.057	U	0.42	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Benzo[a]pyrene	0.056	U	0.42	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Benzo[b]fluoranthene	0.12	U	0.42	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Benzo[g,h,i]perylene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Benzo[k]fluoranthene	0.071	M U	0.42	0.071	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
1,1'-Biphenyl	0.86	U	2.7	0.86	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Bis(2-chloroethoxy)methane	0.099	U	0.42	0.099	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Bis(2-chloroethyl)ether	0.098	U	0.42	0.098	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
bis (2-chloroisopropyl) ether	0.051	U	0.42	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Bis(2-ethylhexyl) phthalate	0.059	U	0.42	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
4-Bromophenyl phenyl ether	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Butyl benzyl phthalate	0.049	U	0.42	0.049	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Caprolactam	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Carbazole	0.51	Q U	1.3	0.51	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
4-Chloroaniline	0.093	U	0.83	0.093	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
4-Chloro-3-methylphenol	0.063	U	0.42	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
2-Chloronaphthalene	0.075	U	0.42	0.075	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
2-Chlorophenol	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
4-Chlorophenyl phenyl ether	0.098	U	0.42	0.098	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Chrysene	0.059	U	0.42	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Dibenz(a,h)anthracene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Dibenzofuran	0.068	U	0.42	0.068	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
2,4-Dichlorophenol	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Diethyl phthalate	0.060	U	0.42	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
2,4-Dimethylphenol	0.065	U	0.42	0.065	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Dimethyl phthalate	0.070	U	0.42	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Di-n-butyl phthalate	0.075	U	0.42	0.075	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
4,6-Dinitro-2-methylphenol	0.24	U	2.1	0.24	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
2,4-Dinitrophenol	0.36	U	2.1	0.36	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
2,4-Dinitrotoluene	0.062	U	0.42	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
2,6-Dinitrotoluene	0.063	U	0.42	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Di-n-octyl phthalate	0.045	U	0.42	0.045	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Fluoranthene	0.061	U	0.42	0.061	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Fluorene	0.059	U	0.42	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Hexachlorobenzene	0.052	U	0.42	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Hexachlorobutadiene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Hexachlorocyclopentadiene	0.094	U	0.42	0.094	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Hexachloroethane	0.097	U	0.42	0.097	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Indeno[1,2,3-cd]pyrene	0.053	U	0.42	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Isophorone	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
2-Methylnaphthalene	0.073	U	0.42	0.073	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
2-Methylphenol	0.14	U	0.42	0.14	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
3 & 4 Methylphenol	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Naphthalene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-1a-0-6-10-19

Date Collected: 10/24/19 11:42
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-5

Matrix: Solid
Percent Solids: 78.2

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.095	U	2.1	0.095	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
3-Nitroaniline	0.20	U	2.1	0.20	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
4-Nitroaniline	0.12	U	2.1	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Nitrobenzene	0.058	U	0.42	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
2-Nitrophenol	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
4-Nitrophenol	0.20	U	2.1	0.20	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
N-Nitrosodi-n-propylamine	0.15	U	0.42	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Pentachlorophenol	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Phenanthrene	0.069	U	0.42	0.069	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Phenol	0.16	M U	0.42	0.16	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
Pyrene	0.047	U	0.42	0.047	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
2,4,5-Trichlorophenol	0.070	U	0.42	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1
2,4,6-Trichlorophenol	0.074	U	0.42	0.074	mg/Kg	☼	10/29/19 09:08	10/29/19 18:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*89*		*30 - 120*	*10/29/19 09:08*	*10/29/19 18:52*	*1*
2-Fluorophenol (Surr)	*61*		*16 - 113*	*10/29/19 09:08*	*10/29/19 18:52*	*1*
Nitrobenzene-d5 (Surr)	*75*		*20 - 120*	*10/29/19 09:08*	*10/29/19 18:52*	*1*
Phenol-d5 (Surr)	*74*		*19 - 144*	*10/29/19 09:08*	*10/29/19 18:52*	*1*
Terphenyl-d14 (Surr)	*88*		*30 - 131*	*10/29/19 09:08*	*10/29/19 18:52*	*1*
2,4,6-Tribromophenol (Surr)	*108*		*23 - 129*	*10/29/19 09:08*	*10/29/19 18:52*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.021	M U	0.085	0.021	mg/Kg	☼	10/28/19 08:03	10/30/19 13:06	1
PCB-1221	0.043	M U	0.13	0.043	mg/Kg	☼	10/28/19 08:03	10/30/19 13:06	1
PCB-1232	0.023	M U	0.085	0.023	mg/Kg	☼	10/28/19 08:03	10/30/19 13:06	1
PCB-1242	0.036	M U	0.11	0.036	mg/Kg	☼	10/28/19 08:03	10/30/19 13:06	1
PCB-1248	0.025	M U	0.085	0.025	mg/Kg	☼	10/28/19 08:03	10/30/19 13:06	1
PCB-1254	0.012	M U	0.042	0.012	mg/Kg	☼	10/28/19 08:03	10/30/19 13:06	1
PCB-1260	0.019	M U	0.057	0.019	mg/Kg	☼	10/28/19 08:03	10/30/19 13:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*87*		*30 - 150*	*10/28/19 08:03*	*10/30/19 13:06*	*1*
DCB Decachlorobiphenyl	*108*		*30 - 150*	*10/28/19 08:03*	*10/30/19 13:06*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.12**	**J**	1.3	0.11	mg/Kg	☼	10/28/19 07:37	10/28/19 12:15	1
Barium	**7.4**		1.3	0.073	mg/Kg	☼	10/28/19 07:37	10/28/19 12:15	1
Cadmium	0.037	U	0.65	0.037	mg/Kg	☼	10/28/19 07:37	10/28/19 12:15	1
Chromium	**2.1**		1.3	0.095	mg/Kg	☼	10/28/19 07:37	10/28/19 12:15	1
Lead	**0.93**	**J**	1.3	0.19	mg/Kg	☼	10/28/19 07:37	10/28/19 12:15	1
Selenium	0.48	U	2.6	0.48	mg/Kg	☼	10/28/19 07:37	10/28/19 12:15	1
Silver	0.25	U	1.3	0.25	mg/Kg	☼	10/28/19 07:37	10/28/19 12:15	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	U	0.051	0.015	mg/Kg	☼	10/29/19 11:30	10/29/19 13:01	1

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-1a-6-10-10-19
Date Collected: 10/24/19 11:51
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-6
Matrix: Solid
Percent Solids: 68.8

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.073	U	0.47	0.073	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Acenaphthylene	0.062	M U	0.47	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Acetophenone	0.12	M U	0.47	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Anthracene	0.082	U	0.47	0.082	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Atrazine	0.19	U	1.4	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Benzo[a]anthracene	0.065	U	0.47	0.065	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Benzo[a]pyrene	0.064	U	0.47	0.064	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Benzo[b]fluoranthene	0.13	U	0.47	0.13	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Benzo[g,h,i]perylene	0.13	U	0.47	0.13	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Benzo[k]fluoranthene	0.081	U	0.47	0.081	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
1,1'-Biphenyl	0.98	U	3.0	0.98	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Bis(2-chloroethoxy)methane	0.11	U	0.47	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Bis(2-chloroethyl)ether	0.11	U	0.47	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
bis (2-chloroisopropyl) ether	0.058	M U	0.47	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Bis(2-ethylhexyl) phthalate	0.067	U	0.47	0.067	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
4-Bromophenyl phenyl ether	0.11	U	0.47	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Butyl benzyl phthalate	0.056	U	0.47	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Caprolactam	0.12	U	0.47	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Carbazole	0.57	Q U	1.4	0.57	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
4-Chloroaniline	0.11	M U	0.95	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
4-Chloro-3-methylphenol	0.071	M U	0.47	0.071	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
2-Chloronaphthalene	0.085	M U	0.47	0.085	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
2-Chlorophenol	0.062	U	0.47	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
4-Chlorophenyl phenyl ether	0.11	U	0.47	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Chrysene	0.066	U	0.47	0.066	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Dibenz(a,h)anthracene	0.13	U	0.47	0.13	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Dibenzofuran	0.077	U	0.47	0.077	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
2,4-Dichlorophenol	0.062	U	0.47	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Diethyl phthalate	0.068	U	0.47	0.068	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
2,4-Dimethylphenol	0.074	M U	0.47	0.074	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Dimethyl phthalate	0.080	U	0.47	0.080	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Di-n-butyl phthalate	0.085	U	0.47	0.085	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
4,6-Dinitro-2-methylphenol	0.27	U	2.4	0.27	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
2,4-Dinitrophenol	0.41	U	2.4	0.41	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
2,4-Dinitrotoluene	0.070	U	0.47	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
2,6-Dinitrotoluene	0.072	U	0.47	0.072	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Di-n-octyl phthalate	0.051	U	0.47	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Fluoranthene	0.069	U	0.47	0.069	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Fluorene	0.067	U	0.47	0.067	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Hexachlorobenzene	0.059	U	0.47	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Hexachlorobutadiene	0.13	U	0.47	0.13	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Hexachlorocyclopentadiene	0.11	U	0.47	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Hexachloroethane	0.11	U	0.47	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Indeno[1,2,3-cd]pyrene	0.060	U	0.47	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Isophorone	**0.34**	**J**	0.47	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
2-Methylnaphthalene	0.082	M U	0.47	0.082	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
2-Methylphenol	0.16	U	0.47	0.16	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
3 & 4 Methylphenol	0.063	M U	0.47	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Naphthalene	0.12	M U	0.47	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-1a-6-10-10-19

Date Collected: 10/24/19 11:51
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-6

Matrix: Solid
Percent Solids: 68.8

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.11	M U	2.4	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
3-Nitroaniline	0.22	M U	2.4	0.22	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
4-Nitroaniline	0.14	M U	2.4	0.14	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Nitrobenzene	0.066	M U	0.47	0.066	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
2-Nitrophenol	0.12	M U	0.47	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
4-Nitrophenol	0.23	U	2.4	0.23	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
N-Nitrosodi-n-propylamine	0.17	U	0.47	0.17	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Pentachlorophenol	0.22	U	2.4	0.22	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Phenanthrene	0.078	M U	0.47	0.078	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Phenol	0.18	M U	0.47	0.18	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
Pyrene	0.053	U	0.47	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
2,4,5-Trichlorophenol	0.080	U	0.47	0.080	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1
2,4,6-Trichlorophenol	0.084	U	0.47	0.084	mg/Kg	☼	10/29/19 09:08	10/29/19 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*74*		*30 - 120*	*10/29/19 09:08*	*10/29/19 19:16*	*1*
2-Fluorophenol (Surr)	*0*	*J*	*16 - 113*	*10/29/19 09:08*	*10/29/19 19:16*	*1*
Nitrobenzene-d5 (Surr)	*0*	*J*	*20 - 120*	*10/29/19 09:08*	*10/29/19 19:16*	*1*
Phenol-d5 (Surr)	*31*		*19 - 144*	*10/29/19 09:08*	*10/29/19 19:16*	*1*
Terphenyl-d14 (Surr)	*61*		*30 - 131*	*10/29/19 09:08*	*10/29/19 19:16*	*1*
2,4,6-Tribromophenol (Surr)	*92*		*23 - 129*	*10/29/19 09:08*	*10/29/19 19:16*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.024	M U	0.097	0.024	mg/Kg	☼	10/28/19 08:03	10/30/19 13:20	1
PCB-1221	0.049	M U	0.15	0.049	mg/Kg	☼	10/28/19 08:03	10/30/19 13:20	1
PCB-1232	0.026	M U	0.097	0.026	mg/Kg	☼	10/28/19 08:03	10/30/19 13:20	1
PCB-1242	0.041	M U	0.13	0.041	mg/Kg	☼	10/28/19 08:03	10/30/19 13:20	1
PCB-1248	0.029	M U	0.097	0.029	mg/Kg	☼	10/28/19 08:03	10/30/19 13:20	1
PCB-1254	0.014	M U	0.048	0.014	mg/Kg	☼	10/28/19 08:03	10/30/19 13:20	1
PCB-1260	0.022	M U	0.065	0.022	mg/Kg	☼	10/28/19 08:03	10/30/19 13:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*30 - 150*	*10/28/19 08:03*	*10/30/19 13:20*	*1*
DCB Decachlorobiphenyl	*107*		*30 - 150*	*10/28/19 08:03*	*10/30/19 13:20*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.3**	**J**	7.3	0.61	mg/Kg	☼	10/28/19 07:37	10/28/19 13:11	5
Barium	**60**		7.3	0.41	mg/Kg	☼	10/28/19 07:37	10/28/19 13:11	5
Cadmium	0.21	U	3.7	0.21	mg/Kg	☼	10/28/19 07:37	10/28/19 13:11	5
Chromium	**4.9**	**J**	7.3	0.54	mg/Kg	☼	10/28/19 07:37	10/28/19 13:11	5
Lead	**1.8**	**J**	7.3	1.1	mg/Kg	☼	10/28/19 07:37	10/28/19 13:11	5
Selenium	2.7	U	15	2.7	mg/Kg	☼	10/28/19 07:37	10/28/19 13:11	5
Silver	1.4	U	7.3	1.4	mg/Kg	☼	10/28/19 07:37	10/28/19 13:11	5

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.017	U	0.058	0.017	mg/Kg	☼	10/29/19 11:30	10/29/19 13:06	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-2a-0-7-10-19

Date Collected: 10/24/19 12:05
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-7

Matrix: Solid
Percent Solids: 80.4

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.062	U	0.40	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Acenaphthylene	0.053	U	0.40	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Acetophenone	0.10	U	0.40	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Anthracene	0.070	U	0.40	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Atrazine	0.16	U	1.2	0.16	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Benzo[a]anthracene	0.055	U	0.40	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Benzo[a]pyrene	0.054	U	0.40	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Benzo[b]fluoranthene	0.11	U	0.40	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Benzo[g,h,i]perylene	0.11	U	0.40	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Benzo[k]fluoranthene	0.069	U	0.40	0.069	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
1,1'-Biphenyl	0.83	U	2.6	0.83	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Bis(2-chloroethoxy)methane	0.096	U	0.40	0.096	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Bis(2-chloroethyl)ether	0.095	U	0.40	0.095	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
bis (2-chloroisopropyl) ether	0.050	U	0.40	0.050	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Bis(2-ethylhexyl) phthalate	0.057	U	0.40	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
4-Bromophenyl phenyl ether	0.098	U	0.40	0.098	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Butyl benzyl phthalate	0.048	U	0.40	0.048	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Caprolactam	0.10	U	0.40	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Carbazole	0.49	Q U	1.2	0.49	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
4-Chloroaniline	0.090	U	0.81	0.090	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
4-Chloro-3-methylphenol	0.061	U	0.40	0.061	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
2-Chloronaphthalene	0.073	U	0.40	0.073	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
2-Chlorophenol	0.053	U	0.40	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
4-Chlorophenyl phenyl ether	0.095	U	0.40	0.095	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Chrysene	0.057	U	0.40	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Dibenz(a,h)anthracene	0.11	U	0.40	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Dibenzofuran	0.066	U	0.40	0.066	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
2,4-Dichlorophenol	0.053	U	0.40	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Diethyl phthalate	0.058	U	0.40	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
2,4-Dimethylphenol	0.063	U	0.40	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Dimethyl phthalate	0.068	U	0.40	0.068	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Di-n-butyl phthalate	0.073	U	0.40	0.073	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
4,6-Dinitro-2-methylphenol	0.23	U	2.1	0.23	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
2,4-Dinitrophenol	0.35	U	2.1	0.35	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
2,4-Dinitrotoluene	0.060	U	0.40	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
2,6-Dinitrotoluene	0.061	U	0.40	0.061	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Di-n-octyl phthalate	0.043	U	0.40	0.043	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Fluoranthene	0.059	U	0.40	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Fluorene	0.058	U	0.40	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Hexachlorobenzene	0.050	U	0.40	0.050	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Hexachlorobutadiene	0.11	U	0.40	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Hexachlorocyclopentadiene	0.091	U	0.40	0.091	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Hexachloroethane	0.094	U	0.40	0.094	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Indeno[1,2,3-cd]pyrene	0.051	U	0.40	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Isophorone	0.053	U	0.40	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
2-Methylnaphthalene	0.070	U	0.40	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
2-Methylphenol	0.14	U	0.40	0.14	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
3 & 4 Methylphenol	0.054	U	0.40	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Naphthalene	0.10	U	0.40	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-2a-0-7-10-19

Date Collected: 10/24/19 12:05
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-7

Matrix: Solid
Percent Solids: 80.4

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.092	U	2.1	0.092	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
3-Nitroaniline	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
4-Nitroaniline	0.12	U	2.1	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Nitrobenzene	0.056	U	0.40	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
2-Nitrophenol	0.10	U	0.40	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
4-Nitrophenol	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
N-Nitrosodi-n-propylamine	0.15	U	0.40	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Pentachlorophenol	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Phenanthrene	0.067	U	0.40	0.067	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Phenol	0.15	M U	0.40	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
Pyrene	0.045	U	0.40	0.045	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
2,4,5-Trichlorophenol	0.068	U	0.40	0.068	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1
2,4,6-Trichlorophenol	0.072	U	0.40	0.072	mg/Kg	☼	10/29/19 09:08	10/29/19 19:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*91*		*30 - 120*	*10/29/19 09:08*	*10/29/19 19:41*	*1*
2-Fluorophenol (Surr)	*62*		*16 - 113*	*10/29/19 09:08*	*10/29/19 19:41*	*1*
Nitrobenzene-d5 (Surr)	*74*		*20 - 120*	*10/29/19 09:08*	*10/29/19 19:41*	*1*
Phenol-d5 (Surr)	*74*		*19 - 144*	*10/29/19 09:08*	*10/29/19 19:41*	*1*
Terphenyl-d14 (Surr)	*81*		*30 - 131*	*10/29/19 09:08*	*10/29/19 19:41*	*1*
2,4,6-Tribromophenol (Surr)	*104*		*23 - 129*	*10/29/19 09:08*	*10/29/19 19:41*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.020	M U	0.083	0.020	mg/Kg	☼	10/28/19 08:03	10/30/19 13:35	1
PCB-1221	0.042	M U	0.12	0.042	mg/Kg	☼	10/28/19 08:03	10/30/19 13:35	1
PCB-1232	0.022	M U	0.083	0.022	mg/Kg	☼	10/28/19 08:03	10/30/19 13:35	1
PCB-1242	0.035	M U	0.11	0.035	mg/Kg	☼	10/28/19 08:03	10/30/19 13:35	1
PCB-1248	0.025	M U	0.083	0.025	mg/Kg	☼	10/28/19 08:03	10/30/19 13:35	1
PCB-1254	0.012	M U	0.041	0.012	mg/Kg	☼	10/28/19 08:03	10/30/19 13:35	1
PCB-1260	0.019	M U	0.056	0.019	mg/Kg	☼	10/28/19 08:03	10/30/19 13:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*101*	*M*	*30 - 150*	*10/28/19 08:03*	*10/30/19 13:35*	*1*
DCB Decachlorobiphenyl	*131*		*30 - 150*	*10/28/19 08:03*	*10/30/19 13:35*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.11	U	1.3	0.11	mg/Kg	☼	10/28/19 07:37	10/28/19 12:21	1
Barium	**5.9**		1.3	0.071	mg/Kg	☼	10/28/19 07:37	10/28/19 12:21	1
Cadmium	0.036	U	0.64	0.036	mg/Kg	☼	10/28/19 07:37	10/28/19 12:21	1
Chromium	**3.8**		1.3	0.094	mg/Kg	☼	10/28/19 07:37	10/28/19 12:21	1
Lead	**0.53**	**J**	1.3	0.19	mg/Kg	☼	10/28/19 07:37	10/28/19 12:21	1
Selenium	0.47	U	2.6	0.47	mg/Kg	☼	10/28/19 07:37	10/28/19 12:21	1
Silver	0.24	U	1.3	0.24	mg/Kg	☼	10/28/19 07:37	10/28/19 12:21	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.014	U	0.048	0.014	mg/Kg	☼	10/29/19 11:30	10/29/19 13:08	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-2a-7-10-10-19

Date Collected: 10/24/19 12:10
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-8

Matrix: Solid
Percent Solids: 78.5

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.065	U	0.42	0.065	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Acenaphthylene	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Acetophenone	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Anthracene	0.073	U	0.42	0.073	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Atrazine	0.17	U	1.3	0.17	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Benzo[a]anthracene	0.057	U	0.42	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Benzo[a]pyrene	0.056	U	0.42	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Benzo[b]fluoranthene	0.12	U	0.42	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Benzo[g,h,i]perylene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Benzo[k]fluoranthene	0.072	U	0.42	0.072	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
1,1'-Biphenyl	0.86	U	2.7	0.86	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Bis(2-chloroethoxy)methane	0.099	U	0.42	0.099	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Bis(2-chloroethyl)ether	0.099	U	0.42	0.099	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
bis (2-chloroisopropyl) ether	0.052	U	0.42	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Bis(2-ethylhexyl) phthalate	0.059	U	0.42	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
4-Bromophenyl phenyl ether	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Butyl benzyl phthalate	0.050	U	0.42	0.050	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Caprolactam	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Carbazole	0.51	Q U	1.3	0.51	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
4-Chloroaniline	0.094	U	0.84	0.094	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
4-Chloro-3-methylphenol	0.063	U	0.42	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
2-Chloronaphthalene	0.076	U	0.42	0.076	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
2-Chlorophenol	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
4-Chlorophenyl phenyl ether	0.098	U	0.42	0.098	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Chrysene	0.059	U	0.42	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Dibenz(a,h)anthracene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Dibenzofuran	0.068	U	0.42	0.068	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
2,4-Dichlorophenol	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Diethyl phthalate	0.060	U	0.42	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
2,4-Dimethylphenol	0.065	U	0.42	0.065	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Dimethyl phthalate	0.071	U	0.42	0.071	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Di-n-butyl phthalate	0.076	U	0.42	0.076	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
4,6-Dinitro-2-methylphenol	0.24	U	2.2	0.24	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
2,4-Dinitrophenol	0.37	U	2.2	0.37	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
2,4-Dinitrotoluene	0.062	U	0.42	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
2,6-Dinitrotoluene	0.063	U	0.42	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Di-n-octyl phthalate	0.045	U	0.42	0.045	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Fluoranthene	0.061	U	0.42	0.061	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Fluorene	0.060	U	0.42	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Hexachlorobenzene	0.052	U	0.42	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Hexachlorobutadiene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Hexachlorocyclopentadiene	0.094	U	0.42	0.094	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Hexachloroethane	0.098	U	0.42	0.098	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Indeno[1,2,3-cd]pyrene	0.053	U	0.42	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Isophorone	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
2-Methylnaphthalene	0.073	U	0.42	0.073	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
2-Methylphenol	0.14	U	0.42	0.14	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
3 & 4 Methylphenol	0.056	U	0.42	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Naphthalene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-2a-7-10-10-19

Date Collected: 10/24/19 12:10
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-8

Matrix: Solid
Percent Solids: 78.5

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.095	U	2.2	0.095	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
3-Nitroaniline	0.20	U	2.2	0.20	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
4-Nitroaniline	0.12	U	2.2	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Nitrobenzene	0.058	U	0.42	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
2-Nitrophenol	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
4-Nitrophenol	0.20	U	2.2	0.20	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
N-Nitrosodi-n-propylamine	0.15	U	0.42	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Pentachlorophenol	0.19	U	2.2	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Phenanthrene	0.069	U	0.42	0.069	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Phenol	0.16	U	0.42	0.16	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
Pyrene	0.047	U	0.42	0.047	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
2,4,5-Trichlorophenol	0.071	U	0.42	0.071	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1
2,4,6-Trichlorophenol	0.075	U	0.42	0.075	mg/Kg	☼	10/29/19 09:08	10/29/19 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*85*		*30 - 120*	*10/29/19 09:08*	*10/29/19 20:05*	*1*
2-Fluorophenol (Surr)	*62*		*16 - 113*	*10/29/19 09:08*	*10/29/19 20:05*	*1*
Nitrobenzene-d5 (Surr)	*76*		*20 - 120*	*10/29/19 09:08*	*10/29/19 20:05*	*1*
Phenol-d5 (Surr)	*73*		*19 - 144*	*10/29/19 09:08*	*10/29/19 20:05*	*1*
Terphenyl-d14 (Surr)	*81*		*30 - 131*	*10/29/19 09:08*	*10/29/19 20:05*	*1*
2,4,6-Tribromophenol (Surr)	*103*		*23 - 129*	*10/29/19 09:08*	*10/29/19 20:05*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.021	M U	0.085	0.021	mg/Kg	☼	10/28/19 08:03	10/30/19 13:50	1
PCB-1221	0.043	M U	0.13	0.043	mg/Kg	☼	10/28/19 08:03	10/30/19 13:50	1
PCB-1232	0.022	M U	0.085	0.022	mg/Kg	☼	10/28/19 08:03	10/30/19 13:50	1
PCB-1242	0.036	M U	0.11	0.036	mg/Kg	☼	10/28/19 08:03	10/30/19 13:50	1
PCB-1248	0.025	M U	0.085	0.025	mg/Kg	☼	10/28/19 08:03	10/30/19 13:50	1
PCB-1254	0.012	M U	0.042	0.012	mg/Kg	☼	10/28/19 08:03	10/30/19 13:50	1
PCB-1260	0.019	M U	0.057	0.019	mg/Kg	☼	10/28/19 08:03	10/30/19 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*115*		*30 - 150*	*10/28/19 08:03*	*10/30/19 13:50*	*1*
DCB Decachlorobiphenyl	*141*		*30 - 150*	*10/28/19 08:03*	*10/30/19 13:50*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.26**	**J**	1.3	0.11	mg/Kg	☼	10/28/19 07:37	10/28/19 12:24	1
Barium	**5.8**		1.3	0.074	mg/Kg	☼	10/28/19 07:37	10/28/19 12:24	1
Cadmium	0.037	U	0.66	0.037	mg/Kg	☼	10/28/19 07:37	10/28/19 12:24	1
Chromium	**2.1**		1.3	0.097	mg/Kg	☼	10/28/19 07:37	10/28/19 12:24	1
Lead	**0.64**	**J**	1.3	0.19	mg/Kg	☼	10/28/19 07:37	10/28/19 12:24	1
Selenium	0.49	U	2.7	0.49	mg/Kg	☼	10/28/19 07:37	10/28/19 12:24	1
Silver	0.25	U	1.3	0.25	mg/Kg	☼	10/28/19 07:37	10/28/19 12:24	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	U	0.051	0.015	mg/Kg	☼	10/29/19 11:30	10/29/19 13:09	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-3a-0-6-10-19

Date Collected: 10/24/19 12:41
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-9

Matrix: Solid
Percent Solids: 87.6

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.057	U	0.37	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Acenaphthylene	0.048	U	0.37	0.048	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Acetophenone	0.092	M U	0.37	0.092	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Anthracene	0.064	U	0.37	0.064	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Atrazine	0.15	U	1.1	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Benzo[a]anthracene	0.051	U	0.37	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Benzo[a]pyrene	0.050	M U	0.37	0.050	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Benzo[b]fluoranthene	0.10	M U	0.37	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Benzo[g,h,i]perylene	0.099	U	0.37	0.099	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Benzo[k]fluoranthene	0.063	M U	0.37	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
1,1'-Biphenyl	0.76	U	2.4	0.76	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Bis(2-chloroethoxy)methane	0.088	U	0.37	0.088	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Bis(2-chloroethyl)ether	0.087	U	0.37	0.087	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
bis (2-chloroisopropyl) ether	0.046	U	0.37	0.046	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Bis(2-ethylhexyl) phthalate	0.053	U	0.37	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
4-Bromophenyl phenyl ether	0.090	U	0.37	0.090	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Butyl benzyl phthalate	0.044	M U	0.37	0.044	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Caprolactam	0.096	U	0.37	0.096	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Carbazole	0.45	Q U	1.1	0.45	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
4-Chloroaniline	0.083	U	0.74	0.083	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
4-Chloro-3-methylphenol	0.056	U	0.37	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
2-Chloronaphthalene	0.067	U	0.37	0.067	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
2-Chlorophenol	0.049	U	0.37	0.049	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
4-Chlorophenyl phenyl ether	0.087	U	0.37	0.087	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Chrysene	0.052	M U	0.37	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Dibenz(a,h)anthracene	0.10	U	0.37	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Dibenzofuran	0.060	U	0.37	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
2,4-Dichlorophenol	0.048	U	0.37	0.048	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Diethyl phthalate	0.053	U	0.37	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
2,4-Dimethylphenol	0.058	U	0.37	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Dimethyl phthalate	0.062	U	0.37	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Di-n-butyl phthalate	0.067	U	0.37	0.067	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
4,6-Dinitro-2-methylphenol	0.21	U	1.9	0.21	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
2,4-Dinitrophenol	0.32	U	1.9	0.32	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
2,4-Dinitrotoluene	0.055	U	0.37	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
2,6-Dinitrotoluene	0.056	U	0.37	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Di-n-octyl phthalate	0.040	M U	0.37	0.040	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Fluoranthene	0.054	U	0.37	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Fluorene	0.053	U	0.37	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Hexachlorobenzene	0.046	U	0.37	0.046	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Hexachlorobutadiene	0.10	U	0.37	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Hexachlorocyclopentadiene	0.083	U	0.37	0.083	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Hexachloroethane	0.086	U	0.37	0.086	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Indeno[1,2,3-cd]pyrene	0.047	U	0.37	0.047	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Isophorone	0.049	U	0.37	0.049	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
2-Methylnaphthalene	0.064	U	0.37	0.064	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
2-Methylphenol	0.12	U	0.37	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
3 & 4 Methylphenol	0.049	U	0.37	0.049	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Naphthalene	0.095	U	0.37	0.095	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-3a-0-6-10-19

Date Collected: 10/24/19 12:41
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-9

Matrix: Solid
Percent Solids: 87.6

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.084	U	1.9	0.084	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
3-Nitroaniline	0.18	U	1.9	0.18	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
4-Nitroaniline	0.11	U	1.9	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Nitrobenzene	0.052	M U	0.37	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
2-Nitrophenol	0.092	U	0.37	0.092	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
4-Nitrophenol	0.18	U	1.9	0.18	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
N-Nitrosodi-n-propylamine	0.13	U	0.37	0.13	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Pentachlorophenol	0.17	U	1.9	0.17	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Phenanthrene	0.061	M U	0.37	0.061	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Phenol	0.14	M U	0.37	0.14	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
Pyrene	0.042	U	0.37	0.042	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
2,4,5-Trichlorophenol	0.063	U	0.37	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1
2,4,6-Trichlorophenol	0.066	U	0.37	0.066	mg/Kg	☼	10/29/19 09:08	10/29/19 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*85*		*30 - 120*	*10/29/19 09:08*	*10/29/19 17:27*	*1*
2-Fluorophenol (Surr)	*83*		*16 - 113*	*10/29/19 09:08*	*10/29/19 17:27*	*1*
Nitrobenzene-d5 (Surr)	*83*		*20 - 120*	*10/29/19 09:08*	*10/29/19 17:27*	*1*
Phenol-d5 (Surr)	*85*		*19 - 144*	*10/29/19 09:08*	*10/29/19 17:27*	*1*
Terphenyl-d14 (Surr)	*94*		*30 - 131*	*10/29/19 09:08*	*10/29/19 17:27*	*1*
2,4,6-Tribromophenol (Surr)	*82*		*23 - 129*	*10/29/19 09:08*	*10/29/19 17:27*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.018	M U	0.075	0.018	mg/Kg	☼	10/28/19 08:03	10/30/19 14:04	1
PCB-1221	0.038	M U	0.11	0.038	mg/Kg	☼	10/28/19 08:03	10/30/19 14:04	1
PCB-1232	0.020	M U	0.075	0.020	mg/Kg	☼	10/28/19 08:03	10/30/19 14:04	1
PCB-1242	0.032	M U	0.096	0.032	mg/Kg	☼	10/28/19 08:03	10/30/19 14:04	1
PCB-1248	0.022	M U	0.075	0.022	mg/Kg	☼	10/28/19 08:03	10/30/19 14:04	1
PCB-1254	0.011	M U	0.037	0.011	mg/Kg	☼	10/28/19 08:03	10/30/19 14:04	1
PCB-1260	0.017	M U	0.050	0.017	mg/Kg	☼	10/28/19 08:03	10/30/19 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*102*		*30 - 150*	*10/28/19 08:03*	*10/30/19 14:04*	*1*
DCB Decachlorobiphenyl	*131*		*30 - 150*	*10/28/19 08:03*	*10/30/19 14:04*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.48**	**J**	1.2	0.095	mg/Kg	☼	10/28/19 07:37	10/28/19 12:34	1
Barium	**12**		1.2	0.064	mg/Kg	☼	10/28/19 07:37	10/28/19 12:34	1
Cadmium	0.033	U	0.58	0.033	mg/Kg	☼	10/28/19 07:37	10/28/19 12:34	1
Chromium	**4.4**		1.2	0.084	mg/Kg	☼	10/28/19 07:37	10/28/19 12:34	1
Lead	**1.3**		1.2	0.17	mg/Kg	☼	10/28/19 07:37	10/28/19 12:34	1
Selenium	0.43	U	2.3	0.43	mg/Kg	☼	10/28/19 07:37	10/28/19 12:34	1
Silver	0.22	U	1.2	0.22	mg/Kg	☼	10/28/19 07:37	10/28/19 12:34	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.013	U	0.043	0.013	mg/Kg	☼	10/29/19 11:30	10/29/19 13:11	1

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-3a-6-10-10-19
Date Collected: 10/24/19 12:42
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-10
Matrix: Solid
Percent Solids: 83.8

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.060	U	0.39	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Acenaphthylene	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Acetophenone	0.097	U	0.39	0.097	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Anthracene	0.067	U	0.39	0.067	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Atrazine	0.16	U	1.2	0.16	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Benzo[a]anthracene	0.053	U	0.39	0.053	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Benzo[a]pyrene	0.052	M U	0.39	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Benzo[b]fluoranthene	0.11	U	0.39	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Benzo[g,h,i]perylene	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Benzo[k]fluoranthene	0.067	U	0.39	0.067	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
1,1'-Biphenyl	0.80	U	2.5	0.80	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Bis(2-chloroethoxy)methane	0.092	U	0.39	0.092	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Bis(2-chloroethyl)ether	0.092	M U	0.39	0.092	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
bis (2-chloroisopropyl) ether	0.048	U	0.39	0.048	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Bis(2-ethylhexyl) phthalate	0.055	U	0.39	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
4-Bromophenyl phenyl ether	0.095	U	0.39	0.095	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Butyl benzyl phthalate	0.046	M U	0.39	0.046	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Caprolactam	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Carbazole	0.47	Q U	1.2	0.47	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
4-Chloroaniline	0.087	U	0.78	0.087	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
4-Chloro-3-methylphenol	0.059	U	0.39	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
2-Chloronaphthalene	0.070	U	0.39	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
2-Chlorophenol	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
4-Chlorophenyl phenyl ether	0.091	U	0.39	0.091	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Chrysene	0.055	U	0.39	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Dibenz(a,h)anthracene	0.11	U	0.39	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Dibenzofuran	0.063	U	0.39	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
2,4-Dichlorophenol	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Diethyl phthalate	0.056	U	0.39	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
2,4-Dimethylphenol	0.061	U	0.39	0.061	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Dimethyl phthalate	0.066	U	0.39	0.066	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Di-n-butyl phthalate	0.070	M U	0.39	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
4,6-Dinitro-2-methylphenol	0.23	U	2.0	0.23	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
2,4-Dinitrophenol	0.34	U	2.0	0.34	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
2,4-Dinitrotoluene	0.058	U	0.39	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
2,6-Dinitrotoluene	0.059	U	0.39	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Di-n-octyl phthalate	0.042	M U	0.39	0.042	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Fluoranthene	0.057	U	0.39	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Fluorene	0.056	U	0.39	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Hexachlorobenzene	0.049	U	0.39	0.049	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Hexachlorobutadiene	0.11	U	0.39	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Hexachlorocyclopentadiene	0.088	U	0.39	0.088	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Hexachloroethane	0.091	U	0.39	0.091	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Indeno[1,2,3-cd]pyrene	0.049	U	0.39	0.049	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Isophorone	0.051	M U	0.39	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
2-Methylnaphthalene	0.068	U	0.39	0.068	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
2-Methylphenol	0.13	U	0.39	0.13	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
3 & 4 Methylphenol	0.052	U	0.39	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Naphthalene	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-3a-6-10-10-19

Date Collected: 10/24/19 12:42
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-10

Matrix: Solid
Percent Solids: 83.8

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.088	U	2.0	0.088	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
3-Nitroaniline	0.18	U	2.0	0.18	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
4-Nitroaniline	0.11	U	2.0	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Nitrobenzene	0.054	U	0.39	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
2-Nitrophenol	0.096	U	0.39	0.096	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
4-Nitrophenol	0.19	U	2.0	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
N-Nitrosodi-n-propylamine	0.14	U	0.39	0.14	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Pentachlorophenol	0.18	U	2.0	0.18	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Phenanthrene	0.064	M U	0.39	0.064	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Phenol	0.15	U	0.39	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
Pyrene	0.044	U	0.39	0.044	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
2,4,5-Trichlorophenol	0.066	U	0.39	0.066	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1
2,4,6-Trichlorophenol	0.069	U	0.39	0.069	mg/Kg	☼	10/29/19 09:08	10/29/19 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*85*		*30 - 120*	*10/29/19 09:08*	*10/29/19 17:02*	*1*
2-Fluorophenol (Surr)	*85*		*16 - 113*	*10/29/19 09:08*	*10/29/19 17:02*	*1*
Nitrobenzene-d5 (Surr)	*81*		*20 - 120*	*10/29/19 09:08*	*10/29/19 17:02*	*1*
Phenol-d5 (Surr)	*86*		*19 - 144*	*10/29/19 09:08*	*10/29/19 17:02*	*1*
Terphenyl-d14 (Surr)	*93*		*30 - 131*	*10/29/19 09:08*	*10/29/19 17:02*	*1*
2,4,6-Tribromophenol (Surr)	*87*		*23 - 129*	*10/29/19 09:08*	*10/29/19 17:02*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.019	M U	0.080	0.019	mg/Kg	☼	10/28/19 08:03	10/30/19 14:19	1
PCB-1221	0.040	M U	0.12	0.040	mg/Kg	☼	10/28/19 08:03	10/30/19 14:19	1
PCB-1232	0.021	M U	0.080	0.021	mg/Kg	☼	10/28/19 08:03	10/30/19 14:19	1
PCB-1242	0.034	M U	0.10	0.034	mg/Kg	☼	10/28/19 08:03	10/30/19 14:19	1
PCB-1248	0.024	M U	0.080	0.024	mg/Kg	☼	10/28/19 08:03	10/30/19 14:19	1
PCB-1254	0.011	M U	0.039	0.011	mg/Kg	☼	10/28/19 08:03	10/30/19 14:19	1
PCB-1260	0.018	M U	0.054	0.018	mg/Kg	☼	10/28/19 08:03	10/30/19 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*111*		*30 - 150*	*10/28/19 08:03*	*10/30/19 14:19*	*1*
DCB Decachlorobiphenyl	*124*		*30 - 150*	*10/28/19 08:03*	*10/30/19 14:19*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.84**	**J**	3.6	0.30	mg/Kg	☼	10/28/19 07:37	10/28/19 13:14	3
Barium	**8.6**		3.6	0.20	mg/Kg	☼	10/28/19 07:37	10/28/19 13:14	3
Cadmium	0.10	U	1.8	0.10	mg/Kg	☼	10/28/19 07:37	10/28/19 13:14	3
Chromium	**1.5**	**J**	3.6	0.26	mg/Kg	☼	10/28/19 07:37	10/28/19 13:14	3
Lead	**2.1**	**J**	3.6	0.52	mg/Kg	☼	10/28/19 07:37	10/28/19 13:14	3
Selenium	1.3	U	7.2	1.3	mg/Kg	☼	10/28/19 07:37	10/28/19 13:14	3
Silver	0.69	U	3.6	0.69	mg/Kg	☼	10/28/19 07:37	10/28/19 13:14	3

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.013	U	0.045	0.013	mg/Kg	☼	10/29/19 11:30	10/29/19 13:13	1

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: DUP-1-10-19
Date Collected: 10/24/19 12:00
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-11
Matrix: Solid
Percent Solids: 79.8

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.063	U	0.41	0.063	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Acenaphthylene	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Acetophenone	0.10	M U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Anthracene	0.071	M U	0.41	0.071	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Atrazine	0.17	U	1.2	0.17	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Benzo[a]anthracene	0.056	U	0.41	0.056	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Benzo[a]pyrene	0.055	U	0.41	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Benzo[b]fluoranthene	0.11	M U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Benzo[g,h,i]perylene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Benzo[k]fluoranthene	0.070	M U	0.41	0.070	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
1,1'-Biphenyl	0.85	M U	2.6	0.85	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Bis(2-chloroethoxy)methane	0.097	U	0.41	0.097	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Bis(2-chloroethyl)ether	0.097	M U	0.41	0.097	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
bis (2-chloroisopropyl) ether	0.051	U	0.41	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Bis(2-ethylhexyl) phthalate	0.058	U	0.41	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
4-Bromophenyl phenyl ether	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Butyl benzyl phthalate	0.049	U	0.41	0.049	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Caprolactam	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Carbazole	0.50	Q U	1.2	0.50	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
4-Chloroaniline	0.092	U	0.82	0.092	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
4-Chloro-3-methylphenol	0.062	U	0.41	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
2-Chloronaphthalene	0.074	U	0.41	0.074	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
2-Chlorophenol	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
4-Chlorophenyl phenyl ether	0.096	U	0.41	0.096	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Chrysene	0.058	U	0.41	0.058	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Dibenz(a,h)anthracene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Dibenzofuran	0.066	U	0.41	0.066	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
2,4-Dichlorophenol	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Diethyl phthalate	0.059	U	0.41	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
2,4-Dimethylphenol	0.064	U	0.41	0.064	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Dimethyl phthalate	0.069	U	0.41	0.069	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Di-n-butyl phthalate	0.074	M U	0.41	0.074	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
4,6-Dinitro-2-methylphenol	0.24	U	2.1	0.24	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
2,4-Dinitrophenol	0.36	U	2.1	0.36	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
2,4-Dinitrotoluene	0.061	U	0.41	0.061	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
2,6-Dinitrotoluene	0.062	U	0.41	0.062	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Di-n-octyl phthalate	0.044	M U	0.41	0.044	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Fluoranthene	0.060	M U	0.41	0.060	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Fluorene	0.059	U	0.41	0.059	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Hexachlorobenzene	0.051	U	0.41	0.051	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Hexachlorobutadiene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Hexachlorocyclopentadiene	0.092	U	0.41	0.092	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Hexachloroethane	0.096	U	0.41	0.096	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Indeno[1,2,3-cd]pyrene	0.052	U	0.41	0.052	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Isophorone	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
2-Methylnaphthalene	0.071	U	0.41	0.071	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
2-Methylphenol	0.14	U	0.41	0.14	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
3 & 4 Methylphenol	0.055	U	0.41	0.055	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Naphthalene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1

Client Sample ID: DUP-1-10-19

Date Collected: 10/24/19 12:00
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98299-11

Matrix: Solid
Percent Solids: 79.8

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.093	U	2.1	0.093	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
3-Nitroaniline	0.19	M U	2.1	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
4-Nitroaniline	0.12	U	2.1	0.12	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Nitrobenzene	0.057	M U	0.41	0.057	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
2-Nitrophenol	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
4-Nitrophenol	0.20	U	2.1	0.20	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
N-Nitrosodi-n-propylamine	0.15	U	0.41	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Pentachlorophenol	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Phenanthrene	0.068	M U	0.41	0.068	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Phenol	0.15	U	0.41	0.15	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
Pyrene	0.046	M U	0.41	0.046	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
2,4,5-Trichlorophenol	0.069	U	0.41	0.069	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1
2,4,6-Trichlorophenol	0.073	U	0.41	0.073	mg/Kg	☼	10/29/19 09:08	10/29/19 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*85*		*30 - 120*	*10/29/19 09:08*	*10/29/19 16:38*	*1*
2-Fluorophenol (Surr)	*84*		*16 - 113*	*10/29/19 09:08*	*10/29/19 16:38*	*1*
Nitrobenzene-d5 (Surr)	*79*		*20 - 120*	*10/29/19 09:08*	*10/29/19 16:38*	*1*
Phenol-d5 (Surr)	*82*		*19 - 144*	*10/29/19 09:08*	*10/29/19 16:38*	*1*
Terphenyl-d14 (Surr)	*92*		*30 - 131*	*10/29/19 09:08*	*10/29/19 16:38*	*1*
2,4,6-Tribromophenol (Surr)	*84*		*23 - 129*	*10/29/19 09:08*	*10/29/19 16:38*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.020	M U	0.082	0.020	mg/Kg	☼	10/28/19 08:03	10/30/19 14:33	1
PCB-1221	0.041	M U	0.12	0.041	mg/Kg	☼	10/28/19 08:03	10/30/19 14:33	1
PCB-1232	0.022	M U	0.082	0.022	mg/Kg	☼	10/28/19 08:03	10/30/19 14:33	1
PCB-1242	0.035	M U	0.11	0.035	mg/Kg	☼	10/28/19 08:03	10/30/19 14:33	1
PCB-1248	0.024	M U	0.082	0.024	mg/Kg	☼	10/28/19 08:03	10/30/19 14:33	1
PCB-1254	0.012	M U	0.041	0.012	mg/Kg	☼	10/28/19 08:03	10/30/19 14:33	1
PCB-1260	0.019	M U	0.055	0.019	mg/Kg	☼	10/28/19 08:03	10/30/19 14:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*111*		*30 - 150*	*10/28/19 08:03*	*10/30/19 14:33*	*1*
DCB Decachlorobiphenyl	*133*	*M*	*30 - 150*	*10/28/19 08:03*	*10/30/19 14:33*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.73**	**J**	3.7	0.30	mg/Kg	☼	10/28/19 07:37	10/28/19 13:17	3
Barium	**8.2**		3.7	0.20	mg/Kg	☼	10/28/19 07:37	10/28/19 13:17	3
Cadmium	0.10	U	1.8	0.10	mg/Kg	☼	10/28/19 07:37	10/28/19 13:17	3
Chromium	**2.7**	**J**	3.7	0.27	mg/Kg	☼	10/28/19 07:37	10/28/19 13:17	3
Lead	**1.6**	**J**	3.7	0.53	mg/Kg	☼	10/28/19 07:37	10/28/19 13:17	3
Selenium	1.4	U	7.3	1.4	mg/Kg	☼	10/28/19 07:37	10/28/19 13:17	3
Silver	0.69	U	3.7	0.69	mg/Kg	☼	10/28/19 07:37	10/28/19 13:17	3

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.014	U	0.046	0.014	mg/Kg	☼	10/29/19 11:30	10/29/19 13:15	1

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Lab Sample ID: MB 660-217581/1-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217581

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.050	U	0.32	0.050	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Acenaphthylene	0.042	U	0.32	0.042	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Acetophenone	0.081	M U	0.32	0.081	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Anthracene	0.056	U	0.32	0.056	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Atrazine	0.13	U	0.98	0.13	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Benzo[a]anthracene	0.044	M U	0.32	0.044	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Benzo[a]pyrene	0.044	M U	0.32	0.044	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Benzo[b]fluoranthene	0.090	U	0.32	0.090	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Benzo[g,h,i]perylene	0.087	U	0.32	0.087	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Benzo[k]fluoranthene	0.055	U	0.32	0.055	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
1,1'-Biphenyl	0.67	M U	2.1	0.67	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Bis(2-chloroethoxy)methane	0.077	U	0.32	0.077	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Bis(2-chloroethyl)ether	0.076	U	0.32	0.076	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
bis (2-chloroisopropyl) ether	0.040	U	0.32	0.040	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Bis(2-ethylhexyl) phthalate	0.046	U	0.32	0.046	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
4-Bromophenyl phenyl ether	0.079	U	0.32	0.079	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Butyl benzyl phthalate	0.038	M U	0.32	0.038	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Caprolactam	0.084	U	0.32	0.084	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Carbazole	0.39	U	0.98	0.39	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
4-Chloroaniline	0.072	U	0.65	0.072	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
4-Chloro-3-methylphenol	0.049	U	0.32	0.049	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2-Chloronaphthalene	0.059	U	0.32	0.059	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2-Chlorophenol	0.043	U	0.32	0.043	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
4-Chlorophenyl phenyl ether	0.076	U	0.32	0.076	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Chrysene	0.046	U	0.32	0.046	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Dibenz(a,h)anthracene	0.089	U	0.32	0.089	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Dibenzofuran	0.052	U	0.32	0.052	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2,4-Dichlorophenol	0.042	U	0.32	0.042	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Diethyl phthalate	0.047	U	0.32	0.047	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2,4-Dimethylphenol	0.051	U	0.32	0.051	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Dimethyl phthalate	0.055	U	0.32	0.055	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Di-n-butyl phthalate	0.059	U	0.32	0.059	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
4,6-Dinitro-2-methylphenol	0.19	U	1.7	0.19	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2,4-Dinitrophenol	0.28	U	1.7	0.28	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2,4-Dinitrotoluene	0.048	U	0.32	0.048	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2,6-Dinitrotoluene	0.049	U	0.32	0.049	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Di-n-octyl phthalate	0.035	M U	0.32	0.035	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Fluoranthene	0.047	U	0.32	0.047	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Fluorene	0.046	U	0.32	0.046	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Hexachlorobenzene	0.040	U	0.32	0.040	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Hexachlorobutadiene	0.088	U	0.32	0.088	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Hexachlorocyclopentadiene	0.073	U	0.32	0.073	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Hexachloroethane	0.076	U	0.32	0.076	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Indeno[1,2,3-cd]pyrene	0.041	U	0.32	0.041	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Isophorone	0.042	U	0.32	0.042	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2-Methylnaphthalene	0.056	U	0.32	0.056	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2-Methylphenol	0.11	U	0.32	0.11	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
3 & 4 Methylphenol	0.043	U	0.32	0.043	mg/Kg		10/29/19 09:08	10/29/19 14:11	1

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Lab Sample ID: MB 660-217581/1-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217581

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.083	U	0.32	0.083	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2-Nitroaniline	0.074	U	1.7	0.074	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
3-Nitroaniline	0.15	U	1.7	0.15	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
4-Nitroaniline	0.093	U	1.7	0.093	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Nitrobenzene	0.045	U	0.32	0.045	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2-Nitrophenol	0.080	U	0.32	0.080	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
4-Nitrophenol	0.16	U	1.7	0.16	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
N-Nitrosodi-n-propylamine	0.12	U	0.32	0.12	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Pentachlorophenol	0.15	U	1.7	0.15	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Phenanthrene	0.054	U	0.32	0.054	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Phenol	0.12	M U	0.32	0.12	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
Pyrene	0.036	U	0.32	0.036	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2,4,5-Trichlorophenol	0.055	U	0.32	0.055	mg/Kg		10/29/19 09:08	10/29/19 14:11	1
2,4,6-Trichlorophenol	0.058	U	0.32	0.058	mg/Kg		10/29/19 09:08	10/29/19 14:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*78*		*30 - 120*	*10/29/19 09:08*	*10/29/19 14:11*	*1*
2-Fluorophenol (Surr)	*80*		*16 - 113*	*10/29/19 09:08*	*10/29/19 14:11*	*1*
Nitrobenzene-d5 (Surr)	*80*		*20 - 120*	*10/29/19 09:08*	*10/29/19 14:11*	*1*
Phenol-d5 (Surr)	*76*		*19 - 144*	*10/29/19 09:08*	*10/29/19 14:11*	*1*
Terphenyl-d14 (Surr)	*91*		*30 - 131*	*10/29/19 09:08*	*10/29/19 14:11*	*1*
2,4,6-Tribromophenol (Surr)	*72*		*23 - 129*	*10/29/19 09:08*	*10/29/19 14:11*	*1*

Lab Sample ID: LCS 660-217581/2-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217581

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	1.66	1.48		mg/Kg		89	58 - 118
Acenaphthylene	1.66	1.50		mg/Kg		90	56 - 116
Acetophenone	1.66	1.42		mg/Kg		85	51 - 111
Anthracene	1.66	1.52		mg/Kg		91	62 - 126
Atrazine	1.66	1.89		mg/Kg		113	77 - 142
Benzo[a]anthracene	1.66	1.57		mg/Kg		94	61 - 121
Benzo[a]pyrene	1.66	1.61		mg/Kg		97	65 - 130
Benzo[b]fluoranthene	1.66	1.63		mg/Kg		98	64 - 124
Benzo[g,h,i]perylene	1.66	1.62		mg/Kg		97	61 - 127
Benzo[k]fluoranthene	1.66	1.62		mg/Kg		97	68 - 132
1,1'-Biphenyl	1.66	1.46	J	mg/Kg		88	55 - 115
Bis(2-chloroethoxy)methane	1.66	1.44		mg/Kg		86	53 - 113
Bis(2-chloroethyl)ether	1.66	1.40		mg/Kg		84	42 - 110
bis (2-chloroisopropyl) ether	1.66	1.44		mg/Kg		87	43 - 110
Bis(2-ethylhexyl) phthalate	1.66	1.54		mg/Kg		93	67 - 131
4-Bromophenyl phenyl ether	1.66	1.53		mg/Kg		92	62 - 122
Butyl benzyl phthalate	1.66	1.57		mg/Kg		94	66 - 126
Caprolactam	1.66	1.53	M	mg/Kg		92	57 - 140
Carbazole	1.66	2.97	Q	mg/Kg		179	82 - 150
4-Chloroaniline	1.66	0.672		mg/Kg		40	23 - 110

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Lab Sample ID: LCS 660-217581/2-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217581

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloro-3-methylphenol	1.66	1.46		mg/Kg		88	62 - 122
2-Chloronaphthalene	1.66	1.45		mg/Kg		87	55 - 115
2-Chlorophenol	1.66	1.41		mg/Kg		85	48 - 110
4-Chlorophenyl phenyl ether	1.66	1.52		mg/Kg		91	62 - 120
Chrysene	1.66	1.60		mg/Kg		96	64 - 127
Dibenz(a,h)anthracene	1.66	1.63		mg/Kg		98	65 - 128
Dibenzofuran	1.66	1.48		mg/Kg		89	48 - 128
2,4-Dichlorophenol	1.66	1.42		mg/Kg		85	55 - 116
Diethyl phthalate	1.66	1.59		mg/Kg		95	64 - 129
2,4-Dimethylphenol	1.66	1.41		mg/Kg		85	56 - 116
Dimethyl phthalate	1.66	1.58		mg/Kg		95	64 - 124
Di-n-butyl phthalate	1.66	1.57		mg/Kg		95	64 - 124
4,6-Dinitro-2-methylphenol	3.33	3.18		mg/Kg		96	34 - 150
2,4-Dinitrophenol	3.33	2.52		mg/Kg		76	13 - 132
2,4-Dinitrotoluene	1.66	1.64		mg/Kg		99	65 - 130
2,6-Dinitrotoluene	1.66	1.60		mg/Kg		96	63 - 125
Di-n-octyl phthalate	1.66	1.58		mg/Kg		95	67 - 127
Fluoranthene	1.66	1.58		mg/Kg		95	64 - 124
Fluorene	1.66	1.51		mg/Kg		91	61 - 121
Hexachlorobenzene	1.66	1.51		mg/Kg		91	63 - 128
Hexachlorobutadiene	1.66	1.44		mg/Kg		86	53 - 113
Hexachlorocyclopentadiene	1.66	1.30		mg/Kg		78	32 - 122
Hexachloroethane	1.66	1.38		mg/Kg		83	46 - 110
Indeno[1,2,3-cd]pyrene	1.66	1.63		mg/Kg		98	59 - 127
Isophorone	1.66	1.46		mg/Kg		88	51 - 124
2-Methylnaphthalene	1.66	1.43		mg/Kg		86	55 - 115
2-Methylphenol	1.66	1.45		mg/Kg		87	49 - 110
3 & 4 Methylphenol	1.66	1.40		mg/Kg		84	47 - 113
Naphthalene	1.66	1.42		mg/Kg		85	51 - 111
2-Nitroaniline	1.66	1.50	J	mg/Kg		90	61 - 123
3-Nitroaniline	1.66	1.82		mg/Kg		109	44 - 135
4-Nitroaniline	1.66	2.22		mg/Kg		133	51 - 150
Nitrobenzene	1.66	1.41		mg/Kg		85	50 - 110
2-Nitrophenol	1.66	1.39		mg/Kg		84	52 - 112
4-Nitrophenol	3.33	3.06		mg/Kg		92	65 - 134
N-Nitrosodi-n-propylamine	1.66	1.44		mg/Kg		86	52 - 112
Pentachlorophenol	3.33	3.18		mg/Kg		96	52 - 127
Phenanthrene	1.66	1.51		mg/Kg		91	62 - 122
Phenol	1.66	1.39		mg/Kg		84	42 - 110
Pyrene	1.66	1.59		mg/Kg		96	66 - 130
2,4,5-Trichlorophenol	1.66	1.45		mg/Kg		87	58 - 121
2,4,6-Trichlorophenol	1.66	1.47		mg/Kg		88	57 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*85*		*30 - 120*
2-Fluorophenol (Surr)	*85*		*16 - 113*
Nitrobenzene-d5 (Surr)	*84*		*20 - 120*
Phenol-d5 (Surr)	*83*		*19 - 144*

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Lab Sample ID: LCS 660-217581/2-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217581

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*91*		*30 - 131*
2,4,6-Tribromophenol (Surr)	*89*		*23 - 129*

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

Lab Sample ID: MB 660-217521/1-A
Matrix: Solid
Analysis Batch: 217620

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217521

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.016	M U	0.066	0.016	mg/Kg		10/28/19 08:03	10/30/19 10:55	1
PCB-1221	0.033	M U	0.098	0.033	mg/Kg		10/28/19 08:03	10/30/19 10:55	1
PCB-1232	0.017	M U	0.066	0.017	mg/Kg		10/28/19 08:03	10/30/19 10:55	1
PCB-1242	0.028	M U	0.084	0.028	mg/Kg		10/28/19 08:03	10/30/19 10:55	1
PCB-1248	0.020	M U	0.066	0.020	mg/Kg		10/28/19 08:03	10/30/19 10:55	1
PCB-1254	0.0095	M U	0.032	0.0095	mg/Kg		10/28/19 08:03	10/30/19 10:55	1
PCB-1260	0.015	M U	0.044	0.015	mg/Kg		10/28/19 08:03	10/30/19 10:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*	*M*	*30 - 150*	*10/28/19 08:03*	*10/30/19 10:55*	*1*
DCB Decachlorobiphenyl	*112*		*30 - 150*	*10/28/19 08:03*	*10/30/19 10:55*	*1*

Lab Sample ID: LCS 660-217521/2-A
Matrix: Solid
Analysis Batch: 217620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217521

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	0.333	0.307		mg/Kg		92	47 - 146
PCB-1260	0.333	0.323		mg/Kg		97	45 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*96*		*30 - 150*
DCB Decachlorobiphenyl	*114*		*30 - 150*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 660-217519/1-A
Matrix: Solid
Analysis Batch: 217526

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217519

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.080	U	0.97	0.080	mg/Kg		10/28/19 07:37	10/28/19 11:18	1
Barium	0.054	U	0.97	0.054	mg/Kg		10/28/19 07:37	10/28/19 11:18	1
Cadmium	0.027	U	0.49	0.027	mg/Kg		10/28/19 07:37	10/28/19 11:18	1
Chromium	0.071	U	0.97	0.071	mg/Kg		10/28/19 07:37	10/28/19 11:18	1
Lead	0.14	U	0.97	0.14	mg/Kg		10/28/19 07:37	10/28/19 11:18	1
Selenium	0.36	U	1.9	0.36	mg/Kg		10/28/19 07:37	10/28/19 11:18	1
Silver	0.18	U	0.97	0.18	mg/Kg		10/28/19 07:37	10/28/19 11:18	1

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

Lab Sample ID: LCS 660-217519/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217526 — **Prep Batch: 217519**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	49.0	46.8		mg/Kg		96	80 - 120
Barium	49.0	49.4		mg/Kg		101	80 - 120
Cadmium	49.0	47.4		mg/Kg		97	80 - 120
Chromium	49.0	49.9		mg/Kg		102	80 - 120
Lead	49.0	48.3		mg/Kg		99	80 - 120
Selenium	49.0	46.3		mg/Kg		95	80 - 120
Silver	49.0	45.6		mg/Kg		93	80 - 120

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Lab Sample ID: MB 660-217560/13-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217604 — **Prep Batch: 217560**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	U	0.040	0.012	mg/Kg		10/29/19 11:30	10/29/19 12:45	1

Lab Sample ID: LCS 660-217560/14-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217604 — **Prep Batch: 217560**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.164		mg/Kg		99	80 - 120

Lab Sample ID: 660-98299-1 MS — **Client Sample ID: BG-1-0-10-10-19**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217604 — **Prep Batch: 217560**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.013	U	0.206	0.203		mg/Kg	☼	99	80 - 120

Lab Sample ID: 660-98299-1 MSD — **Client Sample ID: BG-1-0-10-10-19**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217604 — **Prep Batch: 217560**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.013	U	0.187	0.182		mg/Kg	☼	97	80 - 120	11	20

QC Association Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

GC/MS Semi VOA

Prep Batch: 217581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-1	BG-1-0-10-10-19	Total/NA	Solid	3546	
660-98299-2	BG-4-0-5-10-19	Total/NA	Solid	3546	
660-98299-3	BG-2-0-5-10-19	Total/NA	Solid	3546	
660-98299-4	BG-3-0-5-10-19	Total/NA	Solid	3546	
660-98299-5	B-1a-0-6-10-19	Total/NA	Solid	3546	
660-98299-6	B-1a-6-10-10-19	Total/NA	Solid	3546	
660-98299-7	B-2a-0-7-10-19	Total/NA	Solid	3546	
660-98299-8	B-2a-7-10-10-19	Total/NA	Solid	3546	
660-98299-9	B-3a-0-6-10-19	Total/NA	Solid	3546	
660-98299-10	B-3a-6-10-10-19	Total/NA	Solid	3546	
660-98299-11	DUP-1-10-19	Total/NA	Solid	3546	
MB 660-217581/1-A	Method Blank	Total/NA	Solid	3546	
LCS 660-217581/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 217586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-2	BG-4-0-5-10-19	Total/NA	Solid	8270D	217581
660-98299-3	BG-2-0-5-10-19	Total/NA	Solid	8270D	217581
660-98299-4	BG-3-0-5-10-19	Total/NA	Solid	8270D	217581
660-98299-5	B-1a-0-6-10-19	Total/NA	Solid	8270D	217581
660-98299-6	B-1a-6-10-10-19	Total/NA	Solid	8270D	217581
660-98299-7	B-2a-0-7-10-19	Total/NA	Solid	8270D	217581
660-98299-8	B-2a-7-10-10-19	Total/NA	Solid	8270D	217581

Analysis Batch: 217589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-1	BG-1-0-10-10-19	Total/NA	Solid	8270D	217581
660-98299-9	B-3a-0-6-10-19	Total/NA	Solid	8270D	217581
660-98299-10	B-3a-6-10-10-19	Total/NA	Solid	8270D	217581
660-98299-11	DUP-1-10-19	Total/NA	Solid	8270D	217581
MB 660-217581/1-A	Method Blank	Total/NA	Solid	8270D	217581
LCS 660-217581/2-A	Lab Control Sample	Total/NA	Solid	8270D	217581

GC Semi VOA

Prep Batch: 217521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-1	BG-1-0-10-10-19	Total/NA	Solid	3546	
660-98299-2	BG-4-0-5-10-19	Total/NA	Solid	3546	
660-98299-3	BG-2-0-5-10-19	Total/NA	Solid	3546	
660-98299-4	BG-3-0-5-10-19	Total/NA	Solid	3546	
660-98299-5	B-1a-0-6-10-19	Total/NA	Solid	3546	
660-98299-6	B-1a-6-10-10-19	Total/NA	Solid	3546	
660-98299-7	B-2a-0-7-10-19	Total/NA	Solid	3546	
660-98299-8	B-2a-7-10-10-19	Total/NA	Solid	3546	
660-98299-9	B-3a-0-6-10-19	Total/NA	Solid	3546	
660-98299-10	B-3a-6-10-10-19	Total/NA	Solid	3546	
660-98299-11	DUP-1-10-19	Total/NA	Solid	3546	
MB 660-217521/1-A	Method Blank	Total/NA	Solid	3546	
LCS 660-217521/2-A	Lab Control Sample	Total/NA	Solid	3546	

QC Association Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

GC Semi VOA

Analysis Batch: 217620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-1	BG-1-0-10-10-19	Total/NA	Solid	8082A	217521
660-98299-2	BG-4-0-5-10-19	Total/NA	Solid	8082A	217521
660-98299-3	BG-2-0-5-10-19	Total/NA	Solid	8082A	217521
660-98299-4	BG-3-0-5-10-19	Total/NA	Solid	8082A	217521
660-98299-5	B-1a-0-6-10-19	Total/NA	Solid	8082A	217521
660-98299-6	B-1a-6-10-10-19	Total/NA	Solid	8082A	217521
660-98299-7	B-2a-0-7-10-19	Total/NA	Solid	8082A	217521
660-98299-8	B-2a-7-10-10-19	Total/NA	Solid	8082A	217521
660-98299-9	B-3a-0-6-10-19	Total/NA	Solid	8082A	217521
660-98299-10	B-3a-6-10-10-19	Total/NA	Solid	8082A	217521
660-98299-11	DUP-1-10-19	Total/NA	Solid	8082A	217521
MB 660-217521/1-A	Method Blank	Total/NA	Solid	8082A	217521
LCS 660-217521/2-A	Lab Control Sample	Total/NA	Solid	8082A	217521

Metals

Prep Batch: 217519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-1	BG-1-0-10-10-19	Total/NA	Solid	3050B	
660-98299-2	BG-4-0-5-10-19	Total/NA	Solid	3050B	
660-98299-3	BG-2-0-5-10-19	Total/NA	Solid	3050B	
660-98299-4	BG-3-0-5-10-19	Total/NA	Solid	3050B	
660-98299-5	B-1a-0-6-10-19	Total/NA	Solid	3050B	
660-98299-6	B-1a-6-10-10-19	Total/NA	Solid	3050B	
660-98299-7	B-2a-0-7-10-19	Total/NA	Solid	3050B	
660-98299-8	B-2a-7-10-10-19	Total/NA	Solid	3050B	
660-98299-9	B-3a-0-6-10-19	Total/NA	Solid	3050B	
660-98299-10	B-3a-6-10-10-19	Total/NA	Solid	3050B	
660-98299-11	DUP-1-10-19	Total/NA	Solid	3050B	
MB 660-217519/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 660-217519/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 217526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-1	BG-1-0-10-10-19	Total/NA	Solid	6010D	217519
660-98299-2	BG-4-0-5-10-19	Total/NA	Solid	6010D	217519
660-98299-3	BG-2-0-5-10-19	Total/NA	Solid	6010D	217519
660-98299-4	BG-3-0-5-10-19	Total/NA	Solid	6010D	217519
660-98299-5	B-1a-0-6-10-19	Total/NA	Solid	6010D	217519
660-98299-6	B-1a-6-10-10-19	Total/NA	Solid	6010D	217519
660-98299-7	B-2a-0-7-10-19	Total/NA	Solid	6010D	217519
660-98299-8	B-2a-7-10-10-19	Total/NA	Solid	6010D	217519
660-98299-9	B-3a-0-6-10-19	Total/NA	Solid	6010D	217519
660-98299-10	B-3a-6-10-10-19	Total/NA	Solid	6010D	217519
660-98299-11	DUP-1-10-19	Total/NA	Solid	6010D	217519
MB 660-217519/1-A	Method Blank	Total/NA	Solid	6010D	217519
LCS 660-217519/2-A	Lab Control Sample	Total/NA	Solid	6010D	217519

Prep Batch: 217560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-1	BG-1-0-10-10-19	Total/NA	Solid	7471A	

Metals (Continued)

Prep Batch: 217560 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-2	BG-4-0-5-10-19	Total/NA	Solid	7471A	
660-98299-3	BG-2-0-5-10-19	Total/NA	Solid	7471A	
660-98299-4	BG-3-0-5-10-19	Total/NA	Solid	7471A	
660-98299-5	B-1a-0-6-10-19	Total/NA	Solid	7471A	
660-98299-6	B-1a-6-10-10-19	Total/NA	Solid	7471A	
660-98299-7	B-2a-0-7-10-19	Total/NA	Solid	7471A	
660-98299-8	B-2a-7-10-10-19	Total/NA	Solid	7471A	
660-98299-9	B-3a-0-6-10-19	Total/NA	Solid	7471A	
660-98299-10	B-3a-6-10-10-19	Total/NA	Solid	7471A	
660-98299-11	DUP-1-10-19	Total/NA	Solid	7471A	
MB 660-217560/13-A	Method Blank	Total/NA	Solid	7471A	
LCS 660-217560/14-A	Lab Control Sample	Total/NA	Solid	7471A	
660-98299-1 MS	BG-1-0-10-10-19	Total/NA	Solid	7471A	
660-98299-1 MSD	BG-1-0-10-10-19	Total/NA	Solid	7471A	

Analysis Batch: 217604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-1	BG-1-0-10-10-19	Total/NA	Solid	7471A	217560
660-98299-2	BG-4-0-5-10-19	Total/NA	Solid	7471A	217560
660-98299-3	BG-2-0-5-10-19	Total/NA	Solid	7471A	217560
660-98299-4	BG-3-0-5-10-19	Total/NA	Solid	7471A	217560
660-98299-5	B-1a-0-6-10-19	Total/NA	Solid	7471A	217560
660-98299-6	B-1a-6-10-10-19	Total/NA	Solid	7471A	217560
660-98299-7	B-2a-0-7-10-19	Total/NA	Solid	7471A	217560
660-98299-8	B-2a-7-10-10-19	Total/NA	Solid	7471A	217560
660-98299-9	B-3a-0-6-10-19	Total/NA	Solid	7471A	217560
660-98299-10	B-3a-6-10-10-19	Total/NA	Solid	7471A	217560
660-98299-11	DUP-1-10-19	Total/NA	Solid	7471A	217560
MB 660-217560/13-A	Method Blank	Total/NA	Solid	7471A	217560
LCS 660-217560/14-A	Lab Control Sample	Total/NA	Solid	7471A	217560
660-98299-1 MS	BG-1-0-10-10-19	Total/NA	Solid	7471A	217560
660-98299-1 MSD	BG-1-0-10-10-19	Total/NA	Solid	7471A	217560

General Chemistry

Analysis Batch: 217552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-1	BG-1-0-10-10-19	Total/NA	Solid	Moisture	
660-98299-2	BG-4-0-5-10-19	Total/NA	Solid	Moisture	
660-98299-3	BG-2-0-5-10-19	Total/NA	Solid	Moisture	
660-98299-4	BG-3-0-5-10-19	Total/NA	Solid	Moisture	
660-98299-5	B-1a-0-6-10-19	Total/NA	Solid	Moisture	
660-98299-6	B-1a-6-10-10-19	Total/NA	Solid	Moisture	
660-98299-7	B-2a-0-7-10-19	Total/NA	Solid	Moisture	

Analysis Batch: 217587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-8	B-2a-7-10-10-19	Total/NA	Solid	Moisture	
660-98299-9	B-3a-0-6-10-19	Total/NA	Solid	Moisture	
660-98299-10	B-3a-6-10-10-19	Total/NA	Solid	Moisture	
660-98299-11	DUP-1-10-19	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 217587 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98299-10 DU	B-3a-6-10-10-19	Total/NA	Solid	Moisture	

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: BG-1-0-10-10-19

Lab Sample ID: 660-98299-1
Date Collected: 10/24/19 10:28
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217552	10/28/19 12:25	AJG	TAL TAM

Client Sample ID: BG-1-0-10-10-19

Lab Sample ID: 660-98299-1
Date Collected: 10/24/19 10:28
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 81.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217581	10/29/19 09:08	EM	TAL TAM
Total/NA	Analysis	8270D		1	217589	10/29/19 16:13	MWJ	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 12:07	MDS	TAL TAM
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		1	217526	10/28/19 12:02	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 12:50	GH1	TAL TAM

Client Sample ID: BG-4-0-5-10-19

Lab Sample ID: 660-98299-2
Date Collected: 10/24/19 10:42
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217552	10/28/19 12:25	AJG	TAL TAM

Client Sample ID: BG-4-0-5-10-19

Lab Sample ID: 660-98299-2
Date Collected: 10/24/19 10:42
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 79.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217581	10/29/19 09:08	EM	TAL TAM
Total/NA	Analysis	8270D		1	217586	10/29/19 17:38	K1P	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 12:22	MDS	TAL TAM
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		1	217526	10/28/19 12:05	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 12:55	GH1	TAL TAM

Client Sample ID: BG-2-0-5-10-19

Lab Sample ID: 660-98299-3
Date Collected: 10/24/19 10:58
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217552	10/28/19 12:59	AJG	TAL TAM

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: BG-2-0-5-10-19 — Lab Sample ID: 660-98299-3

Date Collected: 10/24/19 10:58 — **Matrix: Solid**
Date Received: 10/25/19 08:30 — **Percent Solids: 78.8**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217581	10/29/19 09:08	EM	TAL TAM
Total/NA	Analysis	8270D		1	217586	10/29/19 18:03	K1P	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 12:37	MDS	TAL TAM
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		1	217526	10/28/19 12:09	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 12:57	GH1	TAL TAM

Client Sample ID: BG-3-0-5-10-19 — Lab Sample ID: 660-98299-4

Date Collected: 10/24/19 11:14 — **Matrix: Solid**
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217552	10/28/19 12:58	AJG	TAL TAM

Client Sample ID: BG-3-0-5-10-19 — Lab Sample ID: 660-98299-4

Date Collected: 10/24/19 11:14 — **Matrix: Solid**
Date Received: 10/25/19 08:30 — **Percent Solids: 77.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217581	10/29/19 09:08	EM	TAL TAM
Total/NA	Analysis	8270D		1	217586	10/29/19 18:28	K1P	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 12:51	MDS	TAL TAM
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		1	217526	10/28/19 12:12	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 12:59	GH1	TAL TAM

Client Sample ID: B-1a-0-6-10-19 — Lab Sample ID: 660-98299-5

Date Collected: 10/24/19 11:42 — **Matrix: Solid**
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217552	10/28/19 13:16	AJG	TAL TAM

Client Sample ID: B-1a-0-6-10-19 — Lab Sample ID: 660-98299-5

Date Collected: 10/24/19 11:42 — **Matrix: Solid**
Date Received: 10/25/19 08:30 — **Percent Solids: 78.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217581	10/29/19 09:08	EM	TAL TAM
Total/NA	Analysis	8270D		1	217586	10/29/19 18:52	K1P	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 13:06	MDS	TAL TAM

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-1a-0-6-10-19

Lab Sample ID: 660-98299-5
Date Collected: 10/24/19 11:42
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 78.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		1	217526	10/28/19 12:15	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:01	GH1	TAL TAM

Client Sample ID: B-1a-6-10-10-19

Lab Sample ID: 660-98299-6
Date Collected: 10/24/19 11:51
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217552	10/28/19 13:32	AJG	TAL TAM

Client Sample ID: B-1a-6-10-10-19

Lab Sample ID: 660-98299-6
Date Collected: 10/24/19 11:51
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 68.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217581	10/29/19 09:08	EM	TAL TAM
Total/NA	Analysis	8270D		1	217586	10/29/19 19:16	K1P	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 13:20	MDS	TAL TAM
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		5	217526	10/28/19 13:11	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:06	GH1	TAL TAM

Client Sample ID: B-2a-0-7-10-19

Lab Sample ID: 660-98299-7
Date Collected: 10/24/19 12:05
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217552	10/28/19 13:41	AJG	TAL TAM

Client Sample ID: B-2a-0-7-10-19

Lab Sample ID: 660-98299-7
Date Collected: 10/24/19 12:05
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 80.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217581	10/29/19 09:08	EM	TAL TAM
Total/NA	Analysis	8270D		1	217586	10/29/19 19:41	K1P	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 13:35	MDS	TAL TAM
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		1	217526	10/28/19 12:21	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:08	GH1	TAL TAM

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-2a-7-10-10-19

Lab Sample ID: 660-98299-8
Date Collected: 10/24/19 12:10
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 05:47	AJG	TAL TAM

Client Sample ID: B-2a-7-10-10-19

Lab Sample ID: 660-98299-8
Date Collected: 10/24/19 12:10
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 78.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217581	10/29/19 09:08	EM	TAL TAM
Total/NA	Analysis	8270D		1	217586	10/29/19 20:05	K1P	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 13:50	MDS	TAL TAM
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		1	217526	10/28/19 12:24	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:09	GH1	TAL TAM

Client Sample ID: B-3a-0-6-10-19

Lab Sample ID: 660-98299-9
Date Collected: 10/24/19 12:41
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 05:57	AJG	TAL TAM

Client Sample ID: B-3a-0-6-10-19

Lab Sample ID: 660-98299-9
Date Collected: 10/24/19 12:41
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217581	10/29/19 09:08	EM	TAL TAM
Total/NA	Analysis	8270D		1	217589	10/29/19 17:27	MWJ	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 14:04	MDS	TAL TAM
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		1	217526	10/28/19 12:34	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:11	GH1	TAL TAM

Client Sample ID: B-3a-6-10-10-19

Lab Sample ID: 660-98299-10
Date Collected: 10/24/19 12:42
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 05:28	AJG	TAL TAM

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Client Sample ID: B-3a-6-10-10-19

Lab Sample ID: 660-98299-10

Date Collected: 10/24/19 12:42
Date Received: 10/25/19 08:30

Matrix: Solid
Percent Solids: 83.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217581	10/29/19 09:08	EM	TAL TAM
Total/NA	Analysis	8270D		1	217589	10/29/19 17:02	MWJ	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 14:19	MDS	TAL TAM
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		3	217526	10/28/19 13:14	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:13	GH1	TAL TAM

Client Sample ID: DUP-1-10-19

Lab Sample ID: 660-98299-11

Date Collected: 10/24/19 12:00
Date Received: 10/25/19 08:30

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 05:44	AJG	TAL TAM

Client Sample ID: DUP-1-10-19

Lab Sample ID: 660-98299-11

Date Collected: 10/24/19 12:00
Date Received: 10/25/19 08:30

Matrix: Solid
Percent Solids: 79.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217581	10/29/19 09:08	EM	TAL TAM
Total/NA	Analysis	8270D		1	217589	10/29/19 16:38	MWJ	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 14:33	MDS	TAL TAM
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		3	217526	10/28/19 13:17	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:15	GH1	TAL TAM

Laboratory References:

TAL TAM = Eurofins TestAmerica, Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

Method Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Compounds by Gas Chromatograph	SW846	TAL TAM
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL TAM
6010D	Metals (ICP)	SW846	TAL TAM
7471A	Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	SW846	TAL TAM
Moisture	Percent Moisture	EPA	TAL TAM
3050B	Preparation, Metals	SW846	TAL TAM
3546	Microwave Extraction	SW846	TAL TAM
7471A	Preparation, Mercury	SW846	TAL TAM

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 TAM = Eurofins TestAmerica, Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

Accreditation/Certification Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98299-1

Laboratory: Eurofins TestAmerica, Tampa

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

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E84282	06-30-20

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

Laboratory: Eurofins TestAmerica, Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-20
Alaska	State	GA00006	06-30-20
Alaska (UST)	State	17-016	09-30-20
ANAB	Dept. of Defense ELAP	L2463	09-22-22
ANAB	DoD	L2463	09-22-22
ANAB	ISO/IEC 17025	L2463.01	09-22-22
ANAB	ISO/IEC 17025	L2463.01	09-22-22
Arizona	State	AZ0808	12-14-19
Arkansas DEQ	State	19-015-0	02-01-20
Arkansas DEQ	State Program	88-0692	02-01-20
California	State	2939	06-30-20
Colorado	State	GA00006	12-31-19
Connecticut	State	PH-0161	03-31-21
Florida	NELAP	E87052	06-30-20
GA Dept. of Agriculture	State Program	N/A	06-12-20
Georgia	State	E87052	06-30-20
Georgia	State Program	N/A	06-30-20
Georgia (DW)	State	803	06-30-20
Guam	State	19-007R	04-17-20
Hawaii	State	<cert No.>	06-30-20
Indiana	State	C-GA-02	06-30-20
Iowa	State	353	09-22-20
Kansas	NELAP	E-10322	10-15-20
Kentucky (DW)	State	KY90084	12-31-19
Kentucky (UST)	State	<cert No.>	06-30-20
Kentucky (UST)	State Program	18	06-30-20
Kentucky (WW)	State	KY90084	12-31-19
Kentucky (WW)	State Program	90084	12-31-19
Louisiana	NELAP	02011	06-30-20
Louisiana (DW)	State	LA009	12-31-19
Maine	State	GA00006	09-26-20
Maryland	State	250	12-31-19
Massachusetts	State	M-GA006	06-30-20
Massachusetts	State Program	M-GA006	06-30-20
Michigan	State	9925	06-30-20
Mississippi	State	<cert No.>	06-30-20
Mississippi	State Program	N/A	06-30-20
Nebraska	State	NE-OS-7-04	06-30-20

Laboratory: Eurofins TestAmerica, Savannah (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Nebraska	State Program	TestAmerica-Savannah	06-30-20
New Hampshire	NELAP	2096	05-29-20
New Hampshire	NELAP	2096	05-29-20
New Jersey	NELAP	GA769	06-30-20
New Mexico	State	GA00006	06-30-20
New York	NELAP	10842	04-01-20
North Carolina (DW)	State	13701	07-31-20
North Carolina (DW)	State Program	13701	07-31-20
North Carolina (WW/SW)	State	269	12-31-19
North Carolina (WW/SW)	State Program	269	12-31-19
Oklahoma	State	9984	08-31-20
Pennsylvania	NELAP	68-00474	06-30-20
Puerto Rico	State	GA00006	01-01-20
South Carolina	State	98001	06-30-20
Tennessee	State	02961	06-30-20
Texas	NELAP	T104704185-19-13	11-30-19
Texas	NELAP	T1047004185-19-3	11-30-19
Texas	TCEQ Water Supply	T104704185	09-23-20
US Fish & Wildlife	US Federal Programs	LE058448-0	07-31-20
USDA	US Federal Programs	P330-18-00313	10-29-21
Virginia	NELAP	10509	06-14-20
Washington	State	C805	06-10-20
West Virginia (DW)	State	9950C	12-31-19
West Virginia (DW)	State Program	9950C	12-31-19
West Virginia DEP	State	094	11-30-19
Wisconsin	State	999819810	08-31-20
Wyoming	State	8TMS-L	06-30-20 *
Wyoming	State Program	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: April Kelly	Lab PM: Lawhon, Jon K	Carrier Tracking No(s):	COC No: 680-108806-42551.2
Client Contact: Brett Zeigler	Phone: 912-414-3097	E-Mail: jon.lawhon@testamericainc.com		Page: Page 2 of 3
Company: U.S. Army Corps of Engineers				Job #:
Address: 100 West Oglethorpe Ave	Due Date Requested:			
City: Savannah	TAT Requested (days): 5 days			
State, Zip: GA, 31401				
Phone:	PO #: Purchase Order Requested			
Email: derrick.b.zeigler@usace.army.mil	WO #:			
Project Name: Augusta Training Wall, Augusta, GA	Project #: 68022845			
Site:	SSOW#:			

Analysis Requested

660-98299 Chain of Custody

Loc: 660
98299

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
M - Hexane
N - None
O - AsNaO2
P - Na2O4S

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)	8082A, 8270D	6010D, 7471A	Total Number of	Special Instructions/Note:
			Preservation Code:				N	N		
BG-1-0-10-10-19	10/24/19	1028	C	Solid			1	1		
BG-4-0-5-10-19	10/24/19	1042	C	Solid			1	1		
BG-2-0-5-10-19	10/24/19	1058	C	Solid			1	1		
BG-3-0-5-10-19	10/24/19	1114	C	Solid			1	1		
B-1a-0-6-10-19	10/24/19	1142	C	Solid			1	1		
B-1a-6-10-10-19	10/24/19	1151	C	Solid			1	1		
B-2a-0-7-10-19	10/24/19	1205	C	Solid			1	1		
B-2a-7-10-10-19	10/24/19	1210	C	Solid			1	1		
B-3a-0-6-10-19	10/24/19	1241	C	Solid			1	1		
B-3a-6-10-10-19	10/24/19	1242	C	Solid			1	1		
DUP-1-10-19	10/24/19	1200	C	Solid			1	1		

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:	Company	Received by:	Date/Time:	Company
April Kelly	10/24/19 1730	USACE	[signature]	10-25-19 @ 0830	TA TAM
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes ~~Δ No~~ | Custody Seal No.: N/A | Cooler Temperature(s) °C and Other Remarks: 0.6 / 0.6 CVOG

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: U.S. Army Corps of Engineers

Job Number: 660-98299-1

Login Number: 98299

List Source: Eurofins TestAmerica, Tampa

List Number: 1

Creator: Edwards, Erricka

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Tampa
6712 Benjamin Road
Suite 100
Tampa, FL 33634
Tel: (813)885-7427

Laboratory Job ID: 660-98302-1
Client Project/Site: Augusta Training Wall, Augusta, GA

For:
U.S. Army Corps of Engineers
100 West Oglethorpe Ave
Savannah, Georgia 31401

Attn: Brett Zeigler

Authorized for release by:
11/5/2019 9:29:46 AM

Jon Lawhon, Project Manager I
(912)250-0283
jon.lawhon@testamericainc.com

LINKS

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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.

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Sample Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
660-98302-1	B-4a-0-12.5-10-19	Solid	10/24/19 13:18	10/25/19 16:07	
660-98302-2	B-4a-12.5-15-10-19	Solid	10/24/19 13:21	10/25/19 16:07	
660-98302-3	B-6a-0-16-10-19	Solid	10/24/19 13:53	10/25/19 16:07	
660-98302-4	B-6a-16-17-10-19	Solid	10/24/19 14:06	10/25/19 16:07	
660-98302-5	B-6a-17-20-10-19	Solid	10/24/19 14:08	10/25/19 16:07	
660-98302-6	B-7a-0-14-10-19	Solid	10/24/19 14:33	10/25/19 16:07	
660-98302-7	B-7a-14-18.5-10-19	Solid	10/24/19 14:34	10/25/19 16:07	
660-98302-8	B-7a-18.5-20-10-19	Solid	10/24/19 14:39	10/25/19 16:07	

Job ID: 660-98302-1

Laboratory: Eurofins TestAmerica, Tampa

Narrative

CASE NARRATIVE
Client: U.S. Army Corps of Engineers
Project: Augusta Training Wall, Augusta, GA

Report Number: 660-98302-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT
The samples were received on 10/25/2019 4:07 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3º C.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples B-4a-0-12.5-10-19 (660-98302-1), B-4a-12.5-15-10-19 (660-98302-2), B-6a-0-16-10-19 (660-98302-3), B-6a-16-17-10-19 (660-98302-4), B-6a-17-20-10-19 (660-98302-5), B-7a-0-14-10-19 (660-98302-6), B-7a-14-18.5-10-19 (660-98302-7) and B-7a-18.5-20-10-19 (660-98302-8) were analyzed for Semivolatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared and analyzed on 10/29/2019.

Method 8270D: Surrogate recovery for the following samples were outside control limits: B-4a-12.5-15-10-19 (660-98302-2) and B-6a-17-20-10-19 (660-98302-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270D: The laboratory control sample (LCS) for preparation batch 660-217582 and analytical batch 660-217589 recovered outside control limits for the following analytes: Carbazole. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. Carbazole is a known poor performing analyte.

Method 8270D: The laboratory control sample (LCS) for preparation batch 660-217582 and analytical batch 660-217589 recovered outside control limits for the following analyte: Phenol. Phenol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 660-217582 and analytical batch 660-217589 were outside control limits for several analytes. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

POLYCHLORINATED BIPHENYLS (PCBS)
Samples B-4a-0-12.5-10-19 (660-98302-1), B-4a-12.5-15-10-19 (660-98302-2), B-6a-0-16-10-19 (660-98302-3), B-6a-16-17-10-19 (660-98302-4), B-6a-17-20-10-19 (660-98302-5), B-7a-0-14-10-19 (660-98302-6), B-7a-14-18.5-10-19 (660-98302-7) and B-7a-18.5-20-10-19 (660-98302-8) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The samples were prepared on 10/28/2019 and analyzed on 10/30/2019 and 10/31/2019.

This method incorporates 2nd column confirmation. Corrective action is not taken for surrogate/spike compounds unless results from both columns are unacceptable. Results outside criteria are qualified.

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

METALS BY ICP

Job ID: 660-98302-1 (Continued)

Laboratory: Eurofins TestAmerica, Tampa (Continued)

Samples B-4a-0-12.5-10-19 (660-98302-1), B-4a-12.5-15-10-19 (660-98302-2), B-6a-0-16-10-19 (660-98302-3), B-6a-16-17-10-19 (660-98302-4), B-6a-17-20-10-19 (660-98302-5), B-7a-0-14-10-19 (660-98302-6), B-7a-14-18.5-10-19 (660-98302-7) and B-7a-18.5-20-10-19 (660-98302-8) were analyzed for Metals by ICP in accordance with EPA SW-846 Method 6010D. The samples were prepared and analyzed on 10/28/2019 and 10/29/2019.

Method 6010D: Sample diluted due to unspecified matrix interference that caused the internal standards to fall outside acceptable limits. B-4a-12.5-15-10-19 (660-98302-2) and (400-178581-A-1-A ^2). Elevated reporting limits (RLs) are provided.

Method 6010D: Sample diluted due to a saturated level of iron in the matrix which is a spectral interferent on the target analytes. B-7a-14-18.5-10-19 (660-98302-7). Elevated reporting limits (RLs) are provided.

Method 6010D: Sample diluted due to an unspecified matrix interference that caused the internal standards to fall outside acceptable limits. B-6a-16-17-10-19 (660-98302-4), B-6a-17-20-10-19 (660-98302-5) and B-7a-18.5-20-10-19 (660-98302-8). 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.

TOTAL MERCURY

Samples B-4a-0-12.5-10-19 (660-98302-1), B-4a-12.5-15-10-19 (660-98302-2), B-6a-0-16-10-19 (660-98302-3), B-6a-16-17-10-19 (660-98302-4), B-6a-17-20-10-19 (660-98302-5), B-7a-0-14-10-19 (660-98302-6), B-7a-14-18.5-10-19 (660-98302-7) and B-7a-18.5-20-10-19 (660-98302-8) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared and analyzed on 10/29/2019.

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

PERCENT SOLIDS/MOISTURE

Samples B-4a-0-12.5-10-19 (660-98302-1), B-4a-12.5-15-10-19 (660-98302-2), B-6a-0-16-10-19 (660-98302-3), B-6a-16-17-10-19 (660-98302-4), B-6a-17-20-10-19 (660-98302-5), B-7a-0-14-10-19 (660-98302-6), B-7a-14-18.5-10-19 (660-98302-7) and B-7a-18.5-20-10-19 (660-98302-8) were analyzed for Percent Solids/Moisture in accordance with TestAmerica SOP. The samples were analyzed on 10/29/2019.

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

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

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)

Detection Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-4a-0-12.5-10-19 — Lab Sample ID: 660-98302-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.23	J	1.2	0.10	mg/Kg	1	☼	6010D	Total/NA
Barium	8.7		1.2	0.069	mg/Kg	1	☼	6010D	Total/NA
Chromium	5.4		1.2	0.090	mg/Kg	1	☼	6010D	Total/NA
Lead	1.1	J	1.2	0.18	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: B-4a-12.5-15-10-19 — Lab Sample ID: 660-98302-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Phenol	0.16	J Q	0.44	0.16	mg/Kg	1	☼	8270D	Total/NA
Arsenic	0.43	J	3.9	0.32	mg/Kg	3	☼	6010D	Total/NA
Barium	5.2		3.9	0.22	mg/Kg	3	☼	6010D	Total/NA
Chromium	3.6	J	3.9	0.28	mg/Kg	3	☼	6010D	Total/NA
Lead	1.4	J	3.9	0.57	mg/Kg	3	☼	6010D	Total/NA

Client Sample ID: B-6a-0-16-10-19 — Lab Sample ID: 660-98302-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.054	J	0.37	0.054	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.059	J	0.37	0.042	mg/Kg	1	☼	8270D	Total/NA
Arsenic	0.28	J	1.1	0.089	mg/Kg	1	☼	6010D	Total/NA
Barium	9.5		1.1	0.060	mg/Kg	1	☼	6010D	Total/NA
Chromium	8.7		1.1	0.078	mg/Kg	1	☼	6010D	Total/NA
Lead	1.7		1.1	0.16	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: B-6a-16-17-10-19 — Lab Sample ID: 660-98302-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.67	J	7.0	0.58	mg/Kg	5	☼	6010D	Total/NA
Barium	69		7.0	0.39	mg/Kg	5	☼	6010D	Total/NA
Chromium	9.7		7.0	0.51	mg/Kg	5	☼	6010D	Total/NA
Lead	2.7	J	7.0	1.0	mg/Kg	5	☼	6010D	Total/NA

Client Sample ID: B-6a-17-20-10-19 — Lab Sample ID: 660-98302-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.5	J	5.9	0.49	mg/Kg	5	☼	6010D	Total/NA
Barium	18		5.9	0.33	mg/Kg	5	☼	6010D	Total/NA
Cadmium	0.18	J	2.9	0.17	mg/Kg	5	☼	6010D	Total/NA
Chromium	22		5.9	0.43	mg/Kg	5	☼	6010D	Total/NA
Lead	5.5	J	5.9	0.85	mg/Kg	5	☼	6010D	Total/NA

Client Sample ID: B-7a-0-14-10-19 — Lab Sample ID: 660-98302-6

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.053	J	0.39	0.053	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.052	J	0.39	0.052	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.060	J	0.39	0.043	mg/Kg	1	☼	8270D	Total/NA
Arsenic	0.25	J	1.1	0.090	mg/Kg	1	☼	6010D	Total/NA
Barium	12		1.1	0.060	mg/Kg	1	☼	6010D	Total/NA
Chromium	5.9		1.1	0.079	mg/Kg	1	☼	6010D	Total/NA
Lead	1.8		1.1	0.16	mg/Kg	1	☼	6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-7a-14-18.5-10-19 — Lab Sample ID: 660-98302-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Barium	41		7.0	0.39	mg/Kg	5	☼	6010D	Total/NA
Cadmium	0.39	J	3.5	0.20	mg/Kg	5	☼	6010D	Total/NA
Chromium	7.0		7.0	0.51	mg/Kg	5	☼	6010D	Total/NA
Lead	13		7.0	1.0	mg/Kg	5	☼	6010D	Total/NA
Selenium	3.8	J	14	2.6	mg/Kg	5	☼	6010D	Total/NA

Client Sample ID: B-7a-18.5-20-10-19 — Lab Sample ID: 660-98302-8

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Barium	64		14	0.80	mg/Kg	10	☼	6010D	Total/NA
Chromium	2.2	J	14	1.0	mg/Kg	10	☼	6010D	Total/NA
Lead	4.3	J	14	2.1	mg/Kg	10	☼	6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-4a-0-12.5-10-19

Date Collected: 10/24/19 13:18
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-1

Matrix: Solid
Percent Solids: 78.6

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.064	U	0.42	0.064	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Acenaphthylene	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Acetophenone	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Anthracene	0.072	U	0.42	0.072	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Atrazine	0.17	U	1.3	0.17	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Benzo[a]anthracene	0.057	U	0.42	0.057	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Benzo[a]pyrene	0.056	U	0.42	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Benzo[b]fluoranthene	0.12	U	0.42	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Benzo[g,h,i]perylene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Benzo[k]fluoranthene	0.071	M U	0.42	0.071	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
1,1'-Biphenyl	0.86	U	2.7	0.86	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Bis(2-chloroethoxy)methane	0.099	U	0.42	0.099	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Bis(2-chloroethyl)ether	0.098	U	0.42	0.098	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
bis (2-chloroisopropyl) ether	0.051	U	0.42	0.051	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Bis(2-ethylhexyl) phthalate	0.059	U	0.42	0.059	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
4-Bromophenyl phenyl ether	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Butyl benzyl phthalate	0.049	U	0.42	0.049	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Caprolactam	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Carbazole	0.51	Q U	1.3	0.51	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
4-Chloroaniline	0.093	U	0.83	0.093	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
4-Chloro-3-methylphenol	0.063	U	0.42	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
2-Chloronaphthalene	0.075	U	0.42	0.075	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
2-Chlorophenol	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
4-Chlorophenyl phenyl ether	0.098	U	0.42	0.098	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Chrysene	0.059	U	0.42	0.059	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Dibenz(a,h)anthracene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Dibenzofuran	0.068	U	0.42	0.068	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
2,4-Dichlorophenol	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Diethyl phthalate	0.060	U	0.42	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
2,4-Dimethylphenol	0.065	U	0.42	0.065	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Dimethyl phthalate	0.070	U	0.42	0.070	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Di-n-butyl phthalate	0.075	U	0.42	0.075	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
4,6-Dinitro-2-methylphenol	0.24	U	2.1	0.24	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
2,4-Dinitrophenol	0.36	U	2.1	0.36	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
2,4-Dinitrotoluene	0.062	U	0.42	0.062	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
2,6-Dinitrotoluene	0.063	U	0.42	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Di-n-octyl phthalate	0.045	U	0.42	0.045	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Fluoranthene	0.061	U	0.42	0.061	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Fluorene	0.060	U	0.42	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Hexachlorobenzene	0.052	U	0.42	0.052	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Hexachlorobutadiene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Hexachlorocyclopentadiene	0.094	U	0.42	0.094	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Hexachloroethane	0.097	U	0.42	0.097	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Indeno[1,2,3-cd]pyrene	0.053	U	0.42	0.053	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Isophorone	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
2-Methylnaphthalene	0.073	U	0.42	0.073	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
2-Methylphenol	0.14	U	0.42	0.14	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
3 & 4 Methylphenol	0.055	U	0.42	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Naphthalene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-4a-0-12.5-10-19

Date Collected: 10/24/19 13:18
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-1

Matrix: Solid
Percent Solids: 78.6

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.095	U	2.1	0.095	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
3-Nitroaniline	0.20	U	2.1	0.20	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
4-Nitroaniline	0.12	U	2.1	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Nitrobenzene	0.058	U	0.42	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
2-Nitrophenol	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
4-Nitrophenol	0.20	U	2.1	0.20	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
N-Nitrosodi-n-propylamine	0.15	U	0.42	0.15	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Pentachlorophenol	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Phenanthrene	0.069	U	0.42	0.069	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Phenol	0.16	M Q U	0.42	0.16	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
Pyrene	0.047	U	0.42	0.047	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
2,4,5-Trichlorophenol	0.071	U	0.42	0.071	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1
2,4,6-Trichlorophenol	0.074	U	0.42	0.074	mg/Kg	☼	10/29/19 09:11	10/29/19 20:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*61*		*30 - 120*	*10/29/19 09:11*	*10/29/19 20:30*	*1*
2-Fluorophenol (Surr)	*26*		*16 - 113*	*10/29/19 09:11*	*10/29/19 20:30*	*1*
Nitrobenzene-d5 (Surr)	*48*		*20 - 120*	*10/29/19 09:11*	*10/29/19 20:30*	*1*
Phenol-d5 (Surr)	*39*		*19 - 144*	*10/29/19 09:11*	*10/29/19 20:30*	*1*
Terphenyl-d14 (Surr)	*84*		*30 - 131*	*10/29/19 09:11*	*10/29/19 20:30*	*1*
2,4,6-Tribromophenol (Surr)	*99*		*23 - 129*	*10/29/19 09:11*	*10/29/19 20:30*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.020	M U	0.084	0.020	mg/Kg	☼	10/28/19 08:03	10/31/19 15:24	1
PCB-1221	0.042	M U	0.13	0.042	mg/Kg	☼	10/28/19 08:03	10/31/19 15:24	1
PCB-1232	0.022	M U	0.084	0.022	mg/Kg	☼	10/28/19 08:03	10/31/19 15:24	1
PCB-1242	0.036	M U	0.11	0.036	mg/Kg	☼	10/28/19 08:03	10/31/19 15:24	1
PCB-1248	0.025	M U	0.084	0.025	mg/Kg	☼	10/28/19 08:03	10/31/19 15:24	1
PCB-1254	0.012	M U	0.041	0.012	mg/Kg	☼	10/28/19 08:03	10/31/19 15:24	1
PCB-1260	0.019	M U	0.056	0.019	mg/Kg	☼	10/28/19 08:03	10/31/19 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*30 - 150*	*10/28/19 08:03*	*10/31/19 15:24*	*1*
DCB Decachlorobiphenyl	*90*	*M*	*30 - 150*	*10/28/19 08:03*	*10/31/19 15:24*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.23**	**J**	1.2	0.10	mg/Kg	☼	10/28/19 07:37	10/28/19 12:43	1
Barium	**8.7**		1.2	0.069	mg/Kg	☼	10/28/19 07:37	10/28/19 12:43	1
Cadmium	0.035	U	0.62	0.035	mg/Kg	☼	10/28/19 07:37	10/28/19 12:43	1
Chromium	**5.4**		1.2	0.090	mg/Kg	☼	10/28/19 07:37	10/28/19 12:43	1
Lead	**1.1**	**J**	1.2	0.18	mg/Kg	☼	10/28/19 07:37	10/28/19 12:43	1
Selenium	0.46	U	2.5	0.46	mg/Kg	☼	10/28/19 07:37	10/28/19 12:43	1
Silver	0.23	U	1.2	0.23	mg/Kg	☼	10/28/19 07:37	10/28/19 12:43	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	U	0.051	0.015	mg/Kg	☼	10/29/19 11:30	10/29/19 13:50	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-4a-12.5-15-10-19

Date Collected: 10/24/19 13:21
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-2

Matrix: Solid
Percent Solids: 75.3

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.067	U	0.44	0.067	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Acenaphthylene	0.057	U	0.44	0.057	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Acetophenone	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Anthracene	0.076	U	0.44	0.076	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Atrazine	0.18	U	1.3	0.18	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Benzo[a]anthracene	0.060	U	0.44	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Benzo[a]pyrene	0.059	U	0.44	0.059	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Benzo[b]fluoranthene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Benzo[g,h,i]perylene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Benzo[k]fluoranthene	0.075	U	0.44	0.075	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
1,1'-Biphenyl	0.90	M U	2.8	0.90	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Bis(2-chloroethoxy)methane	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Bis(2-chloroethyl)ether	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
bis (2-chloroisopropyl) ether	0.054	U	0.44	0.054	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Bis(2-ethylhexyl) phthalate	0.062	U	0.44	0.062	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
4-Bromophenyl phenyl ether	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Butyl benzyl phthalate	0.052	U	0.44	0.052	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Caprolactam	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Carbazole	0.53	Q U	1.3	0.53	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
4-Chloroaniline	0.098	U	0.87	0.098	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
4-Chloro-3-methylphenol	0.066	U	0.44	0.066	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
2-Chloronaphthalene	0.079	U	0.44	0.079	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
2-Chlorophenol	0.058	U	0.44	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
4-Chlorophenyl phenyl ether	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Chrysene	0.061	U	0.44	0.061	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Dibenz(a,h)anthracene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Dibenzofuran	0.071	U	0.44	0.071	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
2,4-Dichlorophenol	0.057	U	0.44	0.057	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Diethyl phthalate	0.063	U	0.44	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
2,4-Dimethylphenol	0.068	U	0.44	0.068	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Dimethyl phthalate	0.074	U	0.44	0.074	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Di-n-butyl phthalate	0.079	U	0.44	0.079	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
4,6-Dinitro-2-methylphenol	0.25	U	2.2	0.25	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
2,4-Dinitrophenol	0.38	U	2.2	0.38	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
2,4-Dinitrotoluene	0.065	U	0.44	0.065	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
2,6-Dinitrotoluene	0.066	U	0.44	0.066	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Di-n-octyl phthalate	0.047	U	0.44	0.047	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Fluoranthene	0.064	U	0.44	0.064	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Fluorene	0.062	U	0.44	0.062	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Hexachlorobenzene	0.055	U	0.44	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Hexachlorobutadiene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Hexachlorocyclopentadiene	0.098	U	0.44	0.098	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Hexachloroethane	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Indeno[1,2,3-cd]pyrene	0.055	U	0.44	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Isophorone	0.057	U	0.44	0.057	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
2-Methylnaphthalene	0.076	U	0.44	0.076	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
2-Methylphenol	0.15	U	0.44	0.15	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
3 & 4 Methylphenol	0.058	U	0.44	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Naphthalene	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-4a-12.5-15-10-19

Date Collected: 10/24/19 13:21
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-2

Matrix: Solid
Percent Solids: 75.3

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.099	U	2.2	0.099	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
3-Nitroaniline	0.21	U	2.2	0.21	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
4-Nitroaniline	0.13	U	2.2	0.13	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Nitrobenzene	0.061	U	0.44	0.061	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
2-Nitrophenol	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
4-Nitrophenol	0.21	U	2.2	0.21	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
N-Nitrosodi-n-propylamine	0.16	U	0.44	0.16	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Pentachlorophenol	0.20	U	2.2	0.20	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Phenanthrene	0.072	U	0.44	0.072	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Phenol	**0.16**	**J Q**	0.44	0.16	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
Pyrene	0.049	U	0.44	0.049	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
2,4,5-Trichlorophenol	0.074	U	0.44	0.074	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1
2,4,6-Trichlorophenol	0.078	U	0.44	0.078	mg/Kg	☼	10/29/19 09:11	10/29/19 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*53*		*30 - 120*	*10/29/19 09:11*	*10/29/19 20:54*	*1*
2-Fluorophenol (Surr)	*12*	*J*	*16 - 113*	*10/29/19 09:11*	*10/29/19 20:54*	*1*
Nitrobenzene-d5 (Surr)	*31*		*20 - 120*	*10/29/19 09:11*	*10/29/19 20:54*	*1*
Phenol-d5 (Surr)	*24*		*19 - 144*	*10/29/19 09:11*	*10/29/19 20:54*	*1*
Terphenyl-d14 (Surr)	*82*		*30 - 131*	*10/29/19 09:11*	*10/29/19 20:54*	*1*
2,4,6-Tribromophenol (Surr)	*99*		*23 - 129*	*10/29/19 09:11*	*10/29/19 20:54*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.021	M U	0.087	0.021	mg/Kg	☼	10/28/19 08:03	10/30/19 16:01	1
PCB-1221	0.044	M U	0.13	0.044	mg/Kg	☼	10/28/19 08:03	10/30/19 16:01	1
PCB-1232	0.023	M U	0.087	0.023	mg/Kg	☼	10/28/19 08:03	10/30/19 16:01	1
PCB-1242	0.037	M U	0.11	0.037	mg/Kg	☼	10/28/19 08:03	10/30/19 16:01	1
PCB-1248	0.026	M U	0.087	0.026	mg/Kg	☼	10/28/19 08:03	10/30/19 16:01	1
PCB-1254	0.013	M U	0.043	0.013	mg/Kg	☼	10/28/19 08:03	10/30/19 16:01	1
PCB-1260	0.020	M U	0.058	0.020	mg/Kg	☼	10/28/19 08:03	10/30/19 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*93*	*M*	*30 - 150*	*10/28/19 08:03*	*10/30/19 16:01*	*1*
DCB Decachlorobiphenyl	*122*		*30 - 150*	*10/28/19 08:03*	*10/30/19 16:01*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.43**	**J**	3.9	0.32	mg/Kg	☼	10/28/19 07:37	10/28/19 13:20	3
Barium	**5.2**		3.9	0.22	mg/Kg	☼	10/28/19 07:37	10/28/19 13:20	3
Cadmium	0.11	U	2.0	0.11	mg/Kg	☼	10/28/19 07:37	10/28/19 13:20	3
Chromium	**3.6**	**J**	3.9	0.28	mg/Kg	☼	10/28/19 07:37	10/28/19 13:20	3
Lead	**1.4**	**J**	3.9	0.57	mg/Kg	☼	10/28/19 07:37	10/28/19 13:20	3
Selenium	1.4	U	7.8	1.4	mg/Kg	☼	10/28/19 07:37	10/28/19 13:20	3
Silver	0.74	U	3.9	0.74	mg/Kg	☼	10/28/19 07:37	10/28/19 13:20	3

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	U	0.051	0.015	mg/Kg	☼	10/29/19 11:30	10/29/19 13:51	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-6a-0-16-10-19

Date Collected: 10/24/19 13:53
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-3

Matrix: Solid
Percent Solids: 88.2

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.057	M U	0.37	0.057	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Acenaphthylene	0.049	U	0.37	0.049	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Acetophenone	0.092	U	0.37	0.092	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Anthracene	0.064	U	0.37	0.064	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Atrazine	0.15	U	1.1	0.15	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Benzo[a]anthracene	0.051	U	0.37	0.051	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Benzo[a]pyrene	0.050	U	0.37	0.050	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Benzo[b]fluoranthene	0.10	M U	0.37	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Benzo[g,h,i]perylene	0.099	U	0.37	0.099	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Benzo[k]fluoranthene	0.063	M U	0.37	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
1,1'-Biphenyl	0.77	U	2.4	0.77	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Bis(2-chloroethoxy)methane	0.088	U	0.37	0.088	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Bis(2-chloroethyl)ether	0.088	M U	0.37	0.088	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
bis (2-chloroisopropyl) ether	0.046	M U	0.37	0.046	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Bis(2-ethylhexyl) phthalate	0.053	U	0.37	0.053	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
4-Bromophenyl phenyl ether	0.090	U	0.37	0.090	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Butyl benzyl phthalate	0.044	M U	0.37	0.044	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Caprolactam	0.096	U	0.37	0.096	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Carbazole	0.45	J Q U	1.1	0.45	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
4-Chloroaniline	0.083	U	0.74	0.083	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
4-Chloro-3-methylphenol	0.056	U	0.37	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
2-Chloronaphthalene	0.067	M U	0.37	0.067	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
2-Chlorophenol	0.049	M U	0.37	0.049	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
4-Chlorophenyl phenyl ether	0.087	U	0.37	0.087	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Chrysene	0.052	U	0.37	0.052	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Dibenz(a,h)anthracene	0.10	M U	0.37	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Dibenzofuran	0.060	M U	0.37	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
2,4-Dichlorophenol	0.049	U	0.37	0.049	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Diethyl phthalate	0.053	U	0.37	0.053	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
2,4-Dimethylphenol	0.058	M U	0.37	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Dimethyl phthalate	0.062	U	0.37	0.062	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Di-n-butyl phthalate	0.067	U	0.37	0.067	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
4,6-Dinitro-2-methylphenol	0.21	U	1.9	0.21	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
2,4-Dinitrophenol	0.32	U	1.9	0.32	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
2,4-Dinitrotoluene	0.055	U	0.37	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
2,6-Dinitrotoluene	0.056	U	0.37	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Di-n-octyl phthalate	0.040	M U	0.37	0.040	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Fluoranthene	**0.054**	**J**	0.37	0.054	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Fluorene	0.053	U	0.37	0.053	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Hexachlorobenzene	0.046	U	0.37	0.046	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Hexachlorobutadiene	0.10	U	0.37	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Hexachlorocyclopentadiene	0.083	J U	0.37	0.083	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Hexachloroethane	0.087	U	0.37	0.087	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Indeno[1,2,3-cd]pyrene	0.047	U	0.37	0.047	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Isophorone	0.049	U	0.37	0.049	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
2-Methylnaphthalene	0.064	U	0.37	0.064	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
2-Methylphenol	0.12	M U	0.37	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
3 & 4 Methylphenol	0.049	M U	0.37	0.049	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Naphthalene	0.095	U	0.37	0.095	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-6a-0-16-10-19

Date Collected: 10/24/19 13:53
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-3

Matrix: Solid
Percent Solids: 88.2

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.084	U	1.9	0.084	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
3-Nitroaniline	0.18	U	1.9	0.18	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
4-Nitroaniline	0.11	U	1.9	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Nitrobenzene	0.052	U	0.37	0.052	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
2-Nitrophenol	0.092	U	0.37	0.092	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
4-Nitrophenol	0.18	M U	1.9	0.18	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
N-Nitrosodi-n-propylamine	0.13	M U	0.37	0.13	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Pentachlorophenol	0.17	U	1.9	0.17	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Phenanthrene	0.061	U	0.37	0.061	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Phenol	0.14	J M Q U	0.37	0.14	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
Pyrene	**0.059**	**J**	0.37	0.042	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
2,4,5-Trichlorophenol	0.063	U	0.37	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1
2,4,6-Trichlorophenol	0.066	U	0.37	0.066	mg/Kg	☼	10/29/19 09:11	10/29/19 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*60*		*30 - 120*	*10/29/19 09:11*	*10/29/19 18:40*	*1*
2-Fluorophenol (Surr)	*27*		*16 - 113*	*10/29/19 09:11*	*10/29/19 18:40*	*1*
Nitrobenzene-d5 (Surr)	*52*		*20 - 120*	*10/29/19 09:11*	*10/29/19 18:40*	*1*
Phenol-d5 (Surr)	*36*		*19 - 144*	*10/29/19 09:11*	*10/29/19 18:40*	*1*
Terphenyl-d14 (Surr)	*85*		*30 - 131*	*10/29/19 09:11*	*10/29/19 18:40*	*1*
2,4,6-Tribromophenol (Surr)	*70*		*23 - 129*	*10/29/19 09:11*	*10/29/19 18:40*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.018	M U	0.075	0.018	mg/Kg	☼	10/28/19 08:03	10/30/19 11:24	1
PCB-1221	0.037	M U	0.11	0.037	mg/Kg	☼	10/28/19 08:03	10/30/19 11:24	1
PCB-1232	0.020	M U	0.075	0.020	mg/Kg	☼	10/28/19 08:03	10/30/19 11:24	1
PCB-1242	0.032	M U	0.096	0.032	mg/Kg	☼	10/28/19 08:03	10/30/19 11:24	1
PCB-1248	0.022	M U	0.075	0.022	mg/Kg	☼	10/28/19 08:03	10/30/19 11:24	1
PCB-1254	0.011	M U	0.037	0.011	mg/Kg	☼	10/28/19 08:03	10/30/19 11:24	1
PCB-1260	0.017	M U	0.050	0.017	mg/Kg	☼	10/28/19 08:03	10/30/19 11:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*81*		*30 - 150*	*10/28/19 08:03*	*10/30/19 11:24*	*1*
DCB Decachlorobiphenyl	*106*		*30 - 150*	*10/28/19 08:03*	*10/30/19 11:24*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.28**	**J**	1.1	0.089	mg/Kg	☼	10/29/19 07:31	10/29/19 10:54	1
Barium	**9.5**		1.1	0.060	mg/Kg	☼	10/29/19 07:31	10/29/19 10:54	1
Cadmium	0.030	U	0.53	0.030	mg/Kg	☼	10/29/19 07:31	10/29/19 10:54	1
Chromium	**8.7**		1.1	0.078	mg/Kg	☼	10/29/19 07:31	10/29/19 10:54	1
Lead	**1.7**		1.1	0.16	mg/Kg	☼	10/29/19 07:31	10/29/19 10:54	1
Selenium	0.40	U	2.1	0.40	mg/Kg	☼	10/29/19 07:31	10/29/19 10:54	1
Silver	0.20	U	1.1	0.20	mg/Kg	☼	10/29/19 07:31	10/29/19 10:54	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	U	0.041	0.012	mg/Kg	☼	10/29/19 11:30	10/29/19 13:41	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-6a-16-17-10-19

Date Collected: 10/24/19 14:06
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-4

Matrix: Solid
Percent Solids: 74.0

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.068	M U	0.44	0.068	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Acenaphthylene	0.058	M U	0.44	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Acetophenone	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Anthracene	0.077	U	0.44	0.077	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Atrazine	0.18	U	1.3	0.18	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Benzo[a]anthracene	0.061	U	0.44	0.061	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Benzo[a]pyrene	0.060	M U	0.44	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Benzo[b]fluoranthene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Benzo[g,h,i]perylene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Benzo[k]fluoranthene	0.076	U	0.44	0.076	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
1,1'-Biphenyl	0.91	M U	2.8	0.91	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Bis(2-chloroethoxy)methane	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Bis(2-chloroethyl)ether	0.10	M U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
bis (2-chloroisopropyl) ether	0.055	M U	0.44	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Bis(2-ethylhexyl) phthalate	0.063	U	0.44	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
4-Bromophenyl phenyl ether	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Butyl benzyl phthalate	0.053	U	0.44	0.053	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Caprolactam	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Carbazole	0.54	Q U	1.3	0.54	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
4-Chloroaniline	0.099	U	0.89	0.099	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
4-Chloro-3-methylphenol	0.067	U	0.44	0.067	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
2-Chloronaphthalene	0.080	M U	0.44	0.080	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
2-Chlorophenol	0.058	U	0.44	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
4-Chlorophenyl phenyl ether	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Chrysene	0.062	U	0.44	0.062	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Dibenz(a,h)anthracene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Dibenzofuran	0.072	U	0.44	0.072	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
2,4-Dichlorophenol	0.058	U	0.44	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Diethyl phthalate	0.064	U	0.44	0.064	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
2,4-Dimethylphenol	0.069	U	0.44	0.069	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Dimethyl phthalate	0.075	U	0.44	0.075	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Di-n-butyl phthalate	0.080	U	0.44	0.080	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
4,6-Dinitro-2-methylphenol	0.26	U	2.3	0.26	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
2,4-Dinitrophenol	0.39	U	2.3	0.39	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
2,4-Dinitrotoluene	0.066	U	0.44	0.066	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
2,6-Dinitrotoluene	0.067	U	0.44	0.067	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Di-n-octyl phthalate	0.048	U	0.44	0.048	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Fluoranthene	0.065	U	0.44	0.065	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Fluorene	0.063	U	0.44	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Hexachlorobenzene	0.055	U	0.44	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Hexachlorobutadiene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Hexachlorocyclopentadiene	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Hexachloroethane	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Indeno[1,2,3-cd]pyrene	0.056	U	0.44	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Isophorone	0.058	U	0.44	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
2-Methylnaphthalene	0.077	M U	0.44	0.077	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
2-Methylphenol	0.15	M U	0.44	0.15	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
3 & 4 Methylphenol	0.059	U	0.44	0.059	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Naphthalene	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1

Client Sample ID: B-6a-16-17-10-19

Date Collected: 10/24/19 14:06
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-4

Matrix: Solid
Percent Solids: 74.0

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.10	U	2.3	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
3-Nitroaniline	0.21	U	2.3	0.21	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
4-Nitroaniline	0.13	U	2.3	0.13	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Nitrobenzene	0.062	M U	0.44	0.062	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
2-Nitrophenol	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
4-Nitrophenol	0.21	U	2.3	0.21	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
N-Nitrosodi-n-propylamine	0.16	U	0.44	0.16	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Pentachlorophenol	0.20	U	2.3	0.20	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Phenanthrene	0.073	M U	0.44	0.073	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Phenol	0.17	M Q U	0.44	0.17	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
Pyrene	0.050	U	0.44	0.050	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
2,4,5-Trichlorophenol	0.075	U	0.44	0.075	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1
2,4,6-Trichlorophenol	0.079	U	0.44	0.079	mg/Kg	☼	10/29/19 09:11	10/29/19 20:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*52*		*30 - 120*	*10/29/19 09:11*	*10/29/19 20:41*	*1*
2-Fluorophenol (Surr)	*17*		*16 - 113*	*10/29/19 09:11*	*10/29/19 20:41*	*1*
Nitrobenzene-d5 (Surr)	*46*		*20 - 120*	*10/29/19 09:11*	*10/29/19 20:41*	*1*
Phenol-d5 (Surr)	*23*		*19 - 144*	*10/29/19 09:11*	*10/29/19 20:41*	*1*
Terphenyl-d14 (Surr)	*86*		*30 - 131*	*10/29/19 09:11*	*10/29/19 20:41*	*1*
2,4,6-Tribromophenol (Surr)	*52*		*23 - 129*	*10/29/19 09:11*	*10/29/19 20:41*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.022	M U	0.090	0.022	mg/Kg	☼	10/28/19 08:03	10/30/19 14:48	1
PCB-1221	0.045	M U	0.13	0.045	mg/Kg	☼	10/28/19 08:03	10/30/19 14:48	1
PCB-1232	0.024	M U	0.090	0.024	mg/Kg	☼	10/28/19 08:03	10/30/19 14:48	1
PCB-1242	0.038	M U	0.12	0.038	mg/Kg	☼	10/28/19 08:03	10/30/19 14:48	1
PCB-1248	0.027	M U	0.090	0.027	mg/Kg	☼	10/28/19 08:03	10/30/19 14:48	1
PCB-1254	0.013	M U	0.044	0.013	mg/Kg	☼	10/28/19 08:03	10/30/19 14:48	1
PCB-1260	0.020	M U	0.060	0.020	mg/Kg	☼	10/28/19 08:03	10/30/19 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*112*		*30 - 150*	*10/28/19 08:03*	*10/30/19 14:48*	*1*
DCB Decachlorobiphenyl	*146*		*30 - 150*	*10/28/19 08:03*	*10/30/19 14:48*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.67**	**J**	7.0	0.58	mg/Kg	☼	10/29/19 07:31	10/29/19 12:10	5
Barium	**69**		7.0	0.39	mg/Kg	☼	10/29/19 07:31	10/29/19 12:10	5
Cadmium	0.20	U	3.5	0.20	mg/Kg	☼	10/29/19 07:31	10/29/19 12:10	5
Chromium	**9.7**		7.0	0.51	mg/Kg	☼	10/29/19 07:31	10/29/19 12:10	5
Lead	**2.7**	**J**	7.0	1.0	mg/Kg	☼	10/29/19 07:31	10/29/19 12:10	5
Selenium	2.6	U	14	2.6	mg/Kg	☼	10/29/19 07:31	10/29/19 12:10	5
Silver	1.3	U	7.0	1.3	mg/Kg	☼	10/29/19 07:31	10/29/19 12:10	5

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.017	U	0.056	0.017	mg/Kg	☼	10/29/19 11:30	10/29/19 13:53	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-6a-17-20-10-19

Date Collected: 10/24/19 14:08
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-5

Matrix: Solid
Percent Solids: 83.5

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.060	U	0.39	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Acenaphthylene	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Acetophenone	0.097	U	0.39	0.097	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Anthracene	0.068	U	0.39	0.068	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Atrazine	0.16	U	1.2	0.16	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Benzo[a]anthracene	0.054	U	0.39	0.054	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Benzo[a]pyrene	0.053	U	0.39	0.053	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Benzo[b]fluoranthene	0.11	U	0.39	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Benzo[g,h,i]perylene	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Benzo[k]fluoranthene	0.067	U	0.39	0.067	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
1,1'-Biphenyl	0.81	U	2.5	0.81	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Bis(2-chloroethoxy)methane	0.092	U	0.39	0.092	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Bis(2-chloroethyl)ether	0.092	U	0.39	0.092	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
bis (2-chloroisopropyl) ether	0.048	U	0.39	0.048	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Bis(2-ethylhexyl) phthalate	0.056	U	0.39	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
4-Bromophenyl phenyl ether	0.095	U	0.39	0.095	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Butyl benzyl phthalate	0.046	U	0.39	0.046	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Caprolactam	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Carbazole	0.47	Q U	1.2	0.47	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
4-Chloroaniline	0.088	U	0.78	0.088	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
4-Chloro-3-methylphenol	0.059	U	0.39	0.059	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
2-Chloronaphthalene	0.071	U	0.39	0.071	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
2-Chlorophenol	0.052	U	0.39	0.052	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
4-Chlorophenyl phenyl ether	0.092	U	0.39	0.092	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Chrysene	0.055	U	0.39	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Dibenz(a,h)anthracene	0.11	U	0.39	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Dibenzofuran	0.063	U	0.39	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
2,4-Dichlorophenol	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Diethyl phthalate	0.056	U	0.39	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
2,4-Dimethylphenol	0.061	U	0.39	0.061	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Dimethyl phthalate	0.066	U	0.39	0.066	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Di-n-butyl phthalate	0.071	U	0.39	0.071	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
4,6-Dinitro-2-methylphenol	0.23	U	2.0	0.23	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
2,4-Dinitrophenol	0.34	U	2.0	0.34	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
2,4-Dinitrotoluene	0.058	U	0.39	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
2,6-Dinitrotoluene	0.059	U	0.39	0.059	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Di-n-octyl phthalate	0.042	U	0.39	0.042	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Fluoranthene	0.057	U	0.39	0.057	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Fluorene	0.056	U	0.39	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Hexachlorobenzene	0.049	U	0.39	0.049	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Hexachlorobutadiene	0.11	U	0.39	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Hexachlorocyclopentadiene	0.088	U	0.39	0.088	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Hexachloroethane	0.091	U	0.39	0.091	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Indeno[1,2,3-cd]pyrene	0.050	U	0.39	0.050	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Isophorone	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
2-Methylnaphthalene	0.068	U	0.39	0.068	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
2-Methylphenol	0.13	U	0.39	0.13	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
3 & 4 Methylphenol	0.052	U	0.39	0.052	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Naphthalene	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-6a-17-20-10-19

Date Collected: 10/24/19 14:08
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-5

Matrix: Solid
Percent Solids: 83.5

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.089	U	2.0	0.089	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
3-Nitroaniline	0.18	U	2.0	0.18	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
4-Nitroaniline	0.11	U	2.0	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Nitrobenzene	0.054	U	0.39	0.054	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
2-Nitrophenol	0.097	U	0.39	0.097	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
4-Nitrophenol	0.19	U	2.0	0.19	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
N-Nitrosodi-n-propylamine	0.14	U	0.39	0.14	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Pentachlorophenol	0.18	U	2.0	0.18	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Phenanthrene	0.065	U	0.39	0.065	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Phenol	0.15	Q U	0.39	0.15	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
Pyrene	0.044	U	0.39	0.044	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
2,4,5-Trichlorophenol	0.066	U	0.39	0.066	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1
2,4,6-Trichlorophenol	0.070	U	0.39	0.070	mg/Kg	☼	10/29/19 09:11	10/29/19 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*70*		*30 - 120*	*10/29/19 09:11*	*10/29/19 21:18*	*1*
2-Fluorophenol (Surr)	*15*	*J*	*16 - 113*	*10/29/19 09:11*	*10/29/19 21:18*	*1*
Nitrobenzene-d5 (Surr)	*46*		*20 - 120*	*10/29/19 09:11*	*10/29/19 21:18*	*1*
Phenol-d5 (Surr)	*27*		*19 - 144*	*10/29/19 09:11*	*10/29/19 21:18*	*1*
Terphenyl-d14 (Surr)	*86*		*30 - 131*	*10/29/19 09:11*	*10/29/19 21:18*	*1*
2,4,6-Tribromophenol (Surr)	*94*		*23 - 129*	*10/29/19 09:11*	*10/29/19 21:18*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.019	M U	0.080	0.019	mg/Kg	☼	10/28/19 08:03	10/30/19 15:02	1
PCB-1221	0.040	M U	0.12	0.040	mg/Kg	☼	10/28/19 08:03	10/30/19 15:02	1
PCB-1232	0.021	M U	0.080	0.021	mg/Kg	☼	10/28/19 08:03	10/30/19 15:02	1
PCB-1242	0.034	M U	0.10	0.034	mg/Kg	☼	10/28/19 08:03	10/30/19 15:02	1
PCB-1248	0.024	M U	0.080	0.024	mg/Kg	☼	10/28/19 08:03	10/30/19 15:02	1
PCB-1254	0.011	M U	0.039	0.011	mg/Kg	☼	10/28/19 08:03	10/30/19 15:02	1
PCB-1260	0.018	M U	0.054	0.018	mg/Kg	☼	10/28/19 08:03	10/30/19 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*110*		*30 - 150*	*10/28/19 08:03*	*10/30/19 15:02*	*1*
DCB Decachlorobiphenyl	*138*		*30 - 150*	*10/28/19 08:03*	*10/30/19 15:02*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.5**	**J**	5.9	0.49	mg/Kg	☼	10/29/19 07:31	10/29/19 12:13	5
Barium	**18**		5.9	0.33	mg/Kg	☼	10/29/19 07:31	10/29/19 12:13	5
Cadmium	**0.18**	**J**	2.9	0.17	mg/Kg	☼	10/29/19 07:31	10/29/19 12:13	5
Chromium	**22**		5.9	0.43	mg/Kg	☼	10/29/19 07:31	10/29/19 12:13	5
Lead	**5.5**	**J**	5.9	0.85	mg/Kg	☼	10/29/19 07:31	10/29/19 12:13	5
Selenium	2.2	U	12	2.2	mg/Kg	☼	10/29/19 07:31	10/29/19 12:13	5
Silver	1.1	U	5.9	1.1	mg/Kg	☼	10/29/19 07:31	10/29/19 12:13	5

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.013	U	0.045	0.013	mg/Kg	☼	10/29/19 11:30	10/29/19 13:55	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-7a-0-14-10-19

Date Collected: 10/24/19 14:33
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-6

Matrix: Solid
Percent Solids: 85.5

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.060	M U	0.39	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Acenaphthylene	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Acetophenone	0.096	M U	0.39	0.096	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Anthracene	0.067	U	0.39	0.067	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Atrazine	0.16	U	1.2	0.16	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Benzo[a]anthracene	**0.053**	**J**	0.39	0.053	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Benzo[a]pyrene	**0.052**	**J**	0.39	0.052	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Benzo[b]fluoranthene	0.11	M U	0.39	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Benzo[g,h,i]perylene	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Benzo[k]fluoranthene	0.066	M U	0.39	0.066	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
1,1'-Biphenyl	0.80	U	2.5	0.80	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Bis(2-chloroethoxy)methane	0.091	U	0.39	0.091	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Bis(2-chloroethyl)ether	0.091	U	0.39	0.091	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
bis (2-chloroisopropyl) ether	0.048	M U	0.39	0.048	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Bis(2-ethylhexyl) phthalate	0.055	U	0.39	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
4-Bromophenyl phenyl ether	0.094	U	0.39	0.094	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Butyl benzyl phthalate	0.046	M U	0.39	0.046	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Caprolactam	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Carbazole	0.47	Q U	1.2	0.47	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
4-Chloroaniline	0.086	U	0.77	0.086	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
4-Chloro-3-methylphenol	0.058	U	0.39	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
2-Chloronaphthalene	0.070	U	0.39	0.070	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
2-Chlorophenol	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
4-Chlorophenyl phenyl ether	0.090	U	0.39	0.090	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Chrysene	0.054	U	0.39	0.054	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Dibenz(a,h)anthracene	0.11	M U	0.39	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Dibenzofuran	0.063	U	0.39	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
2,4-Dichlorophenol	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Diethyl phthalate	0.055	U	0.39	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
2,4-Dimethylphenol	0.060	U	0.39	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Dimethyl phthalate	0.065	U	0.39	0.065	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Di-n-butyl phthalate	0.070	M U	0.39	0.070	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
4,6-Dinitro-2-methylphenol	0.22	U	2.0	0.22	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
2,4-Dinitrophenol	0.34	U	2.0	0.34	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
2,4-Dinitrotoluene	0.057	U	0.39	0.057	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
2,6-Dinitrotoluene	0.058	U	0.39	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Di-n-octyl phthalate	0.041	M U	0.39	0.041	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Fluoranthene	0.057	U	0.39	0.057	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Fluorene	0.055	M U	0.39	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Hexachlorobenzene	0.048	U	0.39	0.048	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Hexachlorobutadiene	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Hexachlorocyclopentadiene	0.087	U	0.39	0.087	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Hexachloroethane	0.090	U	0.39	0.090	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Indeno[1,2,3-cd]pyrene	0.049	U	0.39	0.049	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Isophorone	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
2-Methylnaphthalene	0.067	U	0.39	0.067	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
2-Methylphenol	0.13	U	0.39	0.13	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
3 & 4 Methylphenol	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Naphthalene	0.099	U	0.39	0.099	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-7a-0-14-10-19

Date Collected: 10/24/19 14:33
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-6

Matrix: Solid
Percent Solids: 85.5

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.088	U	2.0	0.088	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
3-Nitroaniline	0.18	U	2.0	0.18	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
4-Nitroaniline	0.11	U	2.0	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Nitrobenzene	0.054	U	0.39	0.054	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
2-Nitrophenol	0.096	U	0.39	0.096	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
4-Nitrophenol	0.19	U	2.0	0.19	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
N-Nitrosodi-n-propylamine	0.14	U	0.39	0.14	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Pentachlorophenol	0.18	U	2.0	0.18	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Phenanthrene	0.064	U	0.39	0.064	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Phenol	0.14	Q U	0.39	0.14	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
Pyrene	**0.060**	**J**	0.39	0.043	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
2,4,5-Trichlorophenol	0.065	U	0.39	0.065	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1
2,4,6-Trichlorophenol	0.069	U	0.39	0.069	mg/Kg	☼	10/29/19 09:11	10/29/19 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*62*		*30 - 120*	*10/29/19 09:11*	*10/29/19 21:05*	*1*
2-Fluorophenol (Surr)	*31*		*16 - 113*	*10/29/19 09:11*	*10/29/19 21:05*	*1*
Nitrobenzene-d5 (Surr)	*56*		*20 - 120*	*10/29/19 09:11*	*10/29/19 21:05*	*1*
Phenol-d5 (Surr)	*40*		*19 - 144*	*10/29/19 09:11*	*10/29/19 21:05*	*1*
Terphenyl-d14 (Surr)	*82*		*30 - 131*	*10/29/19 09:11*	*10/29/19 21:05*	*1*
2,4,6-Tribromophenol (Surr)	*63*		*23 - 129*	*10/29/19 09:11*	*10/29/19 21:05*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.019	M U	0.078	0.019	mg/Kg	☼	10/28/19 08:03	10/30/19 15:17	1
PCB-1221	0.039	M U	0.12	0.039	mg/Kg	☼	10/28/19 08:03	10/30/19 15:17	1
PCB-1232	0.020	M U	0.078	0.020	mg/Kg	☼	10/28/19 08:03	10/30/19 15:17	1
PCB-1242	0.033	M U	0.10	0.033	mg/Kg	☼	10/28/19 08:03	10/30/19 15:17	1
PCB-1248	0.023	M U	0.078	0.023	mg/Kg	☼	10/28/19 08:03	10/30/19 15:17	1
PCB-1254	0.011	M U	0.038	0.011	mg/Kg	☼	10/28/19 08:03	10/30/19 15:17	1
PCB-1260	0.018	M U	0.052	0.018	mg/Kg	☼	10/28/19 08:03	10/30/19 15:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*83*	*M*	*30 - 150*	*10/28/19 08:03*	*10/30/19 15:17*	*1*
DCB Decachlorobiphenyl	*110*	*M*	*30 - 150*	*10/28/19 08:03*	*10/30/19 15:17*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.25**	**J**	1.1	0.090	mg/Kg	☼	10/29/19 07:31	10/29/19 11:12	1
Barium	**12**		1.1	0.060	mg/Kg	☼	10/29/19 07:31	10/29/19 11:12	1
Cadmium	0.031	U	0.54	0.031	mg/Kg	☼	10/29/19 07:31	10/29/19 11:12	1
Chromium	**5.9**		1.1	0.079	mg/Kg	☼	10/29/19 07:31	10/29/19 11:12	1
Lead	**1.8**		1.1	0.16	mg/Kg	☼	10/29/19 07:31	10/29/19 11:12	1
Selenium	0.40	U	2.2	0.40	mg/Kg	☼	10/29/19 07:31	10/29/19 11:12	1
Silver	0.21	U	1.1	0.21	mg/Kg	☼	10/29/19 07:31	10/29/19 11:12	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.013	U	0.043	0.013	mg/Kg	☼	10/29/19 11:30	10/29/19 13:57	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-7a-14-18.5-10-19

Date Collected: 10/24/19 14:34
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-7

Matrix: Solid
Percent Solids: 73.2

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.068	M U	0.44	0.068	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Acenaphthylene	0.058	M U	0.44	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Acetophenone	0.11	M U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Anthracene	0.076	M U	0.44	0.076	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Atrazine	0.18	U	1.3	0.18	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Benzo[a]anthracene	0.060	U	0.44	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Benzo[a]pyrene	0.059	M U	0.44	0.059	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Benzo[b]fluoranthene	0.12	M U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Benzo[g,h,i]perylene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Benzo[k]fluoranthene	0.075	M U	0.44	0.075	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
1,1'-Biphenyl	0.91	M U	2.8	0.91	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Bis(2-chloroethoxy)methane	0.10	M U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Bis(2-chloroethyl)ether	0.10	M U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
bis (2-chloroisopropyl) ether	0.054	M U	0.44	0.054	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Bis(2-ethylhexyl) phthalate	0.063	U	0.44	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
4-Bromophenyl phenyl ether	0.11	M U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Butyl benzyl phthalate	0.052	M U	0.44	0.052	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Caprolactam	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Carbazole	0.53	Q U	1.3	0.53	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
4-Chloroaniline	0.099	U	0.88	0.099	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
4-Chloro-3-methylphenol	0.066	U	0.44	0.066	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
2-Chloronaphthalene	0.080	U	0.44	0.080	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
2-Chlorophenol	0.058	U	0.44	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
4-Chlorophenyl phenyl ether	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Chrysene	0.062	U	0.44	0.062	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Dibenz(a,h)anthracene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Dibenzofuran	0.071	M U	0.44	0.071	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
2,4-Dichlorophenol	0.058	U	0.44	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Diethyl phthalate	0.063	M U	0.44	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
2,4-Dimethylphenol	0.069	M U	0.44	0.069	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Dimethyl phthalate	0.074	M U	0.44	0.074	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Di-n-butyl phthalate	0.080	U	0.44	0.080	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
4,6-Dinitro-2-methylphenol	0.25	U	2.3	0.25	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
2,4-Dinitrophenol	0.38	U	2.3	0.38	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
2,4-Dinitrotoluene	0.065	U	0.44	0.065	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
2,6-Dinitrotoluene	0.067	U	0.44	0.067	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Di-n-octyl phthalate	0.047	M U	0.44	0.047	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Fluoranthene	0.065	M U	0.44	0.065	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Fluorene	0.063	M U	0.44	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Hexachlorobenzene	0.055	U	0.44	0.055	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Hexachlorobutadiene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Hexachlorocyclopentadiene	0.099	U	0.44	0.099	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Hexachloroethane	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Indeno[1,2,3-cd]pyrene	0.056	U	0.44	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Isophorone	0.058	U	0.44	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
2-Methylnaphthalene	0.077	M U	0.44	0.077	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
2-Methylphenol	0.15	M U	0.44	0.15	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
3 & 4 Methylphenol	0.059	U	0.44	0.059	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Naphthalene	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1

Client Sample ID: B-7a-14-18.5-10-19

Lab Sample ID: 660-98302-7

Date Collected: 10/24/19 14:34
Date Received: 10/25/19 16:07

Matrix: Solid
Percent Solids: 73.2

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.10	M U	2.3	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
3-Nitroaniline	0.21	M U	2.3	0.21	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
4-Nitroaniline	0.13	U	2.3	0.13	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Nitrobenzene	0.061	M U	0.44	0.061	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
2-Nitrophenol	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
4-Nitrophenol	0.21	M U	2.3	0.21	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
N-Nitrosodi-n-propylamine	0.16	U	0.44	0.16	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Pentachlorophenol	0.20	U	2.3	0.20	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Phenanthrene	0.073	U	0.44	0.073	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Phenol	0.16	M Q U	0.44	0.16	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
Pyrene	0.049	U	0.44	0.049	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
2,4,5-Trichlorophenol	0.074	U	0.44	0.074	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1
2,4,6-Trichlorophenol	0.079	U	0.44	0.079	mg/Kg	☼	10/29/19 09:11	10/29/19 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*30 - 120*	*10/29/19 09:11*	*10/29/19 21:29*	*1*
2-Fluorophenol (Surr)	*31*		*16 - 113*	*10/29/19 09:11*	*10/29/19 21:29*	*1*
Nitrobenzene-d5 (Surr)	*55*		*20 - 120*	*10/29/19 09:11*	*10/29/19 21:29*	*1*
Phenol-d5 (Surr)	*29*		*19 - 144*	*10/29/19 09:11*	*10/29/19 21:29*	*1*
Terphenyl-d14 (Surr)	*95*		*30 - 131*	*10/29/19 09:11*	*10/29/19 21:29*	*1*
2,4,6-Tribromophenol (Surr)	*81*		*23 - 129*	*10/29/19 09:11*	*10/29/19 21:29*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.022	M U	0.091	0.022	mg/Kg	☼	10/28/19 08:03	10/30/19 15:32	1
PCB-1221	0.045	M U	0.14	0.045	mg/Kg	☼	10/28/19 08:03	10/30/19 15:32	1
PCB-1232	0.024	M U	0.091	0.024	mg/Kg	☼	10/28/19 08:03	10/30/19 15:32	1
PCB-1242	0.039	M U	0.12	0.039	mg/Kg	☼	10/28/19 08:03	10/30/19 15:32	1
PCB-1248	0.027	M U	0.091	0.027	mg/Kg	☼	10/28/19 08:03	10/30/19 15:32	1
PCB-1254	0.013	M U	0.045	0.013	mg/Kg	☼	10/28/19 08:03	10/30/19 15:32	1
PCB-1260	0.021	M U	0.061	0.021	mg/Kg	☼	10/28/19 08:03	10/30/19 15:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*105*		*30 - 150*	*10/28/19 08:03*	*10/30/19 15:32*	*1*
DCB Decachlorobiphenyl	*130*	*M*	*30 - 150*	*10/28/19 08:03*	*10/30/19 15:32*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.58	U	7.0	0.58	mg/Kg	☼	10/29/19 07:31	10/29/19 12:16	5
Barium	**41**		7.0	0.39	mg/Kg	☼	10/29/19 07:31	10/29/19 12:16	5
Cadmium	**0.39**	**J**	3.5	0.20	mg/Kg	☼	10/29/19 07:31	10/29/19 12:16	5
Chromium	**7.0**		7.0	0.51	mg/Kg	☼	10/29/19 07:31	10/29/19 12:16	5
Lead	**13**		7.0	1.0	mg/Kg	☼	10/29/19 07:31	10/29/19 12:16	5
Selenium	**3.8**	**J**	14	2.6	mg/Kg	☼	10/29/19 07:31	10/29/19 12:16	5
Silver	1.3	U	7.0	1.3	mg/Kg	☼	10/29/19 07:31	10/29/19 12:16	5

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.016	U	0.053	0.016	mg/Kg	☼	10/29/19 11:30	10/29/19 13:59	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-7a-18.5-20-10-19

Date Collected: 10/24/19 14:39
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-8

Matrix: Solid
Percent Solids: 72.4

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.070	M U	0.45	0.070	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Acenaphthylene	0.060	M U	0.45	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Acetophenone	0.11	M U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Anthracene	0.079	U	0.45	0.079	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Atrazine	0.18	U	1.4	0.18	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Benzo[a]anthracene	0.062	M U	0.45	0.062	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Benzo[a]pyrene	0.061	U	0.45	0.061	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Benzo[b]fluoranthene	0.13	U	0.45	0.13	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Benzo[g,h,i]perylene	0.12	U	0.45	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Benzo[k]fluoranthene	0.078	U	0.45	0.078	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
1,1'-Biphenyl	0.94	M U	2.9	0.94	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Bis(2-chloroethoxy)methane	0.11	M U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Bis(2-chloroethyl)ether	0.11	U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
bis (2-chloroisopropyl) ether	0.056	M U	0.45	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Bis(2-ethylhexyl) phthalate	0.065	U	0.45	0.065	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
4-Bromophenyl phenyl ether	0.11	U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Butyl benzyl phthalate	0.054	M U	0.45	0.054	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Caprolactam	0.12	U	0.45	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Carbazole	0.55	Q U	1.4	0.55	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
4-Chloroaniline	0.10	M U	0.91	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
4-Chloro-3-methylphenol	0.068	U	0.45	0.068	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
2-Chloronaphthalene	0.082	U	0.45	0.082	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
2-Chlorophenol	0.060	U	0.45	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
4-Chlorophenyl phenyl ether	0.11	U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Chrysene	0.064	U	0.45	0.064	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Dibenz(a,h)anthracene	0.12	U	0.45	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Dibenzofuran	0.074	M U	0.45	0.074	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
2,4-Dichlorophenol	0.060	U	0.45	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Diethyl phthalate	0.065	U	0.45	0.065	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
2,4-Dimethylphenol	0.071	U	0.45	0.071	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Dimethyl phthalate	0.077	U	0.45	0.077	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Di-n-butyl phthalate	0.082	M U	0.45	0.082	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
4,6-Dinitro-2-methylphenol	0.26	U	2.3	0.26	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
2,4-Dinitrophenol	0.40	U	2.3	0.40	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
2,4-Dinitrotoluene	0.067	U	0.45	0.067	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
2,6-Dinitrotoluene	0.069	U	0.45	0.069	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Di-n-octyl phthalate	0.049	M U	0.45	0.049	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Fluoranthene	0.067	M U	0.45	0.067	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Fluorene	0.065	M U	0.45	0.065	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Hexachlorobenzene	0.057	U	0.45	0.057	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Hexachlorobutadiene	0.12	U	0.45	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Hexachlorocyclopentadiene	0.10	U	0.45	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Hexachloroethane	0.11	U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Indeno[1,2,3-cd]pyrene	0.058	U	0.45	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Isophorone	0.060	U	0.45	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
2-Methylnaphthalene	0.079	M U	0.45	0.079	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
2-Methylphenol	0.15	U	0.45	0.15	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
3 & 4 Methylphenol	0.060	M U	0.45	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Naphthalene	0.12	M U	0.45	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-7a-18.5-20-10-19

Date Collected: 10/24/19 14:39
Date Received: 10/25/19 16:07

Lab Sample ID: 660-98302-8

Matrix: Solid
Percent Solids: 72.4

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.10	U	2.3	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
3-Nitroaniline	0.21	M U	2.3	0.21	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
4-Nitroaniline	0.13	U	2.3	0.13	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Nitrobenzene	0.063	M U	0.45	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
2-Nitrophenol	0.11	U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
4-Nitrophenol	0.22	U	2.3	0.22	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
N-Nitrosodi-n-propylamine	0.17	U	0.45	0.17	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Pentachlorophenol	0.21	U	2.3	0.21	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Phenanthrene	0.075	M U	0.45	0.075	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Phenol	0.17	Q U	0.45	0.17	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
Pyrene	0.051	U	0.45	0.051	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
2,4,5-Trichlorophenol	0.077	U	0.45	0.077	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1
2,4,6-Trichlorophenol	0.081	U	0.45	0.081	mg/Kg	☼	10/29/19 09:11	10/29/19 21:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*57*		*30 - 120*	*10/29/19 09:11*	*10/29/19 21:54*	*1*
2-Fluorophenol (Surr)	*21*		*16 - 113*	*10/29/19 09:11*	*10/29/19 21:54*	*1*
Nitrobenzene-d5 (Surr)	*20*		*20 - 120*	*10/29/19 09:11*	*10/29/19 21:54*	*1*
Phenol-d5 (Surr)	*21*		*19 - 144*	*10/29/19 09:11*	*10/29/19 21:54*	*1*
Terphenyl-d14 (Surr)	*82*		*30 - 131*	*10/29/19 09:11*	*10/29/19 21:54*	*1*
2,4,6-Tribromophenol (Surr)	*62*		*23 - 129*	*10/29/19 09:11*	*10/29/19 21:54*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.022	M U	0.091	0.022	mg/Kg	☼	10/28/19 08:03	10/30/19 15:46	1
PCB-1221	0.046	M U	0.14	0.046	mg/Kg	☼	10/28/19 08:03	10/30/19 15:46	1
PCB-1232	0.024	M U	0.091	0.024	mg/Kg	☼	10/28/19 08:03	10/30/19 15:46	1
PCB-1242	0.039	M U	0.12	0.039	mg/Kg	☼	10/28/19 08:03	10/30/19 15:46	1
PCB-1248	0.027	M U	0.091	0.027	mg/Kg	☼	10/28/19 08:03	10/30/19 15:46	1
PCB-1254	0.013	M U	0.045	0.013	mg/Kg	☼	10/28/19 08:03	10/30/19 15:46	1
PCB-1260	0.021	M U	0.061	0.021	mg/Kg	☼	10/28/19 08:03	10/30/19 15:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*101*		*30 - 150*	*10/28/19 08:03*	*10/30/19 15:46*	*1*
DCB Decachlorobiphenyl	*118*		*30 - 150*	*10/28/19 08:03*	*10/30/19 15:46*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.2	U	14	1.2	mg/Kg	☼	10/29/19 07:31	10/29/19 12:19	10
Barium	**64**		14	0.80	mg/Kg	☼	10/29/19 07:31	10/29/19 12:19	10
Cadmium	0.41	U	7.2	0.41	mg/Kg	☼	10/29/19 07:31	10/29/19 12:19	10
Chromium	**2.2**	**J**	14	1.0	mg/Kg	☼	10/29/19 07:31	10/29/19 12:19	10
Lead	**4.3**	**J**	14	2.1	mg/Kg	☼	10/29/19 07:31	10/29/19 12:19	10
Selenium	5.3	U	29	5.3	mg/Kg	☼	10/29/19 07:31	10/29/19 12:19	10
Silver	2.7	U	14	2.7	mg/Kg	☼	10/29/19 07:31	10/29/19 12:19	10

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.017	U	0.055	0.017	mg/Kg	☼	10/29/19 11:30	10/29/19 14:00	1

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Lab Sample ID: MB 660-217582/1-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217582

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.050	M U	0.32	0.050	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Acenaphthylene	0.042	U	0.32	0.042	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Acetophenone	0.080	M U	0.32	0.080	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Anthracene	0.056	U	0.32	0.056	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Atrazine	0.13	U	0.97	0.13	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Benzo[a]anthracene	0.044	M U	0.32	0.044	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Benzo[a]pyrene	0.043	M U	0.32	0.043	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Benzo[b]fluoranthene	0.090	U	0.32	0.090	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Benzo[g,h,i]perylene	0.086	U	0.32	0.086	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Benzo[k]fluoranthene	0.055	U	0.32	0.055	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
1,1'-Biphenyl	0.66	U	2.0	0.66	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Bis(2-chloroethoxy)methane	0.076	U	0.32	0.076	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Bis(2-chloroethyl)ether	0.076	U	0.32	0.076	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
bis (2-chloroisopropyl) ether	0.040	U	0.32	0.040	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Bis(2-ethylhexyl) phthalate	0.046	U	0.32	0.046	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4-Bromophenyl phenyl ether	0.078	U	0.32	0.078	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Butyl benzyl phthalate	0.038	U	0.32	0.038	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Caprolactam	0.083	U	0.32	0.083	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Carbazole	0.39	U	0.97	0.39	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4-Chloroaniline	0.072	U	0.64	0.072	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4-Chloro-3-methylphenol	0.048	U	0.32	0.048	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2-Chloronaphthalene	0.058	U	0.32	0.058	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2-Chlorophenol	0.042	U	0.32	0.042	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4-Chlorophenyl phenyl ether	0.075	U	0.32	0.075	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Chrysene	0.045	U	0.32	0.045	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Dibenz(a,h)anthracene	0.088	U	0.32	0.088	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Dibenzofuran	0.052	U	0.32	0.052	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,4-Dichlorophenol	0.042	U	0.32	0.042	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Diethyl phthalate	0.046	U	0.32	0.046	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,4-Dimethylphenol	0.050	U	0.32	0.050	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Dimethyl phthalate	0.054	U	0.32	0.054	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Di-n-butyl phthalate	0.058	U	0.32	0.058	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4,6-Dinitro-2-methylphenol	0.19	U	1.7	0.19	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,4-Dinitrophenol	0.28	U	1.7	0.28	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,4-Dinitrotoluene	0.048	U	0.32	0.048	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,6-Dinitrotoluene	0.049	U	0.32	0.049	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Di-n-octyl phthalate	0.034	M U	0.32	0.034	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Fluoranthene	0.047	U	0.32	0.047	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Fluorene	0.046	U	0.32	0.046	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Hexachlorobenzene	0.040	U	0.32	0.040	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Hexachlorobutadiene	0.087	U	0.32	0.087	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Hexachlorocyclopentadiene	0.072	U	0.32	0.072	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Hexachloroethane	0.075	U	0.32	0.075	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Indeno[1,2,3-cd]pyrene	0.041	U	0.32	0.041	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Isophorone	0.042	U	0.32	0.042	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2-Methylnaphthalene	0.056	M U	0.32	0.056	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2-Methylphenol	0.11	U	0.32	0.11	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
3 & 4 Methylphenol	0.043	U	0.32	0.043	mg/Kg		10/29/19 09:11	10/29/19 17:51	1

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Lab Sample ID: MB 660-217582/1-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217582

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.083	U	0.32	0.083	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2-Nitroaniline	0.073	U	1.7	0.073	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
3-Nitroaniline	0.15	U	1.7	0.15	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4-Nitroaniline	0.093	U	1.7	0.093	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Nitrobenzene	0.045	U	0.32	0.045	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2-Nitrophenol	0.080	U	0.32	0.080	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4-Nitrophenol	0.15	U	1.7	0.15	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
N-Nitrosodi-n-propylamine	0.12	U	0.32	0.12	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Pentachlorophenol	0.15	U	1.7	0.15	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Phenanthrene	0.053	U	0.32	0.053	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Phenol	0.12	M U	0.32	0.12	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Pyrene	0.036	U	0.32	0.036	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,4,5-Trichlorophenol	0.054	U	0.32	0.054	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,4,6-Trichlorophenol	0.057	U	0.32	0.057	mg/Kg		10/29/19 09:11	10/29/19 17:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*62*		*30 - 120*	*10/29/19 09:11*	*10/29/19 17:51*	*1*
2-Fluorophenol (Surr)	*32*		*16 - 113*	*10/29/19 09:11*	*10/29/19 17:51*	*1*
Nitrobenzene-d5 (Surr)	*57*		*20 - 120*	*10/29/19 09:11*	*10/29/19 17:51*	*1*
Phenol-d5 (Surr)	*43*		*19 - 144*	*10/29/19 09:11*	*10/29/19 17:51*	*1*
Terphenyl-d14 (Surr)	*84*		*30 - 131*	*10/29/19 09:11*	*10/29/19 17:51*	*1*
2,4,6-Tribromophenol (Surr)	*62*		*23 - 129*	*10/29/19 09:11*	*10/29/19 17:51*	*1*

Lab Sample ID: LCS 660-217582/2-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	1.63	1.15		mg/Kg		71	58 - 118
Acenaphthylene	1.63	1.12		mg/Kg		69	56 - 116
Acetophenone	1.63	0.880		mg/Kg		54	51 - 111
Anthracene	1.63	1.52		mg/Kg		93	62 - 126
Atrazine	1.63	1.99		mg/Kg		122	77 - 142
Benzo[a]anthracene	1.63	1.63		mg/Kg		100	61 - 121
Benzo[a]pyrene	1.63	1.68		mg/Kg		103	65 - 130
Benzo[b]fluoranthene	1.63	1.85		mg/Kg		114	64 - 124
Benzo[g,h,i]perylene	1.63	1.77		mg/Kg		109	61 - 127
Benzo[k]fluoranthene	1.63	1.80		mg/Kg		111	68 - 132
1,1'-Biphenyl	1.63	1.09	J	mg/Kg		67	55 - 115
Bis(2-chloroethoxy)methane	1.63	0.977		mg/Kg		60	53 - 113
Bis(2-chloroethyl)ether	1.63	0.811		mg/Kg		50	42 - 110
bis (2-chloroisopropyl) ether	1.63	0.942		mg/Kg		58	43 - 110
Bis(2-ethylhexyl) phthalate	1.63	1.62		mg/Kg		99	67 - 131
4-Bromophenyl phenyl ether	1.63	1.42		mg/Kg		87	62 - 122
Butyl benzyl phthalate	1.63	1.66		mg/Kg		102	66 - 126
Caprolactam	1.63	1.14		mg/Kg		70	57 - 140
Carbazole	1.63	2.79	Q	mg/Kg		172	82 - 150
4-Chloroaniline	1.63	0.662		mg/Kg		41	23 - 110

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Lab Sample ID: LCS 660-217582/2-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloro-3-methylphenol	1.63	1.19		mg/Kg		73	62 - 122
2-Chloronaphthalene	1.63	1.07		mg/Kg		66	55 - 115
2-Chlorophenol	1.63	0.792		mg/Kg		49	48 - 110
4-Chlorophenyl phenyl ether	1.63	1.27		mg/Kg		78	62 - 120
Chrysene	1.63	1.65		mg/Kg		101	64 - 127
Dibenz(a,h)anthracene	1.63	1.80		mg/Kg		111	65 - 128
Dibenzofuran	1.63	1.19		mg/Kg		73	48 - 128
2,4-Dichlorophenol	1.63	0.950		mg/Kg		58	55 - 116
Diethyl phthalate	1.63	1.54		mg/Kg		94	64 - 129
2,4-Dimethylphenol	1.63	0.969		mg/Kg		60	56 - 116
Dimethyl phthalate	1.63	1.41		mg/Kg		87	64 - 124
Di-n-butyl phthalate	1.63	1.67		mg/Kg		102	64 - 124
4,6-Dinitro-2-methylphenol	3.26	2.91		mg/Kg		90	34 - 150
2,4-Dinitrophenol	3.26	1.81	M	mg/Kg		56	13 - 132
2,4-Dinitrotoluene	1.63	1.59		mg/Kg		98	65 - 130
2,6-Dinitrotoluene	1.63	1.44		mg/Kg		89	63 - 125
Di-n-octyl phthalate	1.63	1.67		mg/Kg		102	67 - 127
Fluoranthene	1.63	1.64		mg/Kg		101	64 - 124
Fluorene	1.63	1.33		mg/Kg		82	61 - 121
Hexachlorobenzene	1.63	1.49		mg/Kg		91	63 - 128
Hexachlorobutadiene	1.63	0.925		mg/Kg		57	53 - 113
Hexachlorocyclopentadiene	1.63	0.830		mg/Kg		51	32 - 122
Hexachloroethane	1.63	0.894		mg/Kg		55	46 - 110
Indeno[1,2,3-cd]pyrene	1.63	1.64		mg/Kg		101	59 - 127
Isophorone	1.63	1.02		mg/Kg		62	51 - 124
2-Methylnaphthalene	1.63	1.01		mg/Kg		62	55 - 115
2-Methylphenol	1.63	0.856		mg/Kg		53	49 - 110
3 & 4 Methylphenol	1.63	0.860		mg/Kg		53	47 - 113
Naphthalene	1.63	0.957		mg/Kg		59	51 - 111
2-Nitroaniline	1.63	1.30	J	mg/Kg		80	61 - 123
3-Nitroaniline	1.63	1.78		mg/Kg		110	44 - 135
4-Nitroaniline	1.63	1.99		mg/Kg		122	51 - 150
Nitrobenzene	1.63	0.862		mg/Kg		53	50 - 110
2-Nitrophenol	1.63	0.911		mg/Kg		56	52 - 112
4-Nitrophenol	3.26	2.99		mg/Kg		92	65 - 134
N-Nitrosodi-n-propylamine	1.63	0.981		mg/Kg		60	52 - 112
Pentachlorophenol	3.26	3.34		mg/Kg		103	52 - 127
Phenanthrene	1.63	1.49		mg/Kg		91	62 - 122
Phenol	1.63	0.576	Q	mg/Kg		35	42 - 110
Pyrene	1.63	1.60		mg/Kg		98	66 - 130
2,4,5-Trichlorophenol	1.63	1.27		mg/Kg		78	58 - 121
2,4,6-Trichlorophenol	1.63	1.18		mg/Kg		72	57 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*63*		*30 - 120*
2-Fluorophenol (Surr)	*22*		*16 - 113*
Nitrobenzene-d5 (Surr)	*52*		*20 - 120*
Phenol-d5 (Surr)	*34*		*19 - 144*

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Lab Sample ID: LCS 660-217582/2-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217582

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*97*		*30 - 131*
2,4,6-Tribromophenol (Surr)	*87*		*23 - 129*

Lab Sample ID: 660-98302-3 MS
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: B-6a-0-16-10-19 MS
Prep Type: Total/NA
Prep Batch: 217582

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	0.057	U M	1.88	1.33		mg/Kg	☼	71	58 - 118
Acenaphthylene	0.049	U	1.88	1.33		mg/Kg	☼	71	56 - 116
Acetophenone	0.092	U	1.88	1.05		mg/Kg	☼	56	51 - 111
Anthracene	0.064	U	1.88	1.85		mg/Kg	☼	98	62 - 126
Atrazine	0.15	U	1.88	2.01		mg/Kg	☼	107	77 - 142
Benzo[a]anthracene	0.051	U	1.88	1.91		mg/Kg	☼	102	61 - 121
Benzo[a]pyrene	0.050	U	1.88	1.98		mg/Kg	☼	105	65 - 130
Benzo[b]fluoranthene	0.10	U M	1.88	2.10		mg/Kg	☼	112	64 - 124
Benzo[g,h,i]perylene	0.099	U	1.88	1.95		mg/Kg	☼	104	61 - 127
Benzo[k]fluoranthene	0.063	U M	1.88	1.91		mg/Kg	☼	102	68 - 132
1,1'-Biphenyl	0.77	U	1.88	1.27	J	mg/Kg	☼	67	55 - 115
Bis(2-chloroethoxy)methane	0.088	U	1.88	1.13		mg/Kg	☼	60	53 - 113
Bis(2-chloroethyl)ether	0.088	U M	1.88	1.05		mg/Kg	☼	56	42 - 110
bis (2-chloroisopropyl) ether	0.046	U M	1.88	1.09		mg/Kg	☼	58	43 - 110
Bis(2-ethylhexyl) phthalate	0.053	U	1.88	1.90		mg/Kg	☼	101	67 - 131
4-Bromophenyl phenyl ether	0.090	U	1.88	1.71		mg/Kg	☼	91	62 - 122
Butyl benzyl phthalate	0.044	U M	1.88	1.94		mg/Kg	☼	103	66 - 126
Caprolactam	0.096	U	1.88	1.42		mg/Kg	☼	76	57 - 140
Carbazole	0.45	U J Q	1.88	3.41	J	mg/Kg	☼	182	82 - 150
4-Chloroaniline	0.083	U	1.88	0.684	J	mg/Kg	☼	36	23 - 110
4-Chloro-3-methylphenol	0.056	U	1.88	1.37		mg/Kg	☼	73	62 - 122
2-Chloronaphthalene	0.067	U M	1.88	1.24		mg/Kg	☼	66	55 - 115
2-Chlorophenol	0.049	U M	1.88	0.915		mg/Kg	☼	49	48 - 110
4-Chlorophenyl phenyl ether	0.087	U	1.88	1.48		mg/Kg	☼	79	62 - 120
Chrysene	0.052	U	1.88	1.93		mg/Kg	☼	103	64 - 127
Dibenz(a,h)anthracene	0.10	U M	1.88	1.99		mg/Kg	☼	106	65 - 128
Dibenzofuran	0.060	U M	1.88	1.39		mg/Kg	☼	74	48 - 128
2,4-Dichlorophenol	0.049	U	1.88	1.14		mg/Kg	☼	61	55 - 116
Diethyl phthalate	0.053	U	1.88	1.73		mg/Kg	☼	92	64 - 129
2,4-Dimethylphenol	0.058	U M	1.88	1.14		mg/Kg	☼	61	56 - 116
Dimethyl phthalate	0.062	U	1.88	1.58		mg/Kg	☼	84	64 - 124
Di-n-butyl phthalate	0.067	U	1.88	1.95		mg/Kg	☼	104	64 - 124
4,6-Dinitro-2-methylphenol	0.21	U	3.76	3.34		mg/Kg	☼	89	34 - 150
2,4-Dinitrophenol	0.32	U	3.76	2.05		mg/Kg	☼	55	13 - 132
2,4-Dinitrotoluene	0.055	U	1.88	1.75		mg/Kg	☼	93	65 - 130
2,6-Dinitrotoluene	0.056	U	1.88	1.56		mg/Kg	☼	83	63 - 125
Di-n-octyl phthalate	0.040	U M	1.88	1.96		mg/Kg	☼	104	67 - 127
Fluoranthene	0.054	J	1.88	1.98		mg/Kg	☼	105	64 - 124
Fluorene	0.053	U	1.88	1.52		mg/Kg	☼	81	61 - 121
Hexachlorobenzene	0.046	U	1.88	1.78		mg/Kg	☼	95	63 - 128

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Lab Sample ID: 660-98302-3 MS
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: B-6a-0-16-10-19 MS
Prep Type: Total/NA
Prep Batch: 217582

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobutadiene	0.10	U	1.88	1.09		mg/Kg	☼	58	53 - 113
Hexachlorocyclopentadiene	0.083	U J	1.88	0.555	J	mg/Kg	☼	30	32 - 122
Hexachloroethane	0.087	U	1.88	0.960		mg/Kg	☼	51	46 - 110
Indeno[1,2,3-cd]pyrene	0.047	U	1.88	1.96		mg/Kg	☼	105	59 - 127
Isophorone	0.049	U	1.88	1.22		mg/Kg	☼	65	51 - 124
2-Methylnaphthalene	0.064	U	1.88	1.21		mg/Kg	☼	64	55 - 115
2-Methylphenol	0.12	U M	1.88	0.994		mg/Kg	☼	53	49 - 110
3 & 4 Methylphenol	0.049	U M	1.88	0.971		mg/Kg	☼	52	47 - 113
Naphthalene	0.095	U	1.88	1.11		mg/Kg	☼	59	51 - 111
2-Nitroaniline	0.084	U	1.88	1.51	J	mg/Kg	☼	80	61 - 123
3-Nitroaniline	0.18	U	1.88	2.04		mg/Kg	☼	108	44 - 135
4-Nitroaniline	0.11	U	1.88	2.16		mg/Kg	☼	115	51 - 150
Nitrobenzene	0.052	U	1.88	1.02		mg/Kg	☼	54	50 - 110
2-Nitrophenol	0.092	U	1.88	1.05		mg/Kg	☼	56	52 - 112
4-Nitrophenol	0.18	U M	3.76	3.52		mg/Kg	☼	94	65 - 134
N-Nitrosodi-n-propylamine	0.13	U M	1.88	1.12		mg/Kg	☼	60	52 - 112
Pentachlorophenol	0.17	U	3.76	4.24		mg/Kg	☼	113	52 - 127
Phenanthrene	0.061	U	1.88	1.84		mg/Kg	☼	98	62 - 122
Phenol	0.14	U J Q M	1.88	0.628	J	mg/Kg	☼	33	42 - 110
Pyrene	0.059	J	1.88	1.97		mg/Kg	☼	102	66 - 130
2,4,5-Trichlorophenol	0.063	U	1.88	1.43		mg/Kg	☼	76	58 - 121
2,4,6-Trichlorophenol	0.066	U	1.88	1.35		mg/Kg	☼	72	57 - 117

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*60*		*30 - 120*
2-Fluorophenol (Surr)	*25*		*16 - 113*
Nitrobenzene-d5 (Surr)	*51*		*20 - 120*
Phenol-d5 (Surr)	*32*		*19 - 144*
Terphenyl-d14 (Surr)	*95*		*30 - 131*
2,4,6-Tribromophenol (Surr)	*88*		*23 - 129*

Lab Sample ID: 660-98302-3 MSD
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: B-6a-0-16-10-19 MSD
Prep Type: Total/NA
Prep Batch: 217582

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	0.057	U M	1.88	1.36		mg/Kg	☼	72	58 - 118	2	40
Acenaphthylene	0.049	U	1.88	1.30		mg/Kg	☼	69	56 - 116	2	40
Acetophenone	0.092	U	1.88	1.02		mg/Kg	☼	54	51 - 111	3	40
Anthracene	0.064	U	1.88	1.72		mg/Kg	☼	92	62 - 126	7	40
Atrazine	0.15	U	1.88	1.90		mg/Kg	☼	101	77 - 142	6	40
Benzo[a]anthracene	0.051	U	1.88	1.82		mg/Kg	☼	97	61 - 121	5	40
Benzo[a]pyrene	0.050	U	1.88	1.85		mg/Kg	☼	99	65 - 130	7	40
Benzo[b]fluoranthene	0.10	U M	1.88	1.93		mg/Kg	☼	103	64 - 124	8	40
Benzo[g,h,i]perylene	0.099	U	1.88	1.89		mg/Kg	☼	101	61 - 127	3	40
Benzo[k]fluoranthene	0.063	U M	1.88	2.00		mg/Kg	☼	106	68 - 132	4	40
1,1'-Biphenyl	0.77	U	1.88	1.24	J	mg/Kg	☼	66	55 - 115	2	40
Bis(2-chloroethoxy)methane	0.088	U	1.88	1.13		mg/Kg	☼	60	53 - 113	0	40

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Lab Sample ID: 660-98302-3 MSD
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: B-6a-0-16-10-19 MSD
Prep Type: Total/NA
Prep Batch: 217582

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-chloroethyl)ether	0.088	U M	1.88	0.976		mg/Kg	☼	52	42 - 110	7	40
bis (2-chloroisopropyl) ether	0.046	U M	1.88	1.02		mg/Kg	☼	55	43 - 110	6	40
Bis(2-ethylhexyl) phthalate	0.053	U	1.88	1.79		mg/Kg	☼	95	67 - 131	6	40
4-Bromophenyl phenyl ether	0.090	U	1.88	1.64		mg/Kg	☼	87	62 - 122	5	40
Butyl benzyl phthalate	0.044	U M	1.88	1.85		mg/Kg	☼	99	66 - 126	4	40
Caprolactam	0.096	U	1.88	1.48		mg/Kg	☼	79	57 - 140	4	40
Carbazole	0.45	U J Q	1.88	3.09	J	mg/Kg	☼	164	82 - 150	10	40
4-Chloroaniline	0.083	U	1.88	0.910		mg/Kg	☼	49	23 - 110	28	40
4-Chloro-3-methylphenol	0.056	U	1.88	1.40		mg/Kg	☼	74	62 - 122	2	40
2-Chloronaphthalene	0.067	U M	1.88	1.21		mg/Kg	☼	65	55 - 115	2	40
2-Chlorophenol	0.049	U M	1.88	0.897		mg/Kg	☼	48	48 - 110	2	40
4-Chlorophenyl phenyl ether	0.087	U	1.88	1.48		mg/Kg	☼	79	62 - 120	0	40
Chrysene	0.052	U	1.88	1.89		mg/Kg	☼	101	64 - 127	2	40
Dibenz(a,h)anthracene	0.10	U M	1.88	1.91		mg/Kg	☼	102	65 - 128	4	40
Dibenzofuran	0.060	U M	1.88	1.38		mg/Kg	☼	74	48 - 128	1	40
2,4-Dichlorophenol	0.049	U	1.88	1.13		mg/Kg	☼	60	55 - 116	1	40
Diethyl phthalate	0.053	U	1.88	1.69		mg/Kg	☼	90	64 - 129	2	40
2,4-Dimethylphenol	0.058	U M	1.88	1.11		mg/Kg	☼	59	56 - 116	3	40
Dimethyl phthalate	0.062	U	1.88	1.63		mg/Kg	☼	87	64 - 124	3	40
Di-n-butyl phthalate	0.067	U	1.88	1.81		mg/Kg	☼	96	64 - 124	8	40
4,6-Dinitro-2-methylphenol	0.21	U	3.75	3.22		mg/Kg	☼	86	34 - 150	4	40
2,4-Dinitrophenol	0.32	U	3.75	2.05		mg/Kg	☼	55	13 - 132	0	40
2,4-Dinitrotoluene	0.055	U	1.88	1.77		mg/Kg	☼	95	65 - 130	1	40
2,6-Dinitrotoluene	0.056	U	1.88	1.61		mg/Kg	☼	86	63 - 125	3	40
Di-n-octyl phthalate	0.040	U M	1.88	1.87		mg/Kg	☼	100	67 - 127	5	40
Fluoranthene	0.054	J	1.88	1.86		mg/Kg	☼	99	64 - 124	6	40
Fluorene	0.053	U	1.88	1.52		mg/Kg	☼	81	61 - 121	0	40
Hexachlorobenzene	0.046	U	1.88	1.69		mg/Kg	☼	90	63 - 128	5	40
Hexachlorobutadiene	0.10	U	1.88	1.03		mg/Kg	☼	55	53 - 113	6	40
Hexachlorocyclopentadiene	0.083	U J	1.88	0.727		mg/Kg	☼	39	32 - 122	27	40
Hexachloroethane	0.087	U	1.88	0.923		mg/Kg	☼	49	46 - 110	4	40
Indeno[1,2,3-cd]pyrene	0.047	U	1.88	1.83	M	mg/Kg	☼	98	59 - 127	7	40
Isophorone	0.049	U	1.88	1.19		mg/Kg	☼	64	51 - 124	2	40
2-Methylnaphthalene	0.064	U	1.88	1.14		mg/Kg	☼	61	55 - 115	5	40
2-Methylphenol	0.12	U M	1.88	0.996		mg/Kg	☼	53	49 - 110	0	40
3 & 4 Methylphenol	0.049	U M	1.88	1.04		mg/Kg	☼	55	47 - 113	7	40
Naphthalene	0.095	U	1.88	1.05		mg/Kg	☼	56	51 - 111	6	40
2-Nitroaniline	0.084	U	1.88	1.55	J	mg/Kg	☼	82	61 - 123	3	40
3-Nitroaniline	0.18	U	1.88	2.13		mg/Kg	☼	113	44 - 135	4	40
4-Nitroaniline	0.11	U	1.88	2.12		mg/Kg	☼	113	51 - 150	2	40
Nitrobenzene	0.052	U	1.88	0.986		mg/Kg	☼	53	50 - 110	3	40
2-Nitrophenol	0.092	U	1.88	1.00		mg/Kg	☼	54	52 - 112	4	40
4-Nitrophenol	0.18	U M	3.75	3.46		mg/Kg	☼	92	65 - 134	2	40
N-Nitrosodi-n-propylamine	0.13	U M	1.88	1.11		mg/Kg	☼	59	52 - 112	1	40
Pentachlorophenol	0.17	U	3.75	3.91		mg/Kg	☼	104	52 - 127	8	40
Phenanthrene	0.061	U	1.88	1.73		mg/Kg	☼	92	62 - 122	6	40
Phenol	0.14	U J Q M	1.88	0.753	J	mg/Kg	☼	40	42 - 110	18	40
Pyrene	0.059	J	1.88	1.85		mg/Kg	☼	96	66 - 130	6	40
2,4,5-Trichlorophenol	0.063	U	1.88	1.43		mg/Kg	☼	76	58 - 121	0	40

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Lab Sample ID: 660-98302-3 MSD — **Client Sample ID: B-6a-0-16-10-19 MSD**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217589 — **Prep Batch: 217582**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,6-Trichlorophenol	0.066	U	1.88	1.35		mg/Kg	☼	72	57 - 117	0	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*60*		*30 - 120*
2-Fluorophenol (Surr)	*25*		*16 - 113*
Nitrobenzene-d5 (Surr)	*50*		*20 - 120*
Phenol-d5 (Surr)	*37*		*19 - 144*
Terphenyl-d14 (Surr)	*89*		*30 - 131*
2,4,6-Tribromophenol (Surr)	*84*		*23 - 129*

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

Lab Sample ID: MB 660-217521/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217620 — **Prep Batch: 217521**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.016	M U	0.066	0.016	mg/Kg		10/28/19 08:03	10/30/19 10:55	1
PCB-1221	0.033	M U	0.098	0.033	mg/Kg		10/28/19 08:03	10/30/19 10:55	1
PCB-1232	0.017	M U	0.066	0.017	mg/Kg		10/28/19 08:03	10/30/19 10:55	1
PCB-1242	0.028	M U	0.084	0.028	mg/Kg		10/28/19 08:03	10/30/19 10:55	1
PCB-1248	0.020	M U	0.066	0.020	mg/Kg		10/28/19 08:03	10/30/19 10:55	1
PCB-1254	0.0095	M U	0.032	0.0095	mg/Kg		10/28/19 08:03	10/30/19 10:55	1
PCB-1260	0.015	M U	0.044	0.015	mg/Kg		10/28/19 08:03	10/30/19 10:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*	*M*	*30 - 150*	*10/28/19 08:03*	*10/30/19 10:55*	*1*
DCB Decachlorobiphenyl	*112*		*30 - 150*	*10/28/19 08:03*	*10/30/19 10:55*	*1*

Lab Sample ID: LCS 660-217521/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217620 — **Prep Batch: 217521**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			0.333	0.307		mg/Kg		92	47 - 146		
PCB-1260			0.333	0.323		mg/Kg		97	45 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*96*		*30 - 150*
DCB Decachlorobiphenyl	*114*		*30 - 150*

Lab Sample ID: 660-98302-3 MS — **Client Sample ID: B-6a-0-16-10-19 MS**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217620 — **Prep Batch: 217521**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	0.018	U M	0.376	0.284		mg/Kg	☼	76	47 - 146		
PCB-1260	0.017	U M	0.376	0.300		mg/Kg	☼	80	45 - 150		

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

Lab Sample ID: 660-98302-3 MS
Matrix: Solid
Analysis Batch: 217620

Client Sample ID: B-6a-0-16-10-19 MS
Prep Type: Total/NA
Prep Batch: 217521

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*80*		*30 - 150*
DCB Decachlorobiphenyl	*100*		*30 - 150*

Lab Sample ID: 660-98302-3 MSD
Matrix: Solid
Analysis Batch: 217620

Client Sample ID: B-6a-0-16-10-19 MSD
Prep Type: Total/NA
Prep Batch: 217521

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	0.018	U M	0.376	0.308		mg/Kg	☼	82	47 - 146	8	50
PCB-1260	0.017	U M	0.376	0.308		mg/Kg	☼	82	45 - 150	3	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*81*		*30 - 150*
DCB Decachlorobiphenyl	*102*		*30 - 150*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 660-217519/1-A
Matrix: Solid
Analysis Batch: 217526

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217519

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.080	U	0.97	0.080	mg/Kg		10/28/19 07:37	10/28/19 11:18	1
Barium	0.054	U	0.97	0.054	mg/Kg		10/28/19 07:37	10/28/19 11:18	1
Cadmium	0.027	U	0.49	0.027	mg/Kg		10/28/19 07:37	10/28/19 11:18	1
Chromium	0.071	U	0.97	0.071	mg/Kg		10/28/19 07:37	10/28/19 11:18	1
Lead	0.14	U	0.97	0.14	mg/Kg		10/28/19 07:37	10/28/19 11:18	1
Selenium	0.36	U	1.9	0.36	mg/Kg		10/28/19 07:37	10/28/19 11:18	1
Silver	0.18	U	0.97	0.18	mg/Kg		10/28/19 07:37	10/28/19 11:18	1

Lab Sample ID: LCS 660-217519/2-A
Matrix: Solid
Analysis Batch: 217526

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217519

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	49.0	46.8		mg/Kg		96	80 - 120
Barium	49.0	49.4		mg/Kg		101	80 - 120
Cadmium	49.0	47.4		mg/Kg		97	80 - 120
Chromium	49.0	49.9		mg/Kg		102	80 - 120
Lead	49.0	48.3		mg/Kg		99	80 - 120
Selenium	49.0	46.3		mg/Kg		95	80 - 120
Silver	49.0	45.6		mg/Kg		93	80 - 120

Lab Sample ID: MB 660-217576/1-A
Matrix: Solid
Analysis Batch: 217594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217576

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.083	U	1.0	0.083	mg/Kg		10/29/19 07:31	10/29/19 10:44	1

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

Lab Sample ID: MB 660-217576/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217594 — **Prep Batch: 217576**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.056	U	1.0	0.056	mg/Kg		10/29/19 07:31	10/29/19 10:44	1
Cadmium	0.028	U	0.50	0.028	mg/Kg		10/29/19 07:31	10/29/19 10:44	1
Chromium	0.073	U	1.0	0.073	mg/Kg		10/29/19 07:31	10/29/19 10:44	1
Lead	0.175	J	1.0	0.15	mg/Kg		10/29/19 07:31	10/29/19 10:44	1
Selenium	0.37	U	2.0	0.37	mg/Kg		10/29/19 07:31	10/29/19 10:44	1
Silver	0.19	U	1.0	0.19	mg/Kg		10/29/19 07:31	10/29/19 10:44	1

Lab Sample ID: LCS 660-217576/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217594 — **Prep Batch: 217576**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	50.9		mg/Kg		102	80 - 120
Barium	50.0	53.2		mg/Kg		106	80 - 120
Cadmium	50.0	51.0		mg/Kg		102	80 - 120
Chromium	50.0	53.7		mg/Kg		107	80 - 120
Lead	50.0	52.3		mg/Kg		105	80 - 120
Selenium	50.0	50.2		mg/Kg		100	80 - 120
Silver	50.0	49.5		mg/Kg		99	80 - 120

Lab Sample ID: 660-98302-3 MS — **Client Sample ID: B-6a-0-16-10-19 MS**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217594 — **Prep Batch: 217576**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.28	J	56.1	48.7		mg/Kg	☼	86	75 - 125
Barium	9.5		56.1	60.4		mg/Kg	☼	91	75 - 125
Cadmium	0.030	U	56.1	48.8		mg/Kg	☼	87	75 - 125
Chromium	8.7		56.1	60.6		mg/Kg	☼	93	75 - 125
Lead	1.7		56.1	51.4		mg/Kg	☼	89	75 - 125
Selenium	0.40	U	56.1	48.0		mg/Kg	☼	86	75 - 125
Silver	0.20	U	56.1	47.5		mg/Kg	☼	85	75 - 125

Lab Sample ID: 660-98302-3 MSD — **Client Sample ID: B-6a-0-16-10-19 MSD**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 217594 — **Prep Batch: 217576**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.28	J	56.7	51.4		mg/Kg	☼	90	75 - 125	5	20
Barium	9.5		56.7	64.8		mg/Kg	☼	98	75 - 125	7	20
Cadmium	0.030	U	56.7	51.7		mg/Kg	☼	91	75 - 125	6	20
Chromium	8.7		56.7	72.5		mg/Kg	☼	113	75 - 125	18	20
Lead	1.7		56.7	54.9		mg/Kg	☼	94	75 - 125	7	20
Selenium	0.40	U	56.7	51.3		mg/Kg	☼	91	75 - 125	7	20
Silver	0.20	U	56.7	50.5		mg/Kg	☼	89	75 - 125	6	20

QC Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Lab Sample ID: MB 660-217561/1-A
Matrix: Solid
Analysis Batch: 217604

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217561

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	U	0.040	0.012	mg/Kg		10/29/19 11:30	10/29/19 13:36	1

Lab Sample ID: LCS 660-217561/2-A
Matrix: Solid
Analysis Batch: 217604

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217561

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.167	0.172		mg/Kg		103	80 - 120		

Lab Sample ID: 660-98302-3 MS
Matrix: Solid
Analysis Batch: 217604

Client Sample ID: B-6a-0-16-10-19 MS
Prep Type: Total/NA
Prep Batch: 217561

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.012	U	0.172	0.162		mg/Kg	☼	94	80 - 120		

Lab Sample ID: 660-98302-3 MSD
Matrix: Solid
Analysis Batch: 217604

Client Sample ID: B-6a-0-16-10-19 MSD
Prep Type: Total/NA
Prep Batch: 217561

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.012	U	0.183	0.179		mg/Kg	☼	98	80 - 120	10	20

QC Association Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

GC/MS Semi VOA

Prep Batch: 217582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-1	B-4a-0-12.5-10-19	Total/NA	Solid	3546	
660-98302-2	B-4a-12.5-15-10-19	Total/NA	Solid	3546	
660-98302-3	B-6a-0-16-10-19	Total/NA	Solid	3546	
660-98302-4	B-6a-16-17-10-19	Total/NA	Solid	3546	
660-98302-5	B-6a-17-20-10-19	Total/NA	Solid	3546	
660-98302-6	B-7a-0-14-10-19	Total/NA	Solid	3546	
660-98302-7	B-7a-14-18.5-10-19	Total/NA	Solid	3546	
660-98302-8	B-7a-18.5-20-10-19	Total/NA	Solid	3546	
MB 660-217582/1-A	Method Blank	Total/NA	Solid	3546	
LCS 660-217582/2-A	Lab Control Sample	Total/NA	Solid	3546	
660-98302-3 MS	B-6a-0-16-10-19 MS	Total/NA	Solid	3546	
660-98302-3 MSD	B-6a-0-16-10-19 MSD	Total/NA	Solid	3546	

Analysis Batch: 217586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-1	B-4a-0-12.5-10-19	Total/NA	Solid	8270D	217582
660-98302-2	B-4a-12.5-15-10-19	Total/NA	Solid	8270D	217582
660-98302-5	B-6a-17-20-10-19	Total/NA	Solid	8270D	217582

Analysis Batch: 217589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-3	B-6a-0-16-10-19	Total/NA	Solid	8270D	217582
660-98302-4	B-6a-16-17-10-19	Total/NA	Solid	8270D	217582
660-98302-6	B-7a-0-14-10-19	Total/NA	Solid	8270D	217582
660-98302-7	B-7a-14-18.5-10-19	Total/NA	Solid	8270D	217582
660-98302-8	B-7a-18.5-20-10-19	Total/NA	Solid	8270D	217582
MB 660-217582/1-A	Method Blank	Total/NA	Solid	8270D	217582
LCS 660-217582/2-A	Lab Control Sample	Total/NA	Solid	8270D	217582
660-98302-3 MS	B-6a-0-16-10-19 MS	Total/NA	Solid	8270D	217582
660-98302-3 MSD	B-6a-0-16-10-19 MSD	Total/NA	Solid	8270D	217582

GC Semi VOA

Prep Batch: 217521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-1	B-4a-0-12.5-10-19	Total/NA	Solid	3546	
660-98302-2	B-4a-12.5-15-10-19	Total/NA	Solid	3546	
660-98302-3	B-6a-0-16-10-19	Total/NA	Solid	3546	
660-98302-4	B-6a-16-17-10-19	Total/NA	Solid	3546	
660-98302-5	B-6a-17-20-10-19	Total/NA	Solid	3546	
660-98302-6	B-7a-0-14-10-19	Total/NA	Solid	3546	
660-98302-7	B-7a-14-18.5-10-19	Total/NA	Solid	3546	
660-98302-8	B-7a-18.5-20-10-19	Total/NA	Solid	3546	
MB 660-217521/1-A	Method Blank	Total/NA	Solid	3546	
LCS 660-217521/2-A	Lab Control Sample	Total/NA	Solid	3546	
660-98302-3 MS	B-6a-0-16-10-19 MS	Total/NA	Solid	3546	
660-98302-3 MSD	B-6a-0-16-10-19 MSD	Total/NA	Solid	3546	

Analysis Batch: 217620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-2	B-4a-12.5-15-10-19	Total/NA	Solid	8082A	217521

GC Semi VOA (Continued)

Analysis Batch: 217620 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-3	B-6a-0-16-10-19	Total/NA	Solid	8082A	217521
660-98302-4	B-6a-16-17-10-19	Total/NA	Solid	8082A	217521
660-98302-5	B-6a-17-20-10-19	Total/NA	Solid	8082A	217521
660-98302-6	B-7a-0-14-10-19	Total/NA	Solid	8082A	217521
660-98302-7	B-7a-14-18.5-10-19	Total/NA	Solid	8082A	217521
660-98302-8	B-7a-18.5-20-10-19	Total/NA	Solid	8082A	217521
MB 660-217521/1-A	Method Blank	Total/NA	Solid	8082A	217521
LCS 660-217521/2-A	Lab Control Sample	Total/NA	Solid	8082A	217521
660-98302-3 MS	B-6a-0-16-10-19 MS	Total/NA	Solid	8082A	217521
660-98302-3 MSD	B-6a-0-16-10-19 MSD	Total/NA	Solid	8082A	217521

Analysis Batch: 217688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-1	B-4a-0-12.5-10-19	Total/NA	Solid	8082A	217521

Metals

Prep Batch: 217519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-1	B-4a-0-12.5-10-19	Total/NA	Solid	3050B	
660-98302-2	B-4a-12.5-15-10-19	Total/NA	Solid	3050B	
MB 660-217519/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 660-217519/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 217526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-1	B-4a-0-12.5-10-19	Total/NA	Solid	6010D	217519
660-98302-2	B-4a-12.5-15-10-19	Total/NA	Solid	6010D	217519
MB 660-217519/1-A	Method Blank	Total/NA	Solid	6010D	217519
LCS 660-217519/2-A	Lab Control Sample	Total/NA	Solid	6010D	217519

Prep Batch: 217561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-1	B-4a-0-12.5-10-19	Total/NA	Solid	7471A	
660-98302-2	B-4a-12.5-15-10-19	Total/NA	Solid	7471A	
660-98302-3	B-6a-0-16-10-19	Total/NA	Solid	7471A	
660-98302-4	B-6a-16-17-10-19	Total/NA	Solid	7471A	
660-98302-5	B-6a-17-20-10-19	Total/NA	Solid	7471A	
660-98302-6	B-7a-0-14-10-19	Total/NA	Solid	7471A	
660-98302-7	B-7a-14-18.5-10-19	Total/NA	Solid	7471A	
660-98302-8	B-7a-18.5-20-10-19	Total/NA	Solid	7471A	
MB 660-217561/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 660-217561/2-A	Lab Control Sample	Total/NA	Solid	7471A	
660-98302-3 MS	B-6a-0-16-10-19 MS	Total/NA	Solid	7471A	
660-98302-3 MSD	B-6a-0-16-10-19 MSD	Total/NA	Solid	7471A	

Prep Batch: 217576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-3	B-6a-0-16-10-19	Total/NA	Solid	3050B	
660-98302-4	B-6a-16-17-10-19	Total/NA	Solid	3050B	
660-98302-5	B-6a-17-20-10-19	Total/NA	Solid	3050B	

Metals (Continued)

Prep Batch: 217576 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-6	B-7a-0-14-10-19	Total/NA	Solid	3050B	
660-98302-7	B-7a-14-18.5-10-19	Total/NA	Solid	3050B	
660-98302-8	B-7a-18.5-20-10-19	Total/NA	Solid	3050B	
MB 660-217576/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 660-217576/2-A	Lab Control Sample	Total/NA	Solid	3050B	
660-98302-3 MS	B-6a-0-16-10-19 MS	Total/NA	Solid	3050B	
660-98302-3 MSD	B-6a-0-16-10-19 MSD	Total/NA	Solid	3050B	

Analysis Batch: 217594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-3	B-6a-0-16-10-19	Total/NA	Solid	6010D	217576
660-98302-4	B-6a-16-17-10-19	Total/NA	Solid	6010D	217576
660-98302-5	B-6a-17-20-10-19	Total/NA	Solid	6010D	217576
660-98302-6	B-7a-0-14-10-19	Total/NA	Solid	6010D	217576
660-98302-7	B-7a-14-18.5-10-19	Total/NA	Solid	6010D	217576
660-98302-8	B-7a-18.5-20-10-19	Total/NA	Solid	6010D	217576
MB 660-217576/1-A	Method Blank	Total/NA	Solid	6010D	217576
LCS 660-217576/2-A	Lab Control Sample	Total/NA	Solid	6010D	217576
660-98302-3 MS	B-6a-0-16-10-19 MS	Total/NA	Solid	6010D	217576
660-98302-3 MSD	B-6a-0-16-10-19 MSD	Total/NA	Solid	6010D	217576

Analysis Batch: 217604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-1	B-4a-0-12.5-10-19	Total/NA	Solid	7471A	217561
660-98302-2	B-4a-12.5-15-10-19	Total/NA	Solid	7471A	217561
660-98302-3	B-6a-0-16-10-19	Total/NA	Solid	7471A	217561
660-98302-4	B-6a-16-17-10-19	Total/NA	Solid	7471A	217561
660-98302-5	B-6a-17-20-10-19	Total/NA	Solid	7471A	217561
660-98302-6	B-7a-0-14-10-19	Total/NA	Solid	7471A	217561
660-98302-7	B-7a-14-18.5-10-19	Total/NA	Solid	7471A	217561
660-98302-8	B-7a-18.5-20-10-19	Total/NA	Solid	7471A	217561
MB 660-217561/1-A	Method Blank	Total/NA	Solid	7471A	217561
LCS 660-217561/2-A	Lab Control Sample	Total/NA	Solid	7471A	217561
660-98302-3 MS	B-6a-0-16-10-19 MS	Total/NA	Solid	7471A	217561
660-98302-3 MSD	B-6a-0-16-10-19 MSD	Total/NA	Solid	7471A	217561

General Chemistry

Analysis Batch: 217587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98302-1	B-4a-0-12.5-10-19	Total/NA	Solid	Moisture	
660-98302-2	B-4a-12.5-15-10-19	Total/NA	Solid	Moisture	
660-98302-3	B-6a-0-16-10-19	Total/NA	Solid	Moisture	
660-98302-4	B-6a-16-17-10-19	Total/NA	Solid	Moisture	
660-98302-5	B-6a-17-20-10-19	Total/NA	Solid	Moisture	
660-98302-6	B-7a-0-14-10-19	Total/NA	Solid	Moisture	
660-98302-7	B-7a-14-18.5-10-19	Total/NA	Solid	Moisture	
660-98302-8	B-7a-18.5-20-10-19	Total/NA	Solid	Moisture	

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-4a-0-12.5-10-19
Lab Sample ID: 660-98302-1
Date Collected: 10/24/19 13:18
Matrix: Solid
Date Received: 10/25/19 16:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 06:01	AJG	TAL TAM

Client Sample ID: B-4a-0-12.5-10-19
Lab Sample ID: 660-98302-1
Date Collected: 10/24/19 13:18
Matrix: Solid
Date Received: 10/25/19 16:07
Percent Solids: 78.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217586	10/29/19 20:30	K1P	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217688	10/31/19 15:24	MDS	TAL TAM
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		1	217526	10/28/19 12:43	GAF	TAL TAM
Total/NA	Prep	7471A			217561	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:50	GH1	TAL TAM

Client Sample ID: B-4a-12.5-15-10-19
Lab Sample ID: 660-98302-2
Date Collected: 10/24/19 13:21
Matrix: Solid
Date Received: 10/25/19 16:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 06:20	AJG	TAL TAM

Client Sample ID: B-4a-12.5-15-10-19
Lab Sample ID: 660-98302-2
Date Collected: 10/24/19 13:21
Matrix: Solid
Date Received: 10/25/19 16:07
Percent Solids: 75.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217586	10/29/19 20:54	K1P	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 16:01	MDS	TAL TAM
Total/NA	Prep	3050B			217519	10/28/19 07:37	SGF	TAL TAM
Total/NA	Analysis	6010D		3	217526	10/28/19 13:20	GAF	TAL TAM
Total/NA	Prep	7471A			217561	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:51	GH1	TAL TAM

Client Sample ID: B-6a-0-16-10-19
Lab Sample ID: 660-98302-3
Date Collected: 10/24/19 13:53
Matrix: Solid
Date Received: 10/25/19 16:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 06:10	AJG	TAL TAM

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-6a-0-16-10-19
Lab Sample ID: 660-98302-3
Date Collected: 10/24/19 13:53
Matrix: Solid
Date Received: 10/25/19 16:07
Percent Solids: 88.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217589	10/29/19 18:40	MWJ	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 11:24	MDS	TAL TAM
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		1	217594	10/29/19 10:54	GAF	TAL TAM
Total/NA	Prep	7471A			217561	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:41	GH1	TAL TAM

Client Sample ID: B-6a-16-17-10-19
Lab Sample ID: 660-98302-4
Date Collected: 10/24/19 14:06
Matrix: Solid
Date Received: 10/25/19 16:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 06:35	AJG	TAL TAM

Client Sample ID: B-6a-16-17-10-19
Lab Sample ID: 660-98302-4
Date Collected: 10/24/19 14:06
Matrix: Solid
Date Received: 10/25/19 16:07
Percent Solids: 74.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217589	10/29/19 20:41	MWJ	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 14:48	MDS	TAL TAM
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		5	217594	10/29/19 12:10	GAF	TAL TAM
Total/NA	Prep	7471A			217561	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:53	GH1	TAL TAM

Client Sample ID: B-6a-17-20-10-19
Lab Sample ID: 660-98302-5
Date Collected: 10/24/19 14:08
Matrix: Solid
Date Received: 10/25/19 16:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 06:38	AJG	TAL TAM

Client Sample ID: B-6a-17-20-10-19
Lab Sample ID: 660-98302-5
Date Collected: 10/24/19 14:08
Matrix: Solid
Date Received: 10/25/19 16:07
Percent Solids: 83.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217586	10/29/19 21:18	K1P	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 15:02	MDS	TAL TAM

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-6a-17-20-10-19
Lab Sample ID: 660-98302-5
Date Collected: 10/24/19 14:08
Matrix: Solid
Date Received: 10/25/19 16:07
Percent Solids: 83.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		5	217594	10/29/19 12:13	GAF	TAL TAM
Total/NA	Prep	7471A			217561	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:55	GH1	TAL TAM

Client Sample ID: B-7a-0-14-10-19
Lab Sample ID: 660-98302-6
Date Collected: 10/24/19 14:33
Matrix: Solid
Date Received: 10/25/19 16:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 06:49	AJG	TAL TAM

Client Sample ID: B-7a-0-14-10-19
Lab Sample ID: 660-98302-6
Date Collected: 10/24/19 14:33
Matrix: Solid
Date Received: 10/25/19 16:07
Percent Solids: 85.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217589	10/29/19 21:05	MWJ	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 15:17	MDS	TAL TAM
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		1	217594	10/29/19 11:12	GAF	TAL TAM
Total/NA	Prep	7471A			217561	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:57	GH1	TAL TAM

Client Sample ID: B-7a-14-18.5-10-19
Lab Sample ID: 660-98302-7
Date Collected: 10/24/19 14:34
Matrix: Solid
Date Received: 10/25/19 16:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 07:09	AJG	TAL TAM

Client Sample ID: B-7a-14-18.5-10-19
Lab Sample ID: 660-98302-7
Date Collected: 10/24/19 14:34
Matrix: Solid
Date Received: 10/25/19 16:07
Percent Solids: 73.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217589	10/29/19 21:29	MWJ	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 15:32	MDS	TAL TAM
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		5	217594	10/29/19 12:16	GAF	TAL TAM
Total/NA	Prep	7471A			217561	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:59	GH1	TAL TAM

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Client Sample ID: B-7a-18.5-20-10-19

Lab Sample ID: 660-98302-8
Date Collected: 10/24/19 14:39
Matrix: Solid
Date Received: 10/25/19 16:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 07:28	AJG	TAL TAM

Client Sample ID: B-7a-18.5-20-10-19

Lab Sample ID: 660-98302-8
Date Collected: 10/24/19 14:39
Matrix: Solid
Date Received: 10/25/19 16:07
Percent Solids: 72.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217589	10/29/19 21:54	MWJ	TAL TAM
Total/NA	Prep	3546			217521	10/28/19 08:03	EM	TAL TAM
Total/NA	Analysis	8082A		1	217620	10/30/19 15:46	MDS	TAL TAM
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		10	217594	10/29/19 12:19	GAF	TAL TAM
Total/NA	Prep	7471A			217561	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 14:00	GH1	TAL TAM

Laboratory References:

TAL TAM = Eurofins TestAmerica, Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

Method Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Compounds by Gas Chromatograph	SW846	TAL TAM
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL TAM
6010D	Metals (ICP)	SW846	TAL TAM
7471A	Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	SW846	TAL TAM
Moisture	Percent Moisture	EPA	TAL TAM
3050B	Preparation, Metals	SW846	TAL TAM
3546	Microwave Extraction	SW846	TAL TAM
7471A	Preparation, Mercury	SW846	TAL TAM

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 TAM = Eurofins TestAmerica, Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

Accreditation/Certification Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98302-1

Laboratory: Eurofins TestAmerica, Tampa

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

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E84282	06-30-20

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

Laboratory: Eurofins TestAmerica, Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-20
Alaska	State	GA00006	06-30-20
Alaska (UST)	State	17-016	09-30-20
ANAB	Dept. of Defense ELAP	L2463	09-22-22
ANAB	DoD	L2463	09-22-22
ANAB	ISO/IEC 17025	L2463.01	09-22-22
ANAB	ISO/IEC 17025	L2463.01	09-22-22
Arizona	State	AZ0808	12-14-19
Arkansas DEQ	State	19-015-0	02-01-20
Arkansas DEQ	State Program	88-0692	02-01-20
California	State	2939	06-30-20
Colorado	State	GA00006	12-31-19
Connecticut	State	PH-0161	03-31-21
Florida	NELAP	E87052	06-30-20
GA Dept. of Agriculture	State Program	N/A	06-12-20
Georgia	State	E87052	06-30-20
Georgia	State Program	N/A	06-30-20
Georgia (DW)	State	803	06-30-20
Guam	State	19-007R	04-17-20
Hawaii	State	<cert No.>	06-30-20
Indiana	State	C-GA-02	06-30-20
Iowa	State	353	09-22-20
Kansas	NELAP	E-10322	10-15-20
Kentucky (DW)	State	KY90084	12-31-19
Kentucky (UST)	State	<cert No.>	06-30-20
Kentucky (UST)	State Program	18	06-30-20
Kentucky (WW)	State	KY90084	12-31-19
Kentucky (WW)	State Program	90084	12-31-19
Louisiana	NELAP	02011	06-30-20
Louisiana (DW)	State	LA009	12-31-19
Maine	State	GA00006	09-26-20
Maryland	State	250	12-31-19
Massachusetts	State	M-GA006	06-30-20
Massachusetts	State Program	M-GA006	06-30-20
Michigan	State	9925	06-30-20
Mississippi	State	<cert No.>	06-30-20
Mississippi	State Program	N/A	06-30-20
Nebraska	State	NE-OS-7-04	06-30-20

Laboratory: Eurofins TestAmerica, Savannah (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Nebraska	State Program	TestAmerica-Savannah	06-30-20
New Hampshire	NELAP	2096	05-29-20
New Hampshire	NELAP	2096	05-29-20
New Jersey	NELAP	GA769	06-30-20
New Mexico	State	GA00006	06-30-20
New York	NELAP	10842	04-01-20
North Carolina (DW)	State	13701	07-31-20
North Carolina (DW)	State Program	13701	07-31-20
North Carolina (WW/SW)	State	269	12-31-19
North Carolina (WW/SW)	State Program	269	12-31-19
Oklahoma	State	9984	08-31-20
Pennsylvania	NELAP	68-00474	06-30-20
Puerto Rico	State	GA00006	01-01-20
South Carolina	State	98001	06-30-20
Tennessee	State	02961	06-30-20
Texas	NELAP	T104704185-19-13	11-30-19 *
Texas	NELAP	T1047004185-19-3	11-30-19
Texas	TCEQ Water Supply	T104704185	09-23-20
US Fish & Wildlife	US Federal Programs	LE058448-0	07-31-20
USDA	US Federal Programs	P330-18-00313	10-29-21
Virginia	NELAP	10509	06-14-20
Washington	State	C805	06-10-20
West Virginia (DW)	State	9950C	12-31-19
West Virginia (DW)	State Program	9950C	12-31-19
West Virginia DEP	State	094	11-30-19
Wisconsin	State	999819810	08-31-20
Wyoming	State	8TMS-L	06-30-20 *
Wyoming	State Program	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: April Kelly	Lab PM: Lawhon, Jon K	Carrier Tracking No(s):	COC No: 680-108806-42551.1
Client Contact: Brett Zeigler	Phone: 912-414-3097	E-Mail: jon.lawhon@testamericainc.com		Page: Page 1 of 3
Company: U.S. Army Corps of Engineers				Job #:
Address: 100 West Oglethorpe Ave	Due Date Requested:			
City: Savannah	TAT Requested (days):			
State, Zip: GA, 31401				
Phone:	PO #: Purchase Order Requested			
Email: derrick.b.zeigler@usace.army.mil	WO #:			
Project Name: Augusta Training Wall, Augusta, GA	Project #: 68022845			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3

Loc: 660
98302

660-98302 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)	8082A, 8270D	6010D, 7471A	Total Nu	Special Instructions/Note:
			Preservation Code:				N	N		
B-4a-0-12.5-10-19	10/24/19	1318		Solid	N		1	1		
B-4a-12.5-15-10-19	10/24/19	1321		Solid	N		1	1		
B-6a-0-16-10-19	10/24/19	1353		Solid	N	Y	3	3		
B-6a-16-17-10-19	10/24/19	1406		Solid	N		1	1		
B-6a-17-20-10-19	10/24/19	1408		Solid	N		1	1		
B-7a-0-14-10-19	10/24/19	1433		Solid	N		1	1		
B-7a-14-18.5-10-19	10/24/19	1434		Solid	N		1	1		
B-7a-18.5-20-10-19	10/24/19	1439		Solid	N		1	1		
				Solid	N					
				Solid	N					
				Solid	N					

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	Company	Received by	Date/Time	Company
April Kelly	10/24/19 1730	USACE	[signature]	10-25-19@ 0830	TA TAM

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
Δ Yes Δ No	1072029	4.3/4.3 CUD7

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: U.S. Army Corps of Engineers

Job Number: 660-98302-1

Login Number: 98302
List Number: 1
Creator: Edwards, Erricka

List Source: Eurofins TestAmerica, Tampa

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Tampa
6712 Benjamin Road
Suite 100
Tampa, FL 33634
Tel: (813)885-7427

Laboratory Job ID: 660-98303-1
Client Project/Site: Augusta Training Wall, Augusta, GA

For:
U.S. Army Corps of Engineers
100 West Oglethorpe Ave
Savannah, Georgia 31401

Attn: Brett Zeigler

Authorized for release by:
11/5/2019 9:37:44 AM

Jon Lawhon, Project Manager I
(912)250-0283
jon.lawhon@testamericainc.com

LINKS

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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.

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Sample Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
660-98303-1	B-9a-0-5-10-19	Solid	10/24/19 15:13	10/25/19 08:30	
660-98303-2	B-9a-5-10-19	Solid	10/24/19 15:16	10/25/19 08:30	
660-98303-3	B-9a-10-18-10-19	Solid	10/24/19 15:30	10/25/19 08:30	
660-98303-4	B-10a-0-12-10-19	Solid	10/24/19 15:47	10/25/19 08:30	
660-98303-5	B-10a-12-15-10-19	Solid	10/24/19 15:48	10/25/19 08:30	
660-98303-6	B-13a-0-12-10-19	Solid	10/24/19 16:34	10/25/19 08:30	
660-98303-7	B-13a-12-15-10-19	Solid	10/24/19 16:35	10/25/19 08:30	
660-98303-8	B-12a-0-10-10-19	Solid	10/24/19 16:08	10/25/19 08:30	

Job ID: 660-98303-1

Laboratory: Eurofins TestAmerica, Tampa

Narrative

CASE NARRATIVE

Client: U.S. Army Corps of Engineers

Project: Augusta Training Wall, Augusta, GA

Report Number: 660-98303-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT
The samples were received on 10/25/2019 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3º C.

Receipt Exceptions
The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): B-12a-0-10-10-19 (660-98303-8).

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples B-9a-0-5-10-19 (660-98303-1), B-9a-5-10-19 (660-98303-2), B-9a-10-18-10-19 (660-98303-3), B-10a-0-12-10-19 (660-98303-4), B-10a-12-15-10-19 (660-98303-5), B-13a-0-12-10-19 (660-98303-6), B-13a-12-15-10-19 (660-98303-7) and B-12a-0-10-10-19 (660-98303-8) were analyzed for Semivolatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 10/29/2019 and analyzed on 10/29/2019 and 10/30/2019.

Method 8270D: The laboratory control sample (LCS) for preparation batch 660-217582 and analytical batch 660-217589 recovered outside control limits for the following analytes: Carbazole. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. Carbazole is a known poor performing analyte.

Method 8270D: The laboratory control sample (LCS) for preparation batch 660-217582 and analytical batch 660-217589 recovered outside control limits for the following analyte: Phenol. Phenol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 660-217582 and analytical batch 660-217589 were outside control limits for several analytes. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

POLYCHLORINATED BIPHENYLS (PCBS)
Samples B-9a-0-5-10-19 (660-98303-1), B-9a-5-10-19 (660-98303-2), B-9a-10-18-10-19 (660-98303-3), B-10a-0-12-10-19 (660-98303-4), B-10a-12-15-10-19 (660-98303-5), B-13a-0-12-10-19 (660-98303-6), B-13a-12-15-10-19 (660-98303-7) and B-12a-0-10-10-19 (660-98303-8) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The samples were prepared on 10/29/2019 and analyzed on 10/31/2019.

This method incorporates 2nd column confirmation. Corrective action is not taken for surrogate/spike compounds unless results from both columns are unacceptable. Results outside criteria are qualified.

Job ID: 660-98303-1 (Continued)

Laboratory: Eurofins TestAmerica, Tampa (Continued)

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

METALS BY ICP

Samples B-9a-0-5-10-19 (660-98303-1), B-9a-5-10-19 (660-98303-2), B-9a-10-18-10-19 (660-98303-3), B-10a-0-12-10-19 (660-98303-4), B-10a-12-15-10-19 (660-98303-5), B-13a-0-12-10-19 (660-98303-6), B-13a-12-15-10-19 (660-98303-7) and B-12a-0-10-10-19 (660-98303-8) were analyzed for Metals by ICP in accordance with EPA SW-846 Method 6010D. The samples were prepared and analyzed on 10/29/2019.

Method 6010D: Sample diluted due to an unspecified matrix interference that caused the internal standards to fall outside acceptable limits. B-10a-12-15-10-19 (660-98303-5) and B-13a-12-15-10-19 (660-98303-7). 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.

TOTAL MERCURY

Samples B-9a-0-5-10-19 (660-98303-1), B-9a-5-10-19 (660-98303-2), B-9a-10-18-10-19 (660-98303-3), B-10a-0-12-10-19 (660-98303-4), B-10a-12-15-10-19 (660-98303-5), B-13a-0-12-10-19 (660-98303-6), B-13a-12-15-10-19 (660-98303-7) and B-12a-0-10-10-19 (660-98303-8) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared and analyzed on 10/29/2019.

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

PERCENT SOLIDS/MOISTURE

Samples B-9a-0-5-10-19 (660-98303-1), B-9a-5-10-19 (660-98303-2), B-9a-10-18-10-19 (660-98303-3), B-10a-0-12-10-19 (660-98303-4), B-10a-12-15-10-19 (660-98303-5), B-13a-0-12-10-19 (660-98303-6), B-13a-12-15-10-19 (660-98303-7) and B-12a-0-10-10-19 (660-98303-8) were analyzed for Percent Solids/Moisture in accordance with TestAmerica SOP. The samples were analyzed on 10/29/2019.

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

Definitions/Glossary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

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)

Detection Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-9a-0-5-10-19 — Lab Sample ID: 660-98303-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.092	J	0.43	0.059	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.071	J M	0.43	0.058	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.069	J	0.43	0.060	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.15	J	0.43	0.063	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.16	J	0.43	0.048	mg/Kg	1	☼	8270D	Total/NA
Arsenic	0.16	J	1.3	0.11	mg/Kg	1	☼	6010D	Total/NA
Barium	9.1		1.3	0.073	mg/Kg	1	☼	6010D	Total/NA
Chromium	4.8		1.3	0.096	mg/Kg	1	☼	6010D	Total/NA
Lead	1.4		1.3	0.19	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: B-9a-5-10-19 — Lab Sample ID: 660-98303-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.28	J	1.1	0.094	mg/Kg	1	☼	6010D	Total/NA
Barium	11		1.1	0.064	mg/Kg	1	☼	6010D	Total/NA
Chromium	2.9		1.1	0.083	mg/Kg	1	☼	6010D	Total/NA
Lead	1.7		1.1	0.17	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: B-9a-10-18-10-19 — Lab Sample ID: 660-98303-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Barium	77		3.0	0.16	mg/Kg	2	☼	6010D	Total/NA
Cadmium	0.16	J	1.5	0.083	mg/Kg	2	☼	6010D	Total/NA
Chromium	8.1		3.0	0.22	mg/Kg	2	☼	6010D	Total/NA
Lead	4.8		3.0	0.43	mg/Kg	2	☼	6010D	Total/NA
Selenium	2.3	J	5.9	1.1	mg/Kg	2	☼	6010D	Total/NA
Mercury	0.020	J	0.056	0.017	mg/Kg	1	☼	7471A	Total/NA

Client Sample ID: B-10a-0-12-10-19 — Lab Sample ID: 660-98303-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Pyrene	0.060	J	0.41	0.046	mg/Kg	1	☼	8270D	Total/NA
Arsenic	0.19	J	1.3	0.11	mg/Kg	1	☼	6010D	Total/NA
Barium	9.3		1.3	0.072	mg/Kg	1	☼	6010D	Total/NA
Chromium	5.3		1.3	0.094	mg/Kg	1	☼	6010D	Total/NA
Lead	1.4		1.3	0.19	mg/Kg	1	☼	6010D	Total/NA

Client Sample ID: B-10a-12-15-10-19 — Lab Sample ID: 660-98303-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Barium	12		6.6	0.37	mg/Kg	5	☼	6010D	Total/NA
Chromium	310		6.6	0.49	mg/Kg	5	☼	6010D	Total/NA
Lead	3.4	J	6.6	0.96	mg/Kg	5	☼	6010D	Total/NA

Client Sample ID: B-13a-0-12-10-19 — Lab Sample ID: 660-98303-6

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.26	J	1.3	0.11	mg/Kg	1	☼	6010D	Total/NA
Barium	12		1.3	0.074	mg/Kg	1	☼	6010D	Total/NA
Chromium	4.1		1.3	0.097	mg/Kg	1	☼	6010D	Total/NA
Lead	2.3		1.3	0.19	mg/Kg	1	☼	6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-13a-12-15-10-19 — Lab Sample ID: 660-98303-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.76	J	6.0	0.50	mg/Kg	5	☼	6010D	Total/NA
Barium	12		6.0	0.33	mg/Kg	5	☼	6010D	Total/NA
Chromium	9.8		6.0	0.44	mg/Kg	5	☼	6010D	Total/NA
Lead	2.1	J	6.0	0.87	mg/Kg	5	☼	6010D	Total/NA

Client Sample ID: B-12a-0-10-10-19 — Lab Sample ID: 660-98303-8

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.13	J	1.3	0.11	mg/Kg	1	☼	6010D	Total/NA
Barium	5.4		1.3	0.071	mg/Kg	1	☼	6010D	Total/NA
Chromium	6.4		1.3	0.093	mg/Kg	1	☼	6010D	Total/NA
Lead	1.4		1.3	0.19	mg/Kg	1	☼	6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-9a-0-5-10-19

Date Collected: 10/24/19 15:13
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-1

Matrix: Solid
Percent Solids: 77.4

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.066	U	0.43	0.066	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Acenaphthylene	0.056	U	0.43	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Acetophenone	0.11	U	0.43	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Anthracene	0.074	U	0.43	0.074	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Atrazine	0.17	U	1.3	0.17	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Benzo[a]anthracene	**0.092**	**J**	0.43	0.059	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Benzo[a]pyrene	**0.071**	**J M**	0.43	0.058	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Benzo[b]fluoranthene	0.12	M U	0.43	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Benzo[g,h,i]perylene	0.11	U	0.43	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Benzo[k]fluoranthene	0.073	M U	0.43	0.073	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
1,1'-Biphenyl	0.88	M U	2.7	0.88	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Bis(2-chloroethoxy)methane	0.10	U	0.43	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Bis(2-chloroethyl)ether	0.10	U	0.43	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
bis (2-chloroisopropyl) ether	0.053	U	0.43	0.053	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Bis(2-ethylhexyl) phthalate	0.061	M U	0.43	0.061	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
4-Bromophenyl phenyl ether	0.10	U	0.43	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Butyl benzyl phthalate	0.051	M U	0.43	0.051	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Caprolactam	0.11	U	0.43	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Carbazole	0.52	Q U	1.3	0.52	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
4-Chloroaniline	0.096	M U	0.85	0.096	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
4-Chloro-3-methylphenol	0.064	U	0.43	0.064	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
2-Chloronaphthalene	0.077	U	0.43	0.077	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
2-Chlorophenol	0.056	U	0.43	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
4-Chlorophenyl phenyl ether	0.10	U	0.43	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Chrysene	**0.069**	**J**	0.43	0.060	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Dibenz(a,h)anthracene	0.12	M U	0.43	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Dibenzofuran	0.069	M U	0.43	0.069	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
2,4-Dichlorophenol	0.056	U	0.43	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Diethyl phthalate	0.061	U	0.43	0.061	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
2,4-Dimethylphenol	0.067	U	0.43	0.067	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Dimethyl phthalate	0.072	U	0.43	0.072	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Di-n-butyl phthalate	0.077	M U	0.43	0.077	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
4,6-Dinitro-2-methylphenol	0.25	U	2.2	0.25	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
2,4-Dinitrophenol	0.37	U	2.2	0.37	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
2,4-Dinitrotoluene	0.063	U	0.43	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
2,6-Dinitrotoluene	0.065	U	0.43	0.065	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Di-n-octyl phthalate	0.046	M U	0.43	0.046	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Fluoranthene	**0.15**	**J**	0.43	0.063	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Fluorene	0.061	U	0.43	0.061	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Hexachlorobenzene	0.053	U	0.43	0.053	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Hexachlorobutadiene	0.12	U	0.43	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Hexachlorocyclopentadiene	0.096	U	0.43	0.096	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Hexachloroethane	0.10	U	0.43	0.10	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Indeno[1,2,3-cd]pyrene	0.054	U	0.43	0.054	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Isophorone	0.056	U	0.43	0.056	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
2-Methylnaphthalene	0.074	U	0.43	0.074	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
2-Methylphenol	0.14	U	0.43	0.14	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
3 & 4 Methylphenol	0.057	U	0.43	0.057	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Naphthalene	0.11	U	0.43	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-9a-0-5-10-19

Date Collected: 10/24/19 15:13
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-1

Matrix: Solid
Percent Solids: 77.4

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.097	U	2.2	0.097	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
3-Nitroaniline	0.20	U	2.2	0.20	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
4-Nitroaniline	0.12	U	2.2	0.12	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Nitrobenzene	0.059	U	0.43	0.059	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
2-Nitrophenol	0.11	U	0.43	0.11	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
4-Nitrophenol	0.21	M U	2.2	0.21	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
N-Nitrosodi-n-propylamine	0.16	U	0.43	0.16	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Pentachlorophenol	0.20	U	2.2	0.20	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Phenanthrene	0.071	U	0.43	0.071	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Phenol	0.16	Q U	0.43	0.16	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
Pyrene	**0.16**	**J**	0.43	0.048	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
2,4,5-Trichlorophenol	0.072	U	0.43	0.072	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1
2,4,6-Trichlorophenol	0.076	U	0.43	0.076	mg/Kg	☼	10/29/19 09:11	10/29/19 19:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*60*		*30 - 120*	*10/29/19 09:11*	*10/29/19 19:52*	*1*
2-Fluorophenol (Surr)	*21*		*16 - 113*	*10/29/19 09:11*	*10/29/19 19:52*	*1*
Nitrobenzene-d5 (Surr)	*52*		*20 - 120*	*10/29/19 09:11*	*10/29/19 19:52*	*1*
Phenol-d5 (Surr)	*29*		*19 - 144*	*10/29/19 09:11*	*10/29/19 19:52*	*1*
Terphenyl-d14 (Surr)	*92*		*30 - 131*	*10/29/19 09:11*	*10/29/19 19:52*	*1*
2,4,6-Tribromophenol (Surr)	*70*		*23 - 129*	*10/29/19 09:11*	*10/29/19 19:52*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.021	M U	0.086	0.021	mg/Kg	☼	10/29/19 16:37	10/31/19 13:28	1
PCB-1221	0.043	M U	0.13	0.043	mg/Kg	☼	10/29/19 16:37	10/31/19 13:28	1
PCB-1232	0.023	M U	0.086	0.023	mg/Kg	☼	10/29/19 16:37	10/31/19 13:28	1
PCB-1242	0.037	M U	0.11	0.037	mg/Kg	☼	10/29/19 16:37	10/31/19 13:28	1
PCB-1248	0.026	M U	0.086	0.026	mg/Kg	☼	10/29/19 16:37	10/31/19 13:28	1
PCB-1254	0.012	M U	0.043	0.012	mg/Kg	☼	10/29/19 16:37	10/31/19 13:28	1
PCB-1260	0.020	M U	0.058	0.020	mg/Kg	☼	10/29/19 16:37	10/31/19 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*76*	*M*	*30 - 150*	*10/29/19 16:37*	*10/31/19 13:28*	*1*
DCB Decachlorobiphenyl	*89*		*30 - 150*	*10/29/19 16:37*	*10/31/19 13:28*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.16**	**J**	1.3	0.11	mg/Kg	☼	10/29/19 07:31	10/29/19 11:27	1
Barium	**9.1**		1.3	0.073	mg/Kg	☼	10/29/19 07:31	10/29/19 11:27	1
Cadmium	0.037	U	0.66	0.037	mg/Kg	☼	10/29/19 07:31	10/29/19 11:27	1
Chromium	**4.8**		1.3	0.096	mg/Kg	☼	10/29/19 07:31	10/29/19 11:27	1
Lead	**1.4**		1.3	0.19	mg/Kg	☼	10/29/19 07:31	10/29/19 11:27	1
Selenium	0.49	U	2.6	0.49	mg/Kg	☼	10/29/19 07:31	10/29/19 11:27	1
Silver	0.25	U	1.3	0.25	mg/Kg	☼	10/29/19 07:31	10/29/19 11:27	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	U	0.048	0.015	mg/Kg	☼	10/29/19 11:30	10/29/19 13:16	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-9a-5-10-19

Date Collected: 10/24/19 15:16
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-2

Matrix: Solid
Percent Solids: 84.3

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.059	U	0.39	0.059	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Acenaphthylene	0.050	U	0.39	0.050	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Acetophenone	0.096	M U	0.39	0.096	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Anthracene	0.067	U	0.39	0.067	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Atrazine	0.16	U	1.2	0.16	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Benzo[a]anthracene	0.053	U	0.39	0.053	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Benzo[a]pyrene	0.052	U	0.39	0.052	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Benzo[b]fluoranthene	0.11	U	0.39	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Benzo[g,h,i]perylene	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Benzo[k]fluoranthene	0.066	U	0.39	0.066	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
1,1'-Biphenyl	0.80	U	2.5	0.80	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Bis(2-chloroethoxy)methane	0.091	U	0.39	0.091	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Bis(2-chloroethyl)ether	0.091	U	0.39	0.091	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
bis (2-chloroisopropyl) ether	0.048	M U	0.39	0.048	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Bis(2-ethylhexyl) phthalate	0.055	M U	0.39	0.055	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
4-Bromophenyl phenyl ether	0.094	U	0.39	0.094	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Butyl benzyl phthalate	0.046	U	0.39	0.046	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Caprolactam	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Carbazole	0.47	Q U	1.2	0.47	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
4-Chloroaniline	0.086	M U	0.77	0.086	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
4-Chloro-3-methylphenol	0.058	U	0.39	0.058	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
2-Chloronaphthalene	0.070	U	0.39	0.070	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
2-Chlorophenol	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
4-Chlorophenyl phenyl ether	0.090	U	0.39	0.090	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Chrysene	0.054	U	0.39	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Dibenz(a,h)anthracene	0.11	U	0.39	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Dibenzofuran	0.062	M U	0.39	0.062	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
2,4-Dichlorophenol	0.050	U	0.39	0.050	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Diethyl phthalate	0.055	U	0.39	0.055	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
2,4-Dimethylphenol	0.060	U	0.39	0.060	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Dimethyl phthalate	0.065	U	0.39	0.065	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Di-n-butyl phthalate	0.070	U	0.39	0.070	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
4,6-Dinitro-2-methylphenol	0.22	U	2.0	0.22	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
2,4-Dinitrophenol	0.34	U	2.0	0.34	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
2,4-Dinitrotoluene	0.057	U	0.39	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
2,6-Dinitrotoluene	0.058	U	0.39	0.058	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Di-n-octyl phthalate	0.041	M U	0.39	0.041	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Fluoranthene	0.057	U	0.39	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Fluorene	0.055	M U	0.39	0.055	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Hexachlorobenzene	0.048	U	0.39	0.048	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Hexachlorobutadiene	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Hexachlorocyclopentadiene	0.087	U	0.39	0.087	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Hexachloroethane	0.090	U	0.39	0.090	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Indeno[1,2,3-cd]pyrene	0.049	U	0.39	0.049	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Isophorone	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
2-Methylnaphthalene	0.067	M U	0.39	0.067	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
2-Methylphenol	0.13	U	0.39	0.13	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
3 & 4 Methylphenol	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Naphthalene	0.099	U	0.39	0.099	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-9a-5-10-19

Date Collected: 10/24/19 15:16
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-2

Matrix: Solid
Percent Solids: 84.3

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.088	U	2.0	0.088	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
3-Nitroaniline	0.18	U	2.0	0.18	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
4-Nitroaniline	0.11	U	2.0	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Nitrobenzene	0.054	U	0.39	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
2-Nitrophenol	0.095	U	0.39	0.095	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
4-Nitrophenol	0.19	U	2.0	0.19	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
N-Nitrosodi-n-propylamine	0.14	U	0.39	0.14	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Pentachlorophenol	0.18	U	2.0	0.18	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Phenanthrene	0.064	U	0.39	0.064	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Phenol	0.14	Q U	0.39	0.14	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
Pyrene	0.043	U	0.39	0.043	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
2,4,5-Trichlorophenol	0.065	U	0.39	0.065	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1
2,4,6-Trichlorophenol	0.069	U	0.39	0.069	mg/Kg	☼	10/29/19 09:11	10/30/19 07:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*65*		*30 - 120*	*10/29/19 09:11*	*10/30/19 07:53*	*1*
2-Fluorophenol (Surr)	*34*		*16 - 113*	*10/29/19 09:11*	*10/30/19 07:53*	*1*
Nitrobenzene-d5 (Surr)	*61*		*20 - 120*	*10/29/19 09:11*	*10/30/19 07:53*	*1*
Phenol-d5 (Surr)	*42*		*19 - 144*	*10/29/19 09:11*	*10/30/19 07:53*	*1*
Terphenyl-d14 (Surr)	*78*		*30 - 131*	*10/29/19 09:11*	*10/30/19 07:53*	*1*
2,4,6-Tribromophenol (Surr)	*63*		*23 - 129*	*10/29/19 09:11*	*10/30/19 07:53*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.019	M U	0.077	0.019	mg/Kg	☼	10/29/19 16:37	10/31/19 13:42	1
PCB-1221	0.039	M U	0.12	0.039	mg/Kg	☼	10/29/19 16:37	10/31/19 13:42	1
PCB-1232	0.020	M U	0.077	0.020	mg/Kg	☼	10/29/19 16:37	10/31/19 13:42	1
PCB-1242	0.033	M U	0.099	0.033	mg/Kg	☼	10/29/19 16:37	10/31/19 13:42	1
PCB-1248	0.023	M U	0.077	0.023	mg/Kg	☼	10/29/19 16:37	10/31/19 13:42	1
PCB-1254	0.011	M U	0.038	0.011	mg/Kg	☼	10/29/19 16:37	10/31/19 13:42	1
PCB-1260	0.018	M U	0.052	0.018	mg/Kg	☼	10/29/19 16:37	10/31/19 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*80*		*30 - 150*	*10/29/19 16:37*	*10/31/19 13:42*	*1*
DCB Decachlorobiphenyl	*88*		*30 - 150*	*10/29/19 16:37*	*10/31/19 13:42*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.28**	**J**	1.1	0.094	mg/Kg	☼	10/29/19 07:31	10/29/19 11:30	1
Barium	**11**		1.1	0.064	mg/Kg	☼	10/29/19 07:31	10/29/19 11:30	1
Cadmium	0.032	U	0.57	0.032	mg/Kg	☼	10/29/19 07:31	10/29/19 11:30	1
Chromium	**2.9**		1.1	0.083	mg/Kg	☼	10/29/19 07:31	10/29/19 11:30	1
Lead	**1.7**		1.1	0.17	mg/Kg	☼	10/29/19 07:31	10/29/19 11:30	1
Selenium	0.42	U	2.3	0.42	mg/Kg	☼	10/29/19 07:31	10/29/19 11:30	1
Silver	0.22	U	1.1	0.22	mg/Kg	☼	10/29/19 07:31	10/29/19 11:30	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.014	U	0.047	0.014	mg/Kg	☼	10/29/19 11:30	10/29/19 13:18	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-9a-10-18-10-19

Date Collected: 10/24/19 15:30
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-3

Matrix: Solid
Percent Solids: 71.1

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.070	M U	0.45	0.070	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Acenaphthylene	0.059	U	0.45	0.059	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Acetophenone	0.11	M U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Anthracene	0.079	M U	0.45	0.079	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Atrazine	0.18	U	1.4	0.18	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Benzo[a]anthracene	0.062	U	0.45	0.062	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Benzo[a]pyrene	0.061	U	0.45	0.061	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Benzo[b]fluoranthene	0.13	U	0.45	0.13	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Benzo[g,h,i]perylene	0.12	U	0.45	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Benzo[k]fluoranthene	0.078	U	0.45	0.078	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
1,1'-Biphenyl	0.94	U	2.9	0.94	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Bis(2-chloroethoxy)methane	0.11	U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Bis(2-chloroethyl)ether	0.11	U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
bis (2-chloroisopropyl) ether	0.056	M U	0.45	0.056	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Bis(2-ethylhexyl) phthalate	0.064	U	0.45	0.064	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
4-Bromophenyl phenyl ether	0.11	U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Butyl benzyl phthalate	0.054	U	0.45	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Caprolactam	0.12	U	0.45	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Carbazole	0.55	Q U	1.4	0.55	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
4-Chloroaniline	0.10	U	0.91	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
4-Chloro-3-methylphenol	0.068	U	0.45	0.068	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
2-Chloronaphthalene	0.082	U	0.45	0.082	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
2-Chlorophenol	0.060	U	0.45	0.060	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
4-Chlorophenyl phenyl ether	0.11	U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Chrysene	0.064	U	0.45	0.064	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Dibenz(a,h)anthracene	0.12	U	0.45	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Dibenzofuran	0.073	U	0.45	0.073	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
2,4-Dichlorophenol	0.059	U	0.45	0.059	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Diethyl phthalate	0.065	U	0.45	0.065	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
2,4-Dimethylphenol	0.071	U	0.45	0.071	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Dimethyl phthalate	0.076	U	0.45	0.076	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Di-n-butyl phthalate	0.082	U	0.45	0.082	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
4,6-Dinitro-2-methylphenol	0.26	U	2.3	0.26	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
2,4-Dinitrophenol	0.40	U	2.3	0.40	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
2,4-Dinitrotoluene	0.067	U	0.45	0.067	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
2,6-Dinitrotoluene	0.069	U	0.45	0.069	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Di-n-octyl phthalate	0.049	M U	0.45	0.049	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Fluoranthene	0.066	U	0.45	0.066	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Fluorene	0.065	U	0.45	0.065	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Hexachlorobenzene	0.057	U	0.45	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Hexachlorobutadiene	0.12	U	0.45	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Hexachlorocyclopentadiene	0.10	U	0.45	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Hexachloroethane	0.11	U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Indeno[1,2,3-cd]pyrene	0.057	U	0.45	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Isophorone	0.059	U	0.45	0.059	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
2-Methylnaphthalene	0.079	U	0.45	0.079	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
2-Methylphenol	0.15	U	0.45	0.15	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
3 & 4 Methylphenol	0.060	U	0.45	0.060	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Naphthalene	0.12	U	0.45	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-9a-10-18-10-19

Date Collected: 10/24/19 15:30
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-3

Matrix: Solid
Percent Solids: 71.1

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.10	U	2.3	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
3-Nitroaniline	0.21	U	2.3	0.21	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
4-Nitroaniline	0.13	U	2.3	0.13	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Nitrobenzene	0.063	U	0.45	0.063	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
2-Nitrophenol	0.11	U	0.45	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
4-Nitrophenol	0.22	U	2.3	0.22	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
N-Nitrosodi-n-propylamine	0.16	U	0.45	0.16	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Pentachlorophenol	0.21	U	2.3	0.21	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Phenanthrene	0.075	M U	0.45	0.075	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Phenol	0.17	Q U	0.45	0.17	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
Pyrene	0.051	U	0.45	0.051	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
2,4,5-Trichlorophenol	0.077	U	0.45	0.077	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1
2,4,6-Trichlorophenol	0.081	U	0.45	0.081	mg/Kg	☼	10/29/19 09:11	10/30/19 08:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*69*		*30 - 120*	*10/29/19 09:11*	*10/30/19 08:17*	*1*
2-Fluorophenol (Surr)	*30*		*16 - 113*	*10/29/19 09:11*	*10/30/19 08:17*	*1*
Nitrobenzene-d5 (Surr)	*62*		*20 - 120*	*10/29/19 09:11*	*10/30/19 08:17*	*1*
Phenol-d5 (Surr)	*40*		*19 - 144*	*10/29/19 09:11*	*10/30/19 08:17*	*1*
Terphenyl-d14 (Surr)	*75*		*30 - 131*	*10/29/19 09:11*	*10/30/19 08:17*	*1*
2,4,6-Tribromophenol (Surr)	*65*		*23 - 129*	*10/29/19 09:11*	*10/30/19 08:17*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.023	M U	0.094	0.023	mg/Kg	☼	10/29/19 16:37	10/31/19 13:57	1
PCB-1221	0.047	M U	0.14	0.047	mg/Kg	☼	10/29/19 16:37	10/31/19 13:57	1
PCB-1232	0.025	M U	0.094	0.025	mg/Kg	☼	10/29/19 16:37	10/31/19 13:57	1
PCB-1242	0.040	M U	0.12	0.040	mg/Kg	☼	10/29/19 16:37	10/31/19 13:57	1
PCB-1248	0.028	M U	0.094	0.028	mg/Kg	☼	10/29/19 16:37	10/31/19 13:57	1
PCB-1254	0.013	M U	0.046	0.013	mg/Kg	☼	10/29/19 16:37	10/31/19 13:57	1
PCB-1260	0.021	M U	0.063	0.021	mg/Kg	☼	10/29/19 16:37	10/31/19 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*		*30 - 150*	*10/29/19 16:37*	*10/31/19 13:57*	*1*
DCB Decachlorobiphenyl	*91*	*M*	*30 - 150*	*10/29/19 16:37*	*10/31/19 13:57*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.25	U	3.0	0.25	mg/Kg	☼	10/29/19 07:31	10/29/19 11:33	2
Barium	**77**		3.0	0.16	mg/Kg	☼	10/29/19 07:31	10/29/19 11:33	2
Cadmium	**0.16**	**J**	1.5	0.083	mg/Kg	☼	10/29/19 07:31	10/29/19 11:33	2
Chromium	**8.1**		3.0	0.22	mg/Kg	☼	10/29/19 07:31	10/29/19 11:33	2
Lead	**4.8**		3.0	0.43	mg/Kg	☼	10/29/19 07:31	10/29/19 11:33	2
Selenium	**2.3**	**J**	5.9	1.1	mg/Kg	☼	10/29/19 07:31	10/29/19 11:33	2
Silver	0.56	U	3.0	0.56	mg/Kg	☼	10/29/19 07:31	10/29/19 11:33	2

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.020**	**J**	0.056	0.017	mg/Kg	☼	10/29/19 11:30	10/29/19 13:20	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-10a-0-12-10-19

Date Collected: 10/24/19 15:47
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-4

Matrix: Solid
Percent Solids: 79.0

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.063	U	0.41	0.063	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Acenaphthylene	0.053	U	0.41	0.053	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Acetophenone	0.10	M U	0.41	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Anthracene	0.071	U	0.41	0.071	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Atrazine	0.17	U	1.2	0.17	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Benzo[a]anthracene	0.056	U	0.41	0.056	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Benzo[a]pyrene	0.055	U	0.41	0.055	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Benzo[b]fluoranthene	0.11	M U	0.41	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Benzo[g,h,i]perylene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Benzo[k]fluoranthene	0.070	M U	0.41	0.070	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
1,1'-Biphenyl	0.84	U	2.6	0.84	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Bis(2-chloroethoxy)methane	0.096	U	0.41	0.096	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Bis(2-chloroethyl)ether	0.096	U	0.41	0.096	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
bis (2-chloroisopropyl) ether	0.050	M U	0.41	0.050	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Bis(2-ethylhexyl) phthalate	0.058	M U	0.41	0.058	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
4-Bromophenyl phenyl ether	0.099	U	0.41	0.099	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Butyl benzyl phthalate	0.048	M U	0.41	0.048	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Caprolactam	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Carbazole	0.49	Q U	1.2	0.49	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
4-Chloroaniline	0.091	M U	0.81	0.091	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
4-Chloro-3-methylphenol	0.061	U	0.41	0.061	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
2-Chloronaphthalene	0.074	U	0.41	0.074	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
2-Chlorophenol	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
4-Chlorophenyl phenyl ether	0.095	U	0.41	0.095	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Chrysene	0.057	U	0.41	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Dibenz(a,h)anthracene	0.11	M U	0.41	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Dibenzofuran	0.066	M U	0.41	0.066	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
2,4-Dichlorophenol	0.053	U	0.41	0.053	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Diethyl phthalate	0.058	U	0.41	0.058	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
2,4-Dimethylphenol	0.064	U	0.41	0.064	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Dimethyl phthalate	0.069	U	0.41	0.069	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Di-n-butyl phthalate	0.074	U	0.41	0.074	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
4,6-Dinitro-2-methylphenol	0.24	U	2.1	0.24	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
2,4-Dinitrophenol	0.36	U	2.1	0.36	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
2,4-Dinitrotoluene	0.060	U	0.41	0.060	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
2,6-Dinitrotoluene	0.062	U	0.41	0.062	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Di-n-octyl phthalate	0.044	M U	0.41	0.044	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Fluoranthene	0.060	U	0.41	0.060	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Fluorene	0.058	U	0.41	0.058	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Hexachlorobenzene	0.051	U	0.41	0.051	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Hexachlorobutadiene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Hexachlorocyclopentadiene	0.092	U	0.41	0.092	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Hexachloroethane	0.095	U	0.41	0.095	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Indeno[1,2,3-cd]pyrene	0.052	U	0.41	0.052	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Isophorone	0.053	U	0.41	0.053	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
2-Methylnaphthalene	0.071	M U	0.41	0.071	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
2-Methylphenol	0.14	U	0.41	0.14	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
3 & 4 Methylphenol	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Naphthalene	0.10	M U	0.41	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-10a-0-12-10-19

Date Collected: 10/24/19 15:47
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-4

Matrix: Solid
Percent Solids: 79.0

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.093	U	2.1	0.093	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
3-Nitroaniline	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
4-Nitroaniline	0.12	U	2.1	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Nitrobenzene	0.057	U	0.41	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
2-Nitrophenol	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
4-Nitrophenol	0.20	U	2.1	0.20	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
N-Nitrosodi-n-propylamine	0.15	U	0.41	0.15	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Pentachlorophenol	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Phenanthrene	0.067	U	0.41	0.067	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Phenol	0.15	Q U	0.41	0.15	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
Pyrene	**0.060**	**J**	0.41	0.046	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
2,4,5-Trichlorophenol	0.069	U	0.41	0.069	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1
2,4,6-Trichlorophenol	0.073	U	0.41	0.073	mg/Kg	☼	10/29/19 09:11	10/30/19 08:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*65*		*30 - 120*	*10/29/19 09:11*	*10/30/19 08:42*	*1*
2-Fluorophenol (Surr)	*33*		*16 - 113*	*10/29/19 09:11*	*10/30/19 08:42*	*1*
Nitrobenzene-d5 (Surr)	*61*		*20 - 120*	*10/29/19 09:11*	*10/30/19 08:42*	*1*
Phenol-d5 (Surr)	*45*		*19 - 144*	*10/29/19 09:11*	*10/30/19 08:42*	*1*
Terphenyl-d14 (Surr)	*94*		*30 - 131*	*10/29/19 09:11*	*10/30/19 08:42*	*1*
2,4,6-Tribromophenol (Surr)	*74*		*23 - 129*	*10/29/19 09:11*	*10/30/19 08:42*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.020	M U	0.082	0.020	mg/Kg	☼	10/29/19 16:37	10/31/19 14:11	1
PCB-1221	0.041	M U	0.12	0.041	mg/Kg	☼	10/29/19 16:37	10/31/19 14:11	1
PCB-1232	0.022	M U	0.082	0.022	mg/Kg	☼	10/29/19 16:37	10/31/19 14:11	1
PCB-1242	0.035	M U	0.11	0.035	mg/Kg	☼	10/29/19 16:37	10/31/19 14:11	1
PCB-1248	0.024	M U	0.082	0.024	mg/Kg	☼	10/29/19 16:37	10/31/19 14:11	1
PCB-1254	0.012	M U	0.040	0.012	mg/Kg	☼	10/29/19 16:37	10/31/19 14:11	1
PCB-1260	0.019	M U	0.055	0.019	mg/Kg	☼	10/29/19 16:37	10/31/19 14:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*77*		*30 - 150*	*10/29/19 16:37*	*10/31/19 14:11*	*1*
DCB Decachlorobiphenyl	*84*		*30 - 150*	*10/29/19 16:37*	*10/31/19 14:11*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.19**	**J**	1.3	0.11	mg/Kg	☼	10/29/19 07:31	10/29/19 11:36	1
Barium	**9.3**		1.3	0.072	mg/Kg	☼	10/29/19 07:31	10/29/19 11:36	1
Cadmium	0.036	U	0.65	0.036	mg/Kg	☼	10/29/19 07:31	10/29/19 11:36	1
Chromium	**5.3**		1.3	0.094	mg/Kg	☼	10/29/19 07:31	10/29/19 11:36	1
Lead	**1.4**		1.3	0.19	mg/Kg	☼	10/29/19 07:31	10/29/19 11:36	1
Selenium	0.48	U	2.6	0.48	mg/Kg	☼	10/29/19 07:31	10/29/19 11:36	1
Silver	0.25	U	1.3	0.25	mg/Kg	☼	10/29/19 07:31	10/29/19 11:36	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.014	U	0.046	0.014	mg/Kg	☼	10/29/19 11:30	10/29/19 13:22	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-10a-12-15-10-19

Date Collected: 10/24/19 15:48
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-5

Matrix: Solid
Percent Solids: 74.5

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.067	U	0.44	0.067	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Acenaphthylene	0.057	U	0.44	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Acetophenone	0.11	M U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Anthracene	0.075	U	0.44	0.075	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Atrazine	0.18	U	1.3	0.18	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Benzo[a]anthracene	0.060	U	0.44	0.060	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Benzo[a]pyrene	0.059	M U	0.44	0.059	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Benzo[b]fluoranthene	0.12	M U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Benzo[g,h,i]perylene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Benzo[k]fluoranthene	0.074	M U	0.44	0.074	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
1,1'-Biphenyl	0.90	M U	2.8	0.90	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Bis(2-chloroethoxy)methane	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Bis(2-chloroethyl)ether	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
bis (2-chloroisopropyl) ether	0.054	M U	0.44	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Bis(2-ethylhexyl) phthalate	0.062	U	0.44	0.062	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
4-Bromophenyl phenyl ether	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Butyl benzyl phthalate	0.052	U	0.44	0.052	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Caprolactam	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Carbazole	0.53	Q U	1.3	0.53	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
4-Chloroaniline	0.097	U	0.87	0.097	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
4-Chloro-3-methylphenol	0.066	U	0.44	0.066	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
2-Chloronaphthalene	0.079	U	0.44	0.079	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
2-Chlorophenol	0.057	U	0.44	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
4-Chlorophenyl phenyl ether	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Chrysene	0.061	U	0.44	0.061	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Dibenz(a,h)anthracene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Dibenzofuran	0.071	U	0.44	0.071	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
2,4-Dichlorophenol	0.057	U	0.44	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Diethyl phthalate	0.062	U	0.44	0.062	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
2,4-Dimethylphenol	0.068	U	0.44	0.068	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Dimethyl phthalate	0.073	U	0.44	0.073	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Di-n-butyl phthalate	0.079	U	0.44	0.079	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
4,6-Dinitro-2-methylphenol	0.25	U	2.2	0.25	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
2,4-Dinitrophenol	0.38	U	2.2	0.38	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
2,4-Dinitrotoluene	0.064	U	0.44	0.064	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
2,6-Dinitrotoluene	0.066	U	0.44	0.066	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Di-n-octyl phthalate	0.047	M U	0.44	0.047	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Fluoranthene	0.064	U	0.44	0.064	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Fluorene	0.062	U	0.44	0.062	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Hexachlorobenzene	0.054	U	0.44	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Hexachlorobutadiene	0.12	U	0.44	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Hexachlorocyclopentadiene	0.098	U	0.44	0.098	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Hexachloroethane	0.10	U	0.44	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Indeno[1,2,3-cd]pyrene	0.055	U	0.44	0.055	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Isophorone	0.057	U	0.44	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
2-Methylnaphthalene	0.076	U	0.44	0.076	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
2-Methylphenol	0.15	U	0.44	0.15	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
3 & 4 Methylphenol	0.058	U	0.44	0.058	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Naphthalene	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-10a-12-15-10-19

Date Collected: 10/24/19 15:48
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-5

Matrix: Solid
Percent Solids: 74.5

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.099	U	2.2	0.099	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
3-Nitroaniline	0.21	U	2.2	0.21	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
4-Nitroaniline	0.13	U	2.2	0.13	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Nitrobenzene	0.061	U	0.44	0.061	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
2-Nitrophenol	0.11	U	0.44	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
4-Nitrophenol	0.21	U	2.2	0.21	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
N-Nitrosodi-n-propylamine	0.16	U	0.44	0.16	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Pentachlorophenol	0.20	U	2.2	0.20	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Phenanthrene	0.072	M U	0.44	0.072	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Phenol	0.16	Q U	0.44	0.16	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
Pyrene	0.049	U	0.44	0.049	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
2,4,5-Trichlorophenol	0.074	U	0.44	0.074	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1
2,4,6-Trichlorophenol	0.078	U	0.44	0.078	mg/Kg	☼	10/29/19 09:11	10/30/19 09:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*30 - 120*	*10/29/19 09:11*	*10/30/19 09:06*	*1*
2-Fluorophenol (Surr)	*53*		*16 - 113*	*10/29/19 09:11*	*10/30/19 09:06*	*1*
Nitrobenzene-d5 (Surr)	*67*		*20 - 120*	*10/29/19 09:11*	*10/30/19 09:06*	*1*
Phenol-d5 (Surr)	*64*		*19 - 144*	*10/29/19 09:11*	*10/30/19 09:06*	*1*
Terphenyl-d14 (Surr)	*84*		*30 - 131*	*10/29/19 09:11*	*10/30/19 09:06*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*23 - 129*	*10/29/19 09:11*	*10/30/19 09:06*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.022	M U	0.090	0.022	mg/Kg	☼	10/29/19 16:37	10/31/19 14:26	1
PCB-1221	0.045	M U	0.13	0.045	mg/Kg	☼	10/29/19 16:37	10/31/19 14:26	1
PCB-1232	0.024	M U	0.090	0.024	mg/Kg	☼	10/29/19 16:37	10/31/19 14:26	1
PCB-1242	0.038	M U	0.12	0.038	mg/Kg	☼	10/29/19 16:37	10/31/19 14:26	1
PCB-1248	0.027	M U	0.090	0.027	mg/Kg	☼	10/29/19 16:37	10/31/19 14:26	1
PCB-1254	0.013	M U	0.044	0.013	mg/Kg	☼	10/29/19 16:37	10/31/19 14:26	1
PCB-1260	0.020	M U	0.060	0.020	mg/Kg	☼	10/29/19 16:37	10/31/19 14:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*76*		*30 - 150*	*10/29/19 16:37*	*10/31/19 14:26*	*1*
DCB Decachlorobiphenyl	*57*	*M*	*30 - 150*	*10/29/19 16:37*	*10/31/19 14:26*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.55	U	6.6	0.55	mg/Kg	☼	10/29/19 07:31	10/29/19 12:22	5
Barium	**12**		6.6	0.37	mg/Kg	☼	10/29/19 07:31	10/29/19 12:22	5
Cadmium	0.19	U	3.3	0.19	mg/Kg	☼	10/29/19 07:31	10/29/19 12:22	5
Chromium	**310**		6.6	0.49	mg/Kg	☼	10/29/19 07:31	10/29/19 12:22	5
Lead	**3.4**	**J**	6.6	0.96	mg/Kg	☼	10/29/19 07:31	10/29/19 12:22	5
Selenium	2.5	U	13	2.5	mg/Kg	☼	10/29/19 07:31	10/29/19 12:22	5
Silver	1.3	U	6.6	1.3	mg/Kg	☼	10/29/19 07:31	10/29/19 12:22	5

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.016	U	0.054	0.016	mg/Kg	☼	10/29/19 11:30	10/29/19 13:27	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-13a-0-12-10-19

Date Collected: 10/24/19 16:34
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-6

Matrix: Solid
Percent Solids: 78.6

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.063	U	0.41	0.063	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Acenaphthylene	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Acetophenone	0.10	M U	0.41	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Anthracene	0.071	U	0.41	0.071	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Atrazine	0.17	U	1.2	0.17	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Benzo[a]anthracene	0.056	U	0.41	0.056	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Benzo[a]pyrene	0.055	U	0.41	0.055	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Benzo[b]fluoranthene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Benzo[g,h,i]perylene	0.11	M U	0.41	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Benzo[k]fluoranthene	0.070	U	0.41	0.070	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
1,1'-Biphenyl	0.85	U	2.6	0.85	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Bis(2-chloroethoxy)methane	0.097	U	0.41	0.097	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Bis(2-chloroethyl)ether	0.097	M U	0.41	0.097	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
bis (2-chloroisopropyl) ether	0.051	U	0.41	0.051	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Bis(2-ethylhexyl) phthalate	0.058	M U	0.41	0.058	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
4-Bromophenyl phenyl ether	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Butyl benzyl phthalate	0.049	M U	0.41	0.049	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Caprolactam	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Carbazole	0.50	Q U	1.2	0.50	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
4-Chloroaniline	0.092	M U	0.82	0.092	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
4-Chloro-3-methylphenol	0.062	U	0.41	0.062	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
2-Chloronaphthalene	0.074	U	0.41	0.074	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
2-Chlorophenol	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
4-Chlorophenyl phenyl ether	0.096	U	0.41	0.096	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Chrysene	0.058	U	0.41	0.058	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Dibenz(a,h)anthracene	0.11	M U	0.41	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Dibenzofuran	0.067	U	0.41	0.067	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
2,4-Dichlorophenol	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Diethyl phthalate	0.059	U	0.41	0.059	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
2,4-Dimethylphenol	0.064	U	0.41	0.064	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Dimethyl phthalate	0.069	U	0.41	0.069	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Di-n-butyl phthalate	0.074	M U	0.41	0.074	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
4,6-Dinitro-2-methylphenol	0.24	U	2.1	0.24	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
2,4-Dinitrophenol	0.36	U	2.1	0.36	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
2,4-Dinitrotoluene	0.061	U	0.41	0.061	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
2,6-Dinitrotoluene	0.062	U	0.41	0.062	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Di-n-octyl phthalate	0.044	M U	0.41	0.044	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Fluoranthene	0.060	U	0.41	0.060	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Fluorene	0.059	U	0.41	0.059	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Hexachlorobenzene	0.051	U	0.41	0.051	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Hexachlorobutadiene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Hexachlorocyclopentadiene	0.093	U	0.41	0.093	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Hexachloroethane	0.096	U	0.41	0.096	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Indeno[1,2,3-cd]pyrene	0.052	M U	0.41	0.052	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Isophorone	0.054	U	0.41	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
2-Methylnaphthalene	0.071	M U	0.41	0.071	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
2-Methylphenol	0.14	U	0.41	0.14	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
3 & 4 Methylphenol	0.055	U	0.41	0.055	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Naphthalene	0.11	U	0.41	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1

Client Sample ID: B-13a-0-12-10-19

Date Collected: 10/24/19 16:34
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-6

Matrix: Solid
Percent Solids: 78.6

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.093	U	2.1	0.093	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
3-Nitroaniline	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
4-Nitroaniline	0.12	U	2.1	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Nitrobenzene	0.057	U	0.41	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
2-Nitrophenol	0.10	U	0.41	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
4-Nitrophenol	0.20	U	2.1	0.20	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
N-Nitrosodi-n-propylamine	0.15	U	0.41	0.15	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Pentachlorophenol	0.19	U	2.1	0.19	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Phenanthrene	0.068	U	0.41	0.068	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Phenol	0.15	Q U	0.41	0.15	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
Pyrene	0.046	U	0.41	0.046	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
2,4,5-Trichlorophenol	0.069	U	0.41	0.069	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1
2,4,6-Trichlorophenol	0.073	U	0.41	0.073	mg/Kg	☼	10/29/19 09:11	10/30/19 09:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*63*		*30 - 120*	*10/29/19 09:11*	*10/30/19 09:31*	*1*
2-Fluorophenol (Surr)	*32*		*16 - 113*	*10/29/19 09:11*	*10/30/19 09:31*	*1*
Nitrobenzene-d5 (Surr)	*56*		*20 - 120*	*10/29/19 09:11*	*10/30/19 09:31*	*1*
Phenol-d5 (Surr)	*41*		*19 - 144*	*10/29/19 09:11*	*10/30/19 09:31*	*1*
Terphenyl-d14 (Surr)	*92*		*30 - 131*	*10/29/19 09:11*	*10/30/19 09:31*	*1*
2,4,6-Tribromophenol (Surr)	*68*		*23 - 129*	*10/29/19 09:11*	*10/30/19 09:31*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.020	M U	0.084	0.020	mg/Kg	☼	10/29/19 16:37	10/31/19 14:41	1
PCB-1221	0.042	M U	0.13	0.042	mg/Kg	☼	10/29/19 16:37	10/31/19 14:41	1
PCB-1232	0.022	M U	0.084	0.022	mg/Kg	☼	10/29/19 16:37	10/31/19 14:41	1
PCB-1242	0.036	M U	0.11	0.036	mg/Kg	☼	10/29/19 16:37	10/31/19 14:41	1
PCB-1248	0.025	M U	0.084	0.025	mg/Kg	☼	10/29/19 16:37	10/31/19 14:41	1
PCB-1254	0.012	M U	0.041	0.012	mg/Kg	☼	10/29/19 16:37	10/31/19 14:41	1
PCB-1260	0.019	M U	0.057	0.019	mg/Kg	☼	10/29/19 16:37	10/31/19 14:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*30 - 150*	*10/29/19 16:37*	*10/31/19 14:41*	*1*
DCB Decachlorobiphenyl	*95*		*30 - 150*	*10/29/19 16:37*	*10/31/19 14:41*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.26**	**J**	1.3	0.11	mg/Kg	☼	10/29/19 07:31	10/29/19 11:43	1
Barium	**12**		1.3	0.074	mg/Kg	☼	10/29/19 07:31	10/29/19 11:43	1
Cadmium	0.037	U	0.66	0.037	mg/Kg	☼	10/29/19 07:31	10/29/19 11:43	1
Chromium	**4.1**		1.3	0.097	mg/Kg	☼	10/29/19 07:31	10/29/19 11:43	1
Lead	**2.3**		1.3	0.19	mg/Kg	☼	10/29/19 07:31	10/29/19 11:43	1
Selenium	0.49	U	2.7	0.49	mg/Kg	☼	10/29/19 07:31	10/29/19 11:43	1
Silver	0.25	U	1.3	0.25	mg/Kg	☼	10/29/19 07:31	10/29/19 11:43	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	U	0.051	0.015	mg/Kg	☼	10/29/19 11:30	10/29/19 13:29	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-13a-12-15-10-19

Date Collected: 10/24/19 16:35
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-7

Matrix: Solid
Percent Solids: 84.4

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.060	U	0.39	0.060	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Acenaphthylene	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Acetophenone	0.097	M U	0.39	0.097	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Anthracene	0.068	U	0.39	0.068	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Atrazine	0.16	U	1.2	0.16	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Benzo[a]anthracene	0.054	U	0.39	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Benzo[a]pyrene	0.053	U	0.39	0.053	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Benzo[b]fluoranthene	0.11	U	0.39	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Benzo[g,h,i]perylene	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Benzo[k]fluoranthene	0.067	U	0.39	0.067	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
1,1'-Biphenyl	0.81	U	2.5	0.81	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Bis(2-chloroethoxy)methane	0.092	U	0.39	0.092	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Bis(2-chloroethyl)ether	0.092	U	0.39	0.092	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
bis (2-chloroisopropyl) ether	0.048	M U	0.39	0.048	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Bis(2-ethylhexyl) phthalate	0.056	U	0.39	0.056	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
4-Bromophenyl phenyl ether	0.095	U	0.39	0.095	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Butyl benzyl phthalate	0.046	M U	0.39	0.046	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Caprolactam	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Carbazole	0.47	Q U	1.2	0.47	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
4-Chloroaniline	0.087	U	0.78	0.087	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
4-Chloro-3-methylphenol	0.059	U	0.39	0.059	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
2-Chloronaphthalene	0.071	U	0.39	0.071	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
2-Chlorophenol	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
4-Chlorophenyl phenyl ether	0.091	U	0.39	0.091	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Chrysene	0.055	U	0.39	0.055	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Dibenz(a,h)anthracene	0.11	U	0.39	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Dibenzofuran	0.063	U	0.39	0.063	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
2,4-Dichlorophenol	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Diethyl phthalate	0.056	U	0.39	0.056	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
2,4-Dimethylphenol	0.061	U	0.39	0.061	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Dimethyl phthalate	0.066	U	0.39	0.066	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Di-n-butyl phthalate	0.071	U	0.39	0.071	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
4,6-Dinitro-2-methylphenol	0.23	U	2.0	0.23	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
2,4-Dinitrophenol	0.34	U	2.0	0.34	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
2,4-Dinitrotoluene	0.058	U	0.39	0.058	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
2,6-Dinitrotoluene	0.059	U	0.39	0.059	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Di-n-octyl phthalate	0.042	M U	0.39	0.042	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Fluoranthene	0.057	U	0.39	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Fluorene	0.056	U	0.39	0.056	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Hexachlorobenzene	0.049	U	0.39	0.049	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Hexachlorobutadiene	0.11	U	0.39	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Hexachlorocyclopentadiene	0.088	U	0.39	0.088	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Hexachloroethane	0.091	U	0.39	0.091	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Indeno[1,2,3-cd]pyrene	0.049	U	0.39	0.049	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Isophorone	0.051	U	0.39	0.051	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
2-Methylnaphthalene	0.068	U	0.39	0.068	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
2-Methylphenol	0.13	U	0.39	0.13	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
3 & 4 Methylphenol	0.052	U	0.39	0.052	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Naphthalene	0.10	U	0.39	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-13a-12-15-10-19

Date Collected: 10/24/19 16:35
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-7

Matrix: Solid
Percent Solids: 84.4

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.089	U	2.0	0.089	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
3-Nitroaniline	0.18	U	2.0	0.18	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
4-Nitroaniline	0.11	U	2.0	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Nitrobenzene	0.054	U	0.39	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
2-Nitrophenol	0.097	U	0.39	0.097	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
4-Nitrophenol	0.19	U	2.0	0.19	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
N-Nitrosodi-n-propylamine	0.14	U	0.39	0.14	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Pentachlorophenol	0.18	U	2.0	0.18	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Phenanthrene	0.065	M U	0.39	0.065	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Phenol	0.15	Q U	0.39	0.15	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
Pyrene	0.044	M U	0.39	0.044	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
2,4,5-Trichlorophenol	0.066	U	0.39	0.066	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1
2,4,6-Trichlorophenol	0.070	U	0.39	0.070	mg/Kg	☼	10/29/19 09:11	10/30/19 09:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*58*		*30 - 120*	*10/29/19 09:11*	*10/30/19 09:55*	*1*
2-Fluorophenol (Surr)	*20*		*16 - 113*	*10/29/19 09:11*	*10/30/19 09:55*	*1*
Nitrobenzene-d5 (Surr)	*49*		*20 - 120*	*10/29/19 09:11*	*10/30/19 09:55*	*1*
Phenol-d5 (Surr)	*28*		*19 - 144*	*10/29/19 09:11*	*10/30/19 09:55*	*1*
Terphenyl-d14 (Surr)	*98*		*30 - 131*	*10/29/19 09:11*	*10/30/19 09:55*	*1*
2,4,6-Tribromophenol (Surr)	*74*		*23 - 129*	*10/29/19 09:11*	*10/30/19 09:55*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.019	M U	0.079	0.019	mg/Kg	☼	10/29/19 16:37	10/31/19 14:55	1
PCB-1221	0.040	M U	0.12	0.040	mg/Kg	☼	10/29/19 16:37	10/31/19 14:55	1
PCB-1232	0.021	M U	0.079	0.021	mg/Kg	☼	10/29/19 16:37	10/31/19 14:55	1
PCB-1242	0.034	M U	0.10	0.034	mg/Kg	☼	10/29/19 16:37	10/31/19 14:55	1
PCB-1248	0.023	M U	0.079	0.023	mg/Kg	☼	10/29/19 16:37	10/31/19 14:55	1
PCB-1254	0.011	M U	0.039	0.011	mg/Kg	☼	10/29/19 16:37	10/31/19 14:55	1
PCB-1260	0.018	M U	0.053	0.018	mg/Kg	☼	10/29/19 16:37	10/31/19 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*81*	*M*	*30 - 150*	*10/29/19 16:37*	*10/31/19 14:55*	*1*
DCB Decachlorobiphenyl	*92*		*30 - 150*	*10/29/19 16:37*	*10/31/19 14:55*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.76**	**J**	6.0	0.50	mg/Kg	☼	10/29/19 07:31	10/29/19 12:25	5
Barium	**12**		6.0	0.33	mg/Kg	☼	10/29/19 07:31	10/29/19 12:25	5
Cadmium	0.17	U	3.0	0.17	mg/Kg	☼	10/29/19 07:31	10/29/19 12:25	5
Chromium	**9.8**		6.0	0.44	mg/Kg	☼	10/29/19 07:31	10/29/19 12:25	5
Lead	**2.1**	**J**	6.0	0.87	mg/Kg	☼	10/29/19 07:31	10/29/19 12:25	5
Selenium	2.2	U	12	2.2	mg/Kg	☼	10/29/19 07:31	10/29/19 12:25	5
Silver	1.1	U	6.0	1.1	mg/Kg	☼	10/29/19 07:31	10/29/19 12:25	5

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.013	U	0.043	0.013	mg/Kg	☼	10/29/19 11:30	10/29/19 13:30	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-12a-0-10-10-19

Date Collected: 10/24/19 16:08
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-8

Matrix: Solid
Percent Solids: 76.8

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.065	U	0.42	0.065	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Acenaphthylene	0.056	U	0.42	0.056	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Acetophenone	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Anthracene	0.073	U	0.42	0.073	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Atrazine	0.17	U	1.3	0.17	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Benzo[a]anthracene	0.058	M U	0.42	0.058	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Benzo[a]pyrene	0.057	M U	0.42	0.057	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Benzo[b]fluoranthene	0.12	U	0.42	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Benzo[g,h,i]perylene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Benzo[k]fluoranthene	0.073	M U	0.42	0.073	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
1,1'-Biphenyl	0.88	U	2.7	0.88	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Bis(2-chloroethoxy)methane	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Bis(2-chloroethyl)ether	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
bis (2-chloroisopropyl) ether	0.052	M U	0.42	0.052	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Bis(2-ethylhexyl) phthalate	0.060	U	0.42	0.060	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
4-Bromophenyl phenyl ether	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Butyl benzyl phthalate	0.050	M U	0.42	0.050	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Caprolactam	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Carbazole	0.51	Q U	1.3	0.51	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
4-Chloroaniline	0.095	U	0.85	0.095	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
4-Chloro-3-methylphenol	0.064	U	0.42	0.064	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
2-Chloronaphthalene	0.077	U	0.42	0.077	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
2-Chlorophenol	0.056	U	0.42	0.056	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
4-Chlorophenyl phenyl ether	0.099	U	0.42	0.099	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Chrysene	0.060	U	0.42	0.060	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Dibenz(a,h)anthracene	0.12	M U	0.42	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Dibenzofuran	0.069	U	0.42	0.069	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
2,4-Dichlorophenol	0.056	U	0.42	0.056	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Diethyl phthalate	0.061	U	0.42	0.061	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
2,4-Dimethylphenol	0.066	U	0.42	0.066	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Dimethyl phthalate	0.071	U	0.42	0.071	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Di-n-butyl phthalate	0.077	U	0.42	0.077	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
4,6-Dinitro-2-methylphenol	0.25	U	2.2	0.25	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
2,4-Dinitrophenol	0.37	U	2.2	0.37	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
2,4-Dinitrotoluene	0.063	U	0.42	0.063	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
2,6-Dinitrotoluene	0.064	U	0.42	0.064	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Di-n-octyl phthalate	0.045	M U	0.42	0.045	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Fluoranthene	0.062	U	0.42	0.062	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Fluorene	0.061	M U	0.42	0.061	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Hexachlorobenzene	0.053	U	0.42	0.053	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Hexachlorobutadiene	0.12	U	0.42	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Hexachlorocyclopentadiene	0.095	U	0.42	0.095	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Hexachloroethane	0.099	U	0.42	0.099	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Indeno[1,2,3-cd]pyrene	0.054	M U	0.42	0.054	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Isophorone	0.056	U	0.42	0.056	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
2-Methylnaphthalene	0.074	M U	0.42	0.074	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
2-Methylphenol	0.14	U	0.42	0.14	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
3 & 4 Methylphenol	0.056	U	0.42	0.056	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Naphthalene	0.11	U	0.42	0.11	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-12a-0-10-10-19

Date Collected: 10/24/19 16:08
Date Received: 10/25/19 08:30

Lab Sample ID: 660-98303-8

Matrix: Solid
Percent Solids: 76.8

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.096	U	2.2	0.096	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
3-Nitroaniline	0.20	U	2.2	0.20	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
4-Nitroaniline	0.12	U	2.2	0.12	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Nitrobenzene	0.059	U	0.42	0.059	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
2-Nitrophenol	0.10	U	0.42	0.10	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
4-Nitrophenol	0.20	M U	2.2	0.20	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
N-Nitrosodi-n-propylamine	0.15	U	0.42	0.15	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Pentachlorophenol	0.20	U	2.2	0.20	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Phenanthrene	0.070	M U	0.42	0.070	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Phenol	0.16	Q U	0.42	0.16	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
Pyrene	0.048	U	0.42	0.048	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
2,4,5-Trichlorophenol	0.072	U	0.42	0.072	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1
2,4,6-Trichlorophenol	0.076	U	0.42	0.076	mg/Kg	☼	10/29/19 09:11	10/30/19 10:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*67*		*30 - 120*	*10/29/19 09:11*	*10/30/19 10:19*	*1*
2-Fluorophenol (Surr)	*29*		*16 - 113*	*10/29/19 09:11*	*10/30/19 10:19*	*1*
Nitrobenzene-d5 (Surr)	*61*		*20 - 120*	*10/29/19 09:11*	*10/30/19 10:19*	*1*
Phenol-d5 (Surr)	*43*		*19 - 144*	*10/29/19 09:11*	*10/30/19 10:19*	*1*
Terphenyl-d14 (Surr)	*101*		*30 - 131*	*10/29/19 09:11*	*10/30/19 10:19*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*23 - 129*	*10/29/19 09:11*	*10/30/19 10:19*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.021	M U	0.086	0.021	mg/Kg	☼	10/29/19 16:37	10/31/19 15:10	1
PCB-1221	0.043	M U	0.13	0.043	mg/Kg	☼	10/29/19 16:37	10/31/19 15:10	1
PCB-1232	0.023	M U	0.086	0.023	mg/Kg	☼	10/29/19 16:37	10/31/19 15:10	1
PCB-1242	0.036	M U	0.11	0.036	mg/Kg	☼	10/29/19 16:37	10/31/19 15:10	1
PCB-1248	0.025	M U	0.086	0.025	mg/Kg	☼	10/29/19 16:37	10/31/19 15:10	1
PCB-1254	0.012	M U	0.042	0.012	mg/Kg	☼	10/29/19 16:37	10/31/19 15:10	1
PCB-1260	0.019	M U	0.057	0.019	mg/Kg	☼	10/29/19 16:37	10/31/19 15:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*80*		*30 - 150*	*10/29/19 16:37*	*10/31/19 15:10*	*1*
DCB Decachlorobiphenyl	*89*		*30 - 150*	*10/29/19 16:37*	*10/31/19 15:10*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.13**	**J**	1.3	0.11	mg/Kg	☼	10/29/19 07:31	10/29/19 11:49	1
Barium	**5.4**		1.3	0.071	mg/Kg	☼	10/29/19 07:31	10/29/19 11:49	1
Cadmium	0.036	U	0.64	0.036	mg/Kg	☼	10/29/19 07:31	10/29/19 11:49	1
Chromium	**6.4**		1.3	0.093	mg/Kg	☼	10/29/19 07:31	10/29/19 11:49	1
Lead	**1.4**		1.3	0.19	mg/Kg	☼	10/29/19 07:31	10/29/19 11:49	1
Selenium	0.47	U	2.6	0.47	mg/Kg	☼	10/29/19 07:31	10/29/19 11:49	1
Silver	0.24	U	1.3	0.24	mg/Kg	☼	10/29/19 07:31	10/29/19 11:49	1

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.016	U	0.052	0.016	mg/Kg	☼	10/29/19 11:30	10/29/19 13:32	1

Method: 8270D - Semivolatile Compounds by Gas Chromatograph

Lab Sample ID: MB 660-217582/1-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217582

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.050	M U	0.32	0.050	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Acenaphthylene	0.042	U	0.32	0.042	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Acetophenone	0.080	M U	0.32	0.080	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Anthracene	0.056	U	0.32	0.056	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Atrazine	0.13	U	0.97	0.13	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Benzo[a]anthracene	0.044	M U	0.32	0.044	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Benzo[a]pyrene	0.043	M U	0.32	0.043	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Benzo[b]fluoranthene	0.090	U	0.32	0.090	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Benzo[g,h,i]perylene	0.086	U	0.32	0.086	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Benzo[k]fluoranthene	0.055	U	0.32	0.055	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
1,1'-Biphenyl	0.66	U	2.0	0.66	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Bis(2-chloroethoxy)methane	0.076	U	0.32	0.076	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Bis(2-chloroethyl)ether	0.076	U	0.32	0.076	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
bis (2-chloroisopropyl) ether	0.040	U	0.32	0.040	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Bis(2-ethylhexyl) phthalate	0.046	U	0.32	0.046	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4-Bromophenyl phenyl ether	0.078	U	0.32	0.078	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Butyl benzyl phthalate	0.038	U	0.32	0.038	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Caprolactam	0.083	U	0.32	0.083	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Carbazole	0.39	U	0.97	0.39	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4-Chloroaniline	0.072	U	0.64	0.072	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4-Chloro-3-methylphenol	0.048	U	0.32	0.048	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2-Chloronaphthalene	0.058	U	0.32	0.058	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2-Chlorophenol	0.042	U	0.32	0.042	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4-Chlorophenyl phenyl ether	0.075	U	0.32	0.075	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Chrysene	0.045	U	0.32	0.045	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Dibenz(a,h)anthracene	0.088	U	0.32	0.088	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Dibenzofuran	0.052	U	0.32	0.052	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,4-Dichlorophenol	0.042	U	0.32	0.042	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Diethyl phthalate	0.046	U	0.32	0.046	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,4-Dimethylphenol	0.050	U	0.32	0.050	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Dimethyl phthalate	0.054	U	0.32	0.054	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Di-n-butyl phthalate	0.058	U	0.32	0.058	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4,6-Dinitro-2-methylphenol	0.19	U	1.7	0.19	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,4-Dinitrophenol	0.28	U	1.7	0.28	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,4-Dinitrotoluene	0.048	U	0.32	0.048	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,6-Dinitrotoluene	0.049	U	0.32	0.049	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Di-n-octyl phthalate	0.034	M U	0.32	0.034	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Fluoranthene	0.047	U	0.32	0.047	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Fluorene	0.046	U	0.32	0.046	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Hexachlorobenzene	0.040	U	0.32	0.040	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Hexachlorobutadiene	0.087	U	0.32	0.087	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Hexachlorocyclopentadiene	0.072	U	0.32	0.072	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Hexachloroethane	0.075	U	0.32	0.075	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Indeno[1,2,3-cd]pyrene	0.041	U	0.32	0.041	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Isophorone	0.042	U	0.32	0.042	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2-Methylnaphthalene	0.056	M U	0.32	0.056	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2-Methylphenol	0.11	U	0.32	0.11	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
3 & 4 Methylphenol	0.043	U	0.32	0.043	mg/Kg		10/29/19 09:11	10/29/19 17:51	1

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Lab Sample ID: MB 660-217582/1-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217582

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.083	U	0.32	0.083	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2-Nitroaniline	0.073	U	1.7	0.073	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
3-Nitroaniline	0.15	U	1.7	0.15	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4-Nitroaniline	0.093	U	1.7	0.093	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Nitrobenzene	0.045	U	0.32	0.045	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2-Nitrophenol	0.080	U	0.32	0.080	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
4-Nitrophenol	0.15	U	1.7	0.15	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
N-Nitrosodi-n-propylamine	0.12	U	0.32	0.12	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Pentachlorophenol	0.15	U	1.7	0.15	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Phenanthrene	0.053	U	0.32	0.053	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Phenol	0.12	M U	0.32	0.12	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
Pyrene	0.036	U	0.32	0.036	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,4,5-Trichlorophenol	0.054	U	0.32	0.054	mg/Kg		10/29/19 09:11	10/29/19 17:51	1
2,4,6-Trichlorophenol	0.057	U	0.32	0.057	mg/Kg		10/29/19 09:11	10/29/19 17:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*62*		*30 - 120*	*10/29/19 09:11*	*10/29/19 17:51*	*1*
2-Fluorophenol (Surr)	*32*		*16 - 113*	*10/29/19 09:11*	*10/29/19 17:51*	*1*
Nitrobenzene-d5 (Surr)	*57*		*20 - 120*	*10/29/19 09:11*	*10/29/19 17:51*	*1*
Phenol-d5 (Surr)	*43*		*19 - 144*	*10/29/19 09:11*	*10/29/19 17:51*	*1*
Terphenyl-d14 (Surr)	*84*		*30 - 131*	*10/29/19 09:11*	*10/29/19 17:51*	*1*
2,4,6-Tribromophenol (Surr)	*62*		*23 - 129*	*10/29/19 09:11*	*10/29/19 17:51*	*1*

Lab Sample ID: LCS 660-217582/2-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	1.63	1.15		mg/Kg		71	58 - 118
Acenaphthylene	1.63	1.12		mg/Kg		69	56 - 116
Acetophenone	1.63	0.880		mg/Kg		54	51 - 111
Anthracene	1.63	1.52		mg/Kg		93	62 - 126
Atrazine	1.63	1.99		mg/Kg		122	77 - 142
Benzo[a]anthracene	1.63	1.63		mg/Kg		100	61 - 121
Benzo[a]pyrene	1.63	1.68		mg/Kg		103	65 - 130
Benzo[b]fluoranthene	1.63	1.85		mg/Kg		114	64 - 124
Benzo[g,h,i]perylene	1.63	1.77		mg/Kg		109	61 - 127
Benzo[k]fluoranthene	1.63	1.80		mg/Kg		111	68 - 132
1,1'-Biphenyl	1.63	1.09	J	mg/Kg		67	55 - 115
Bis(2-chloroethoxy)methane	1.63	0.977		mg/Kg		60	53 - 113
Bis(2-chloroethyl)ether	1.63	0.811		mg/Kg		50	42 - 110
bis (2-chloroisopropyl) ether	1.63	0.942		mg/Kg		58	43 - 110
Bis(2-ethylhexyl) phthalate	1.63	1.62		mg/Kg		99	67 - 131
4-Bromophenyl phenyl ether	1.63	1.42		mg/Kg		87	62 - 122
Butyl benzyl phthalate	1.63	1.66		mg/Kg		102	66 - 126
Caprolactam	1.63	1.14		mg/Kg		70	57 - 140
Carbazole	1.63	2.79	Q	mg/Kg		172	82 - 150
4-Chloroaniline	1.63	0.662		mg/Kg		41	23 - 110

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Lab Sample ID: LCS 660-217582/2-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloro-3-methylphenol	1.63	1.19		mg/Kg		73	62 - 122
2-Chloronaphthalene	1.63	1.07		mg/Kg		66	55 - 115
2-Chlorophenol	1.63	0.792		mg/Kg		49	48 - 110
4-Chlorophenyl phenyl ether	1.63	1.27		mg/Kg		78	62 - 120
Chrysene	1.63	1.65		mg/Kg		101	64 - 127
Dibenz(a,h)anthracene	1.63	1.80		mg/Kg		111	65 - 128
Dibenzofuran	1.63	1.19		mg/Kg		73	48 - 128
2,4-Dichlorophenol	1.63	0.950		mg/Kg		58	55 - 116
Diethyl phthalate	1.63	1.54		mg/Kg		94	64 - 129
2,4-Dimethylphenol	1.63	0.969		mg/Kg		60	56 - 116
Dimethyl phthalate	1.63	1.41		mg/Kg		87	64 - 124
Di-n-butyl phthalate	1.63	1.67		mg/Kg		102	64 - 124
4,6-Dinitro-2-methylphenol	3.26	2.91		mg/Kg		90	34 - 150
2,4-Dinitrophenol	3.26	1.81	M	mg/Kg		56	13 - 132
2,4-Dinitrotoluene	1.63	1.59		mg/Kg		98	65 - 130
2,6-Dinitrotoluene	1.63	1.44		mg/Kg		89	63 - 125
Di-n-octyl phthalate	1.63	1.67		mg/Kg		102	67 - 127
Fluoranthene	1.63	1.64		mg/Kg		101	64 - 124
Fluorene	1.63	1.33		mg/Kg		82	61 - 121
Hexachlorobenzene	1.63	1.49		mg/Kg		91	63 - 128
Hexachlorobutadiene	1.63	0.925		mg/Kg		57	53 - 113
Hexachlorocyclopentadiene	1.63	0.830		mg/Kg		51	32 - 122
Hexachloroethane	1.63	0.894		mg/Kg		55	46 - 110
Indeno[1,2,3-cd]pyrene	1.63	1.64		mg/Kg		101	59 - 127
Isophorone	1.63	1.02		mg/Kg		62	51 - 124
2-Methylnaphthalene	1.63	1.01		mg/Kg		62	55 - 115
2-Methylphenol	1.63	0.856		mg/Kg		53	49 - 110
3 & 4 Methylphenol	1.63	0.860		mg/Kg		53	47 - 113
Naphthalene	1.63	0.957		mg/Kg		59	51 - 111
2-Nitroaniline	1.63	1.30	J	mg/Kg		80	61 - 123
3-Nitroaniline	1.63	1.78		mg/Kg		110	44 - 135
4-Nitroaniline	1.63	1.99		mg/Kg		122	51 - 150
Nitrobenzene	1.63	0.862		mg/Kg		53	50 - 110
2-Nitrophenol	1.63	0.911		mg/Kg		56	52 - 112
4-Nitrophenol	3.26	2.99		mg/Kg		92	65 - 134
N-Nitrosodi-n-propylamine	1.63	0.981		mg/Kg		60	52 - 112
Pentachlorophenol	3.26	3.34		mg/Kg		103	52 - 127
Phenanthrene	1.63	1.49		mg/Kg		91	62 - 122
Phenol	1.63	0.576	Q	mg/Kg		35	42 - 110
Pyrene	1.63	1.60		mg/Kg		98	66 - 130
2,4,5-Trichlorophenol	1.63	1.27		mg/Kg		78	58 - 121
2,4,6-Trichlorophenol	1.63	1.18		mg/Kg		72	57 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*63*		*30 - 120*
2-Fluorophenol (Surr)	*22*		*16 - 113*
Nitrobenzene-d5 (Surr)	*52*		*20 - 120*
Phenol-d5 (Surr)	*34*		*19 - 144*

Method: 8270D - Semivolatile Compounds by Gas Chromatograph (Continued)

Lab Sample ID: LCS 660-217582/2-A
Matrix: Solid
Analysis Batch: 217589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217582

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*97*		*30 - 131*
2,4,6-Tribromophenol (Surr)	*87*		*23 - 129*

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

Lab Sample ID: MB 660-217607/1-A
Matrix: Solid
Analysis Batch: 217688

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217607

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.016	M U	0.065	0.016	mg/Kg		10/29/19 16:37	10/31/19 12:15	1
PCB-1221	0.033	M U	0.097	0.033	mg/Kg		10/29/19 16:37	10/31/19 12:15	1
PCB-1232	0.017	M U	0.065	0.017	mg/Kg		10/29/19 16:37	10/31/19 12:15	1
PCB-1242	0.028	M U	0.083	0.028	mg/Kg		10/29/19 16:37	10/31/19 12:15	1
PCB-1248	0.019	M U	0.065	0.019	mg/Kg		10/29/19 16:37	10/31/19 12:15	1
PCB-1254	0.0094	M U	0.032	0.0094	mg/Kg		10/29/19 16:37	10/31/19 12:15	1
PCB-1260	0.015	M U	0.044	0.015	mg/Kg		10/29/19 16:37	10/31/19 12:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*83*		*30 - 150*	*10/29/19 16:37*	*10/31/19 12:15*	*1*
DCB Decachlorobiphenyl	*94*	*M*	*30 - 150*	*10/29/19 16:37*	*10/31/19 12:15*	*1*

Lab Sample ID: LCS 660-217607/2-A
Matrix: Solid
Analysis Batch: 217688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217607

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	0.330	0.270		mg/Kg		82	47 - 146
PCB-1260	0.330	0.291		mg/Kg		88	45 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*94*	*M*	*30 - 150*
DCB Decachlorobiphenyl	*102*	*M*	*30 - 150*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 660-217576/1-A
Matrix: Solid
Analysis Batch: 217594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217576

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.083	U	1.0	0.083	mg/Kg		10/29/19 07:31	10/29/19 10:44	1
Barium	0.056	U	1.0	0.056	mg/Kg		10/29/19 07:31	10/29/19 10:44	1
Cadmium	0.028	U	0.50	0.028	mg/Kg		10/29/19 07:31	10/29/19 10:44	1
Chromium	0.073	U	1.0	0.073	mg/Kg		10/29/19 07:31	10/29/19 10:44	1
Lead	0.175	J	1.0	0.15	mg/Kg		10/29/19 07:31	10/29/19 10:44	1
Selenium	0.37	U	2.0	0.37	mg/Kg		10/29/19 07:31	10/29/19 10:44	1
Silver	0.19	U	1.0	0.19	mg/Kg		10/29/19 07:31	10/29/19 10:44	1

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

Lab Sample ID: LCS 660-217576/2-A
Matrix: Solid
Analysis Batch: 217594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217576

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	50.9		mg/Kg		102	80 - 120
Barium	50.0	53.2		mg/Kg		106	80 - 120
Cadmium	50.0	51.0		mg/Kg		102	80 - 120
Chromium	50.0	53.7		mg/Kg		107	80 - 120
Lead	50.0	52.3		mg/Kg		105	80 - 120
Selenium	50.0	50.2		mg/Kg		100	80 - 120
Silver	50.0	49.5		mg/Kg		99	80 - 120

Method: 7471A - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Lab Sample ID: MB 660-217560/13-A
Matrix: Solid
Analysis Batch: 217604

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217560

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	U	0.040	0.012	mg/Kg		10/29/19 11:30	10/29/19 12:45	1

Lab Sample ID: LCS 660-217560/14-A
Matrix: Solid
Analysis Batch: 217604

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217560

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.164		mg/Kg		99	80 - 120

QC Association Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

GC/MS Semi VOA

Prep Batch: 217582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-1	B-9a-0-5-10-19	Total/NA	Solid	3546	
660-98303-2	B-9a-5-10-19	Total/NA	Solid	3546	
660-98303-3	B-9a-10-18-10-19	Total/NA	Solid	3546	
660-98303-4	B-10a-0-12-10-19	Total/NA	Solid	3546	
660-98303-5	B-10a-12-15-10-19	Total/NA	Solid	3546	
660-98303-6	B-13a-0-12-10-19	Total/NA	Solid	3546	
660-98303-7	B-13a-12-15-10-19	Total/NA	Solid	3546	
660-98303-8	B-12a-0-10-10-19	Total/NA	Solid	3546	
MB 660-217582/1-A	Method Blank	Total/NA	Solid	3546	
LCS 660-217582/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 217589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-1	B-9a-0-5-10-19	Total/NA	Solid	8270D	217582
MB 660-217582/1-A	Method Blank	Total/NA	Solid	8270D	217582
LCS 660-217582/2-A	Lab Control Sample	Total/NA	Solid	8270D	217582

Analysis Batch: 217611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-2	B-9a-5-10-19	Total/NA	Solid	8270D	217582
660-98303-3	B-9a-10-18-10-19	Total/NA	Solid	8270D	217582
660-98303-4	B-10a-0-12-10-19	Total/NA	Solid	8270D	217582
660-98303-5	B-10a-12-15-10-19	Total/NA	Solid	8270D	217582
660-98303-6	B-13a-0-12-10-19	Total/NA	Solid	8270D	217582
660-98303-7	B-13a-12-15-10-19	Total/NA	Solid	8270D	217582
660-98303-8	B-12a-0-10-10-19	Total/NA	Solid	8270D	217582

GC Semi VOA

Prep Batch: 217607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-1	B-9a-0-5-10-19	Total/NA	Solid	3546	
660-98303-2	B-9a-5-10-19	Total/NA	Solid	3546	
660-98303-3	B-9a-10-18-10-19	Total/NA	Solid	3546	
660-98303-4	B-10a-0-12-10-19	Total/NA	Solid	3546	
660-98303-5	B-10a-12-15-10-19	Total/NA	Solid	3546	
660-98303-6	B-13a-0-12-10-19	Total/NA	Solid	3546	
660-98303-7	B-13a-12-15-10-19	Total/NA	Solid	3546	
660-98303-8	B-12a-0-10-10-19	Total/NA	Solid	3546	
MB 660-217607/1-A	Method Blank	Total/NA	Solid	3546	
LCS 660-217607/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 217688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-1	B-9a-0-5-10-19	Total/NA	Solid	8082A	217607
660-98303-2	B-9a-5-10-19	Total/NA	Solid	8082A	217607
660-98303-3	B-9a-10-18-10-19	Total/NA	Solid	8082A	217607
660-98303-4	B-10a-0-12-10-19	Total/NA	Solid	8082A	217607
660-98303-5	B-10a-12-15-10-19	Total/NA	Solid	8082A	217607
660-98303-6	B-13a-0-12-10-19	Total/NA	Solid	8082A	217607
660-98303-7	B-13a-12-15-10-19	Total/NA	Solid	8082A	217607

GC Semi VOA (Continued)

Analysis Batch: 217688 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-8	B-12a-0-10-10-19	Total/NA	Solid	8082A	217607
MB 660-217607/1-A	Method Blank	Total/NA	Solid	8082A	217607
LCS 660-217607/2-A	Lab Control Sample	Total/NA	Solid	8082A	217607

Metals

Prep Batch: 217560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-1	B-9a-0-5-10-19	Total/NA	Solid	7471A	
660-98303-2	B-9a-5-10-19	Total/NA	Solid	7471A	
660-98303-3	B-9a-10-18-10-19	Total/NA	Solid	7471A	
660-98303-4	B-10a-0-12-10-19	Total/NA	Solid	7471A	
660-98303-5	B-10a-12-15-10-19	Total/NA	Solid	7471A	
660-98303-6	B-13a-0-12-10-19	Total/NA	Solid	7471A	
660-98303-7	B-13a-12-15-10-19	Total/NA	Solid	7471A	
660-98303-8	B-12a-0-10-10-19	Total/NA	Solid	7471A	
MB 660-217560/13-A	Method Blank	Total/NA	Solid	7471A	
LCS 660-217560/14-A	Lab Control Sample	Total/NA	Solid	7471A	

Prep Batch: 217576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-1	B-9a-0-5-10-19	Total/NA	Solid	3050B	
660-98303-2	B-9a-5-10-19	Total/NA	Solid	3050B	
660-98303-3	B-9a-10-18-10-19	Total/NA	Solid	3050B	
660-98303-4	B-10a-0-12-10-19	Total/NA	Solid	3050B	
660-98303-5	B-10a-12-15-10-19	Total/NA	Solid	3050B	
660-98303-6	B-13a-0-12-10-19	Total/NA	Solid	3050B	
660-98303-7	B-13a-12-15-10-19	Total/NA	Solid	3050B	
660-98303-8	B-12a-0-10-10-19	Total/NA	Solid	3050B	
MB 660-217576/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 660-217576/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 217594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-1	B-9a-0-5-10-19	Total/NA	Solid	6010D	217576
660-98303-2	B-9a-5-10-19	Total/NA	Solid	6010D	217576
660-98303-3	B-9a-10-18-10-19	Total/NA	Solid	6010D	217576
660-98303-4	B-10a-0-12-10-19	Total/NA	Solid	6010D	217576
660-98303-5	B-10a-12-15-10-19	Total/NA	Solid	6010D	217576
660-98303-6	B-13a-0-12-10-19	Total/NA	Solid	6010D	217576
660-98303-7	B-13a-12-15-10-19	Total/NA	Solid	6010D	217576
660-98303-8	B-12a-0-10-10-19	Total/NA	Solid	6010D	217576
MB 660-217576/1-A	Method Blank	Total/NA	Solid	6010D	217576
LCS 660-217576/2-A	Lab Control Sample	Total/NA	Solid	6010D	217576

Analysis Batch: 217604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-1	B-9a-0-5-10-19	Total/NA	Solid	7471A	217560
660-98303-2	B-9a-5-10-19	Total/NA	Solid	7471A	217560
660-98303-3	B-9a-10-18-10-19	Total/NA	Solid	7471A	217560
660-98303-4	B-10a-0-12-10-19	Total/NA	Solid	7471A	217560

Metals (Continued)

Analysis Batch: 217604 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-5	B-10a-12-15-10-19	Total/NA	Solid	7471A	217560
660-98303-6	B-13a-0-12-10-19	Total/NA	Solid	7471A	217560
660-98303-7	B-13a-12-15-10-19	Total/NA	Solid	7471A	217560
660-98303-8	B-12a-0-10-10-19	Total/NA	Solid	7471A	217560
MB 660-217560/13-A	Method Blank	Total/NA	Solid	7471A	217560
LCS 660-217560/14-A	Lab Control Sample	Total/NA	Solid	7471A	217560

General Chemistry

Analysis Batch: 217587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-1	B-9a-0-5-10-19	Total/NA	Solid	Moisture	
660-98303-2	B-9a-5-10-19	Total/NA	Solid	Moisture	
660-98303-3	B-9a-10-18-10-19	Total/NA	Solid	Moisture	
660-98303-4	B-10a-0-12-10-19	Total/NA	Solid	Moisture	
660-98303-5	B-10a-12-15-10-19	Total/NA	Solid	Moisture	
660-98303-6	B-13a-0-12-10-19	Total/NA	Solid	Moisture	
660-98303-7	B-13a-12-15-10-19	Total/NA	Solid	Moisture	

Analysis Batch: 217596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-98303-8	B-12a-0-10-10-19	Total/NA	Solid	Moisture	
660-98303-8 DU	B-12a-0-10-10-19	Total/NA	Solid	Moisture	

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-9a-0-5-10-19
Lab Sample ID: 660-98303-1
Date Collected: 10/24/19 15:13
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 07:24	AJG	TAL TAM

Client Sample ID: B-9a-0-5-10-19
Lab Sample ID: 660-98303-1
Date Collected: 10/24/19 15:13
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 77.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217589	10/29/19 19:52	MWJ	TAL TAM
Total/NA	Prep	3546			217607	10/29/19 16:37	XMO	TAL TAM
Total/NA	Analysis	8082A		1	217688	10/31/19 13:28	MDS	TAL TAM
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		1	217594	10/29/19 11:27	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:16	GH1	TAL TAM

Client Sample ID: B-9a-5-10-19
Lab Sample ID: 660-98303-2
Date Collected: 10/24/19 15:16
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 08:08	AJG	TAL TAM

Client Sample ID: B-9a-5-10-19
Lab Sample ID: 660-98303-2
Date Collected: 10/24/19 15:16
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 84.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217611	10/30/19 07:53	MWJ	TAL TAM
Total/NA	Prep	3546			217607	10/29/19 16:37	XMO	TAL TAM
Total/NA	Analysis	8082A		1	217688	10/31/19 13:42	MDS	TAL TAM
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		1	217594	10/29/19 11:30	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:18	GH1	TAL TAM

Client Sample ID: B-9a-10-18-10-19
Lab Sample ID: 660-98303-3
Date Collected: 10/24/19 15:30
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 08:35	AJG	TAL TAM

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-9a-10-18-10-19
Lab Sample ID: 660-98303-3
Date Collected: 10/24/19 15:30
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 71.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217611	10/30/19 08:17	MWJ	TAL TAM
Total/NA	Prep	3546			217607	10/29/19 16:37	XMO	TAL TAM
Total/NA	Analysis	8082A		1	217688	10/31/19 13:57	MDS	TAL TAM
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		2	217594	10/29/19 11:33	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:20	GH1	TAL TAM

Client Sample ID: B-10a-0-12-10-19
Lab Sample ID: 660-98303-4
Date Collected: 10/24/19 15:47
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 08:31	AJG	TAL TAM

Client Sample ID: B-10a-0-12-10-19
Lab Sample ID: 660-98303-4
Date Collected: 10/24/19 15:47
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217611	10/30/19 08:42	MWJ	TAL TAM
Total/NA	Prep	3546			217607	10/29/19 16:37	XMO	TAL TAM
Total/NA	Analysis	8082A		1	217688	10/31/19 14:11	MDS	TAL TAM
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		1	217594	10/29/19 11:36	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:22	GH1	TAL TAM

Client Sample ID: B-10a-12-15-10-19
Lab Sample ID: 660-98303-5
Date Collected: 10/24/19 15:48
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 09:07	AJG	TAL TAM

Client Sample ID: B-10a-12-15-10-19
Lab Sample ID: 660-98303-5
Date Collected: 10/24/19 15:48
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 74.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217611	10/30/19 09:06	MWJ	TAL TAM
Total/NA	Prep	3546			217607	10/29/19 16:37	XMO	TAL TAM
Total/NA	Analysis	8082A		1	217688	10/31/19 14:26	MDS	TAL TAM

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-10a-12-15-10-19 — Lab Sample ID: 660-98303-5

Date Collected: 10/24/19 15:48 — **Matrix: Solid**
Date Received: 10/25/19 08:30 — **Percent Solids: 74.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		5	217594	10/29/19 12:22	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:27	GH1	TAL TAM

Client Sample ID: B-13a-0-12-10-19 — Lab Sample ID: 660-98303-6

Date Collected: 10/24/19 16:34 — **Matrix: Solid**
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 09:00	AJG	TAL TAM

Client Sample ID: B-13a-0-12-10-19 — Lab Sample ID: 660-98303-6

Date Collected: 10/24/19 16:34 — **Matrix: Solid**
Date Received: 10/25/19 08:30 — **Percent Solids: 78.6**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217611	10/30/19 09:31	MWJ	TAL TAM
Total/NA	Prep	3546			217607	10/29/19 16:37	XMO	TAL TAM
Total/NA	Analysis	8082A		1	217688	10/31/19 14:41	MDS	TAL TAM
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		1	217594	10/29/19 11:43	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:29	GH1	TAL TAM

Client Sample ID: B-13a-12-15-10-19 — Lab Sample ID: 660-98303-7

Date Collected: 10/24/19 16:35 — **Matrix: Solid**
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217587	10/29/19 09:24	AJG	TAL TAM

Client Sample ID: B-13a-12-15-10-19 — Lab Sample ID: 660-98303-7

Date Collected: 10/24/19 16:35 — **Matrix: Solid**
Date Received: 10/25/19 08:30 — **Percent Solids: 84.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217611	10/30/19 09:55	MWJ	TAL TAM
Total/NA	Prep	3546			217607	10/29/19 16:37	XMO	TAL TAM
Total/NA	Analysis	8082A		1	217688	10/31/19 14:55	MDS	TAL TAM
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		5	217594	10/29/19 12:25	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:30	GH1	TAL TAM

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Client Sample ID: B-12a-0-10-10-19

Lab Sample ID: 660-98303-8
Date Collected: 10/24/19 16:08
Matrix: Solid
Date Received: 10/25/19 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	217596	10/29/19 09:47	AJG	TAL TAM

Client Sample ID: B-12a-0-10-10-19

Lab Sample ID: 660-98303-8
Date Collected: 10/24/19 16:08
Matrix: Solid
Date Received: 10/25/19 08:30
Percent Solids: 76.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			217582	10/29/19 09:11	EM	TAL TAM
Total/NA	Analysis	8270D		1	217611	10/30/19 10:19	MWJ	TAL TAM
Total/NA	Prep	3546			217607	10/29/19 16:37	XMO	TAL TAM
Total/NA	Analysis	8082A		1	217688	10/31/19 15:10	MDS	TAL TAM
Total/NA	Prep	3050B			217576	10/29/19 07:31	GAF	TAL TAM
Total/NA	Analysis	6010D		1	217594	10/29/19 11:49	GAF	TAL TAM
Total/NA	Prep	7471A			217560	10/29/19 11:30	GH1	TAL TAM
Total/NA	Analysis	7471A		1	217604	10/29/19 13:32	GH1	TAL TAM

Laboratory References:

TAL TAM = Eurofins TestAmerica, Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

Method Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Compounds by Gas Chromatograph	SW846	TAL TAM
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL TAM
6010D	Metals (ICP)	SW846	TAL TAM
7471A	Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	SW846	TAL TAM
Moisture	Percent Moisture	EPA	TAL TAM
3050B	Preparation, Metals	SW846	TAL TAM
3546	Microwave Extraction	SW846	TAL TAM
7471A	Preparation, Mercury	SW846	TAL TAM

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 TAM = Eurofins TestAmerica, Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

Accreditation/Certification Summary

Client: U.S. Army Corps of Engineers
Project/Site: Augusta Training Wall, Augusta, GA

Job ID: 660-98303-1

Laboratory: Eurofins TestAmerica, Tampa

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

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E84282	06-30-20

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

Laboratory: Eurofins TestAmerica, Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-20
Alaska	State	GA00006	06-30-20
Alaska (UST)	State	17-016	09-30-20
ANAB	Dept. of Defense ELAP	L2463	09-22-22
ANAB	DoD	L2463	09-22-22
ANAB	ISO/IEC 17025	L2463.01	09-22-22
ANAB	ISO/IEC 17025	L2463.01	09-22-22
Arizona	State	AZ0808	12-14-19
Arkansas DEQ	State	19-015-0	02-01-20
Arkansas DEQ	State Program	88-0692	02-01-20
California	State	2939	06-30-20
Colorado	State	GA00006	12-31-19
Connecticut	State	PH-0161	03-31-21
Florida	NELAP	E87052	06-30-20
GA Dept. of Agriculture	State Program	N/A	06-12-20
Georgia	State	E87052	06-30-20
Georgia	State Program	N/A	06-30-20
Georgia (DW)	State	803	06-30-20
Guam	State	19-007R	04-17-20
Hawaii	State	<cert No.>	06-30-20
Indiana	State	C-GA-02	06-30-20
Iowa	State	353	09-22-20
Kansas	NELAP	E-10322	10-15-20
Kentucky (DW)	State	KY90084	12-31-19
Kentucky (UST)	State	<cert No.>	06-30-20
Kentucky (UST)	State Program	18	06-30-20
Kentucky (WW)	State	KY90084	12-31-19
Kentucky (WW)	State Program	90084	12-31-19
Louisiana	NELAP	02011	06-30-20
Louisiana (DW)	State	LA009	12-31-19
Maine	State	GA00006	09-26-20
Maryland	State	250	12-31-19
Massachusetts	State	M-GA006	06-30-20
Massachusetts	State Program	M-GA006	06-30-20
Michigan	State	9925	06-30-20
Mississippi	State	<cert No.>	06-30-20
Mississippi	State Program	N/A	06-30-20
Nebraska	State	NE-OS-7-04	06-30-20

Laboratory: Eurofins TestAmerica, Savannah (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Nebraska	State Program	TestAmerica-Savannah	06-30-20
New Hampshire	NELAP	2096	05-29-20
New Hampshire	NELAP	2096	05-29-20
New Jersey	NELAP	GA769	06-30-20
New Mexico	State	GA00006	06-30-20
New York	NELAP	10842	04-01-20
North Carolina (DW)	State	13701	07-31-20
North Carolina (DW)	State Program	13701	07-31-20
North Carolina (WW/SW)	State	269	12-31-19
North Carolina (WW/SW)	State Program	269	12-31-19
Oklahoma	State	9984	08-31-20
Pennsylvania	NELAP	68-00474	06-30-20
Puerto Rico	State	GA00006	01-01-20
South Carolina	State	98001	06-30-20
Tennessee	State	02961	06-30-20
Texas	NELAP	T104704185-19-13	11-30-19 *
Texas	NELAP	T1047004185-19-3	11-30-19
Texas	TCEQ Water Supply	T104704185	09-23-20
US Fish & Wildlife	US Federal Programs	LE058448-0	07-31-20
USDA	US Federal Programs	P330-18-00313	10-29-21
Virginia	NELAP	10509	06-14-20
Washington	State	C805	06-10-20
West Virginia (DW)	State	9950C	12-31-19
West Virginia (DW)	State Program	9950C	12-31-19
West Virginia DEP	State	094	11-30-19
Wisconsin	State	999819810	08-31-20
Wyoming	State	8TMS-L	06-30-20 *
Wyoming	State Program	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: April Kelly	Lab PM: Lawhon, Jon K	Carrier Tracking No(s):	COC No: 680-108806-42551.3
Client Contact: Brett Zeigler	Phone: 912-414-3097	E-Mail: jon.lawhon@testamericainc.com		Page: Page 3 of 3
Company: U.S. Army Corps of Engineers				Job #:
Address: 100 West Oglethorpe Ave	Due Date Requested:			
City: Savannah	TAT Requested (days):			
State, Zip: GA, 31401				
Phone:	PO #: Purchase Order Requested			
Email: derrick.b.zeigler@usace.army.mil	WO #:			
Project Name: Augusta Training Wall, Augusta, GA	Project #: 68022845			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

660-98303 Chain of Custody

Loc: 660
98303

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)	8082A, 8270D	6010D, 7471A														
				Preservation Code:			N	N														
B-9a-0-5-10-19	10/24/19	1513		Solid	N	N	1	1														
B-9a-5-10-19	10/24/19	1516		Solid	N	N	1	1														
B-9a-10-18-10-19	10/24/19	1530		Solid	N	N	1	1														
B-10a-0-12-10-19	10/24/19	1547		Solid	N	N	1	1														
B-10a-12-15-10-19	10/24/19	1548		Solid	N	N	1	1														
B-13a-0-12-10-19	10/24/19	1634		Solid	N	N	1	1														
B-13a-12-15-10-19	10/24/19	1635		Solid	N	N	1	1														
				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	Company	Received by	Date/Time	Company
April Kelly	10/24/19 1730	USACE	[illegible]	10/25/19 0830	TA-SAV

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.: 1220150
Cooler Temperature(s) °C and Other Remarks: 3.2/3.3 CUOY

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: U.S. Army Corps of Engineers

Job Number: 660-98303-1

Login Number: 98303
List Number: 1
Creator: Edwards, Erricka

List Source: Eurofins TestAmerica, Tampa

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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 containers received and the COC.	False	Received extra samples not listed on COC.
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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	